General Plan Update 2035

CITY OF WOODLAND

2035 General Plan and Climate Action Plan
Public Review Draft Environmental Impact Report

SEPTEMBER 2016

NOTICE OF AVAILABILITY of the DRAFT ENVIRONMENTAL IMPACT REPORT for the DRAFT 2035 GENERAL PLAN UPDATE and DRAFT 2035 CLIMATE ACTION PLAN for the CITY OF WOODLAND

DATE: September 15, 2016
TO: Interested Agencies and Individuals
FROM: Woodland Community Development Department

Copies of the Draft Environmental Impact Report (DEIR) (SCH # 2013032015) for the Draft 2035 General Plan Update and Draft 2035 Climate Action Plan (CAP) are now available for review. Public comment on this document is invited for a 45 day period extending from September 19, 2016 through November 3, 2016. More information is provided below.

The Proposed Project is adoption of a new general plan and CAP for the City of Woodland. These documents will apply to the incorporated area of the City (totaling 9,619 acres) and land outside of the current City limits but within the Planning Area (totaling 3,162 acres) upon annexation. The 12,781 acre Planning Area is identical to the Urban Limit Line (ULL) established by City of Woodland voters in 2006.

The Draft General Plan is organized into an Introduction and Administration Chapter and a number of "elements." Each element includes an introduction, background information, and a list of goals and policies. The Draft General Plan Update contains the following Elements:

- Land Use, Community Design, and Historic Preservation Element
- Transportation and Circulation Element
- Economic Development Element
- Public Facilities and Services Element
- Healthy Community Element
- Conservation and Open Space Element
- Safety Element
- Housing Element

The Draft General Plan Update has a planning horizon of 2035. The Draft General Plan Update contemplates two alternative ways in which growth and development through 2035 could occur within the planning area. These are identified as the South Alternative and East Alternative. Each of these alternatives relies upon the same Land Use Diagram (Figure 2-5). The South Alternative, as shown in the Land Use Diagram, envisions growth occurring in the areas labeled Specific Plan (SP)-1A, SP-1B, SP-1C, and SP-3 by 2035. The East Alternative envisions growth occurring in the areas labeled SP-1A, SP-2, and SP-3 by 2035.

The DEIR analyzes both of these alternatives at an equal level of detail or "equal weight." The impacts of each alternative are fully evaluated relative to baseline conditions and established significance criteria. The analysis in the DEIR provides information for development of the final General Plan that will be adopted by City Council.

The DEIR is structured to allow adoption of one of these two alternatives, or some variation, so long as the total growth numbers (by 2035) do not exceed 7,000 residential units and approximately 17.0 million square feet of non-residential uses (±19,000 jobs), and there are no other substantive inconsistencies with assumptions made in the DEIR.

The Draft CAP presents a strategy for achieving specified reductions in greenhouse gas (GHG) emissions. The Draft CAP identifies GHG targets for the City as follows:

- 15 percent below 2005 levels by 2020
- 2.25 MT CO_2e per service population (residents plus jobs) per year by 2035

These targets equate to local GHG reductions of approximately 60,000 metric tons of carbon dioxide equivalent per year (MT CO_2e/yr) by 2020 and 112,000 MT CO_2e/yr by 2035 in order to achieve Woodland's GHG targets. The CAP is comprised of quantifiable objectives, strategies, and implementation actions for achieving GHG reductions within six focus areas: Energy, Transportation and Land Use, Urban Forest and Open Space, Water and Solid Waste, Public Involvement, and Municipal Operations.

The City and its consultants (Dyett & Bhatia and AECOM) have prepared a Program-level DEIR pursuant to the California Environmental Quality Act (CEQA) to analyze and disclose the potential adverse significant impacts associated with implementation of the Draft General Plan and Draft CAP. A Final EIR will be prepared following public review and comment on the DEIR. The City Planning Commission and City Council will consider this information during their deliberations. Following certification of the Final EIR, the City Council will adopt a final General Plan and CAP.

The DEIR identifies the potential for significant effects in the following impact areas: Aesthetics and Visual Resources; Agriculture and Forestry Resources; Air Quality; Biological Resources; Climate Change, Greenhouse Gas Emissions, and Energy; Cultural Resources; Geology, Soils, Mineral Resources, and Paleontological Resources; Hydrology, Flooding, and Water Quality; Land Use Planning, Population, and Housing; Noise and Vibration; Public Services and Recreation; Transportation and Circulation; Utilities; Cumulative Impacts; Growth Inducing Impacts; and Significant Irreversible Changes

The DEIR is now available for public review online at the web link listed below or in printed form via "loaner" copies at the public counter of the City Community Development Department at 300 First Street, Woodland, CA 95695:

http://web.cityofwoodland.org/gov/depts/cd/divisions/planning/generalplan/2035/default.asp

Interested parties may also purchase printed copies and electronic copies (USB flash drive) from the Community Development Department. Contact (530) 661-5820 for a schedule of costs. The document is also available for public review at the Woodland Public Library, 250 First St, Woodland.

You may submit comments on the DEIR during the 45-day review period, which begins Monday, September 19, 2016 and ends Thursday, November 3, 2016. All comments received or postmarked by November 3, 2016 will be accepted.

Please direct your comments to:

WoodlandGPDEIRcomments@cityofwoodland.org c/o
Cindy Norris, Principal Planner
Woodland City Community Development Department
300 First Street
Woodland, CA 95695
(530) 661-5820

A meeting to receive comments on the DEIR has been scheduled for October 20, 2016 before the Woodland Planning Commission at 6:30 at the City Council Chambers, City Hall, 300 First St, Woodland, CA 95695.

Additional public meetings and hearings will be announced as they are scheduled. Public hearings on the Draft General Plan Update, Draft CAP Update, and Draft EIR are anticipated to be held before the Planning Commission in December and January, and before the City Council in January and February. Separate public notice for these meetings and hearings will be distributed. For more specific questions about the General Plan or EIR, please contact Cindy Norris at the number or email given above. Thank you.

General Plan Update 2035

CITY OF WOODLAND

2035 General Plan and Climate Action Plan

Public Review Draft Environmental Impact Report

State Clearinghouse Number 2013032015

September 2016

Prepared for:

City of Woodland
Community Development Department
300 First Street
Woodland, CA 95695

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1 INTRODUCTION

This Environmental Impact Report (EIR) evaluates the impacts of the Draft *City of Woodland 2035 General Plan* (2035 General Plan) and Draft *2035 Climate Action Plan* (2035 CAP), collectively referred to as the Proposed Project. This EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 *et seq*.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 *et seq*.).

1.1 TYPE OF EIR

The 2035 General Plan and CAP EIR is a program EIR, as described under the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 *et seq*). According to the CEQA Guidelines (Section 15168[a]), a state or local agency should prepare a program EIR, rather than a project EIR, when a series of actions may be characterized as one large project and are related either:

- geographically;
- as logical parts of a chain of contemplated actions;
- in connection with the issuance of rules, regulations, plans, or other general criteria that govern the conduct of a continuing program; or
- as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways.

In this case, this program EIR addresses the 2035 General Plan and 2035 CAP, which is the proposed "project," as defined by CEQA. This program EIR considers a series of actions related to implementation of the project.

Although the required contents of a program EIR are the same as those of a project EIR, in practice, there are differences in level of detail. General Plans by their nature are broad, long-range, and conceptual. Program EIRs contain a more general discussion of impacts, alternatives, and mitigation measures than do project-level EIRs. This is appropriate since the 2035 General Plan is a long-term guide for development and conservation throughout the City's *Planning Area*, which is all of the area within the City's Urban Limit Line. Since the details of future individual development projects are not yet known, it is not possible for this General Plan EIR to provide analysis of these project-level details.

1.2 PURPOSE OF THE EIR

The CEQA Guidelines charge public agencies with the responsibility of avoiding or minimizing environmental damage that could result from implementation of a project, where feasible. As part of this responsibility, public agencies are required to balance various public objectives, including economic, environmental, and social issues.

The purpose of an EIR is neither to recommend approval nor denial of a project. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. An EIR describes the significant environmental impacts of a project, identifies potentially feasible

measures to mitigate significant impacts, and describes potentially feasible alternatives to the project that can reduce or avoid significant environmental effects. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project.

The lead agency is the public agency with primary responsibility over the proposed project. In accordance with CEQA Guidelines Section 15051(b)(1), "[t]he lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The City, as the lead agency, has prepared this EIR to evaluate the environmental impacts of implementation of the 2035 General Plan and 2035 CAP. The EIR was prepared under the direction of the City and is provided for review by both the public and public agencies, as required by CEQA. The City Council must certify the Final EIR before adopting the 2035 General Plan and 2035 CAP.

If significant environmental effects are identified, the lead agency must adopt "findings" indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the environmental impacts are identified as significant and unavoidable, the lead agency may still approve the project if it determines that social, economic, legal, technological, or other factors override the unavoidable impacts. The lead agency would then be required to prepare a "Statement of Overriding Considerations" that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record.

In making its decision about the proposed project, the City considers the information in this EIR, comments received on the EIR, and responses to those comments, along with other available information and technical analysis.

1.3 USE OF THE GENERAL PLAN EIR FOR TIERING AND STREAMLINING

The analysis in this program EIR is considered the first tier of environmental review and creates the foundation upon which future, project-specific CEQA documents can build. Tiering refers to the concept of a multi-level approach to preparing environmental documents set forth in Public Resources Code Section 21083.3 and Section 15152 of the CEQA Guidelines. Project-level environmental analysis can be streamlined to limit the scope of site-specific approvals following the preparation of an EIR for a general plan.[1] This streamlining provision applies to site-specific approvals for projects that are consistent with the general plan.

Section 15152 of the CEQA Guidelines provides that where a first-tier EIR has "adequately addressed" the subject of cumulative impacts, such impacts need not be revisited in second- and/or third-tier documents. According to Section 15152(f)(3), significant effects identified in a first-tier EIR are adequately addressed, for purposes of later approvals, if the lead agency determines that such effects have been either:

> "mitigated or avoided as a result of the prior [EIR] and findings adopted in connection with that prior [EIR]"; or
>
> "examined at a sufficient level of detail in the prior [EIR] to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project."

[1] This section of the Public Resources Code also refers to consistency with community plans and zoning, but the above discussion is tailored to this General Plan EIR.

This program EIR will help determine the need for subsequent environmental documentation, as well as dictate the scope of project level CEQA review. According to Section 15168 (d) of the CEQA Guidelines, a program EIR can be used to simplify the task of preparing future environmental documents on later parts of the program. A program EIR can:

1) "Provide the basis in an Initial Study for determining whether the later activity may have any significant effects.

2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.

3) Focus an EIR on a subsequent project to permit discussion solely of new effects which had not been considered before."

The City intends to use the 2035 General Plan EIR to streamline future environmental review and approval of private and public projects, as well as implementation actions such as updates to zoning that are consistent with the 2035 General Plan. The City will make use of existing streamlining provided by CEQA, and will make use of emerging streamlining techniques, as appropriate.

In order to maximize the value of the General Plan EIR to future projects that promote the 2035 General Plan's objectives, the City has strategically integrated the General Plan and the environmental review. While many general plan program EIRs include only generalized analysis of conceptual land use change estimates, the City elected to include an enhanced level of analysis for this General Plan and EIR. The 2035 General Plan EIR uses detailed, parcel-level land use programming for the basis of analysis, with a focus on vacant and underutilized properties that would be appropriate for development between the present and 2035. This EIR includes a comprehensive analysis of land use changes anticipated under the 2035 General Plan, with additional detail in the analysis focused on these development opportunity sites. This EIR includes quantified estimates in certain impact areas, such as transportation, air quality, greenhouse gas emissions, noise, and other topics, based on reasonable assumptions as to the amount, type, and character of land use changes under the 2035 General Plan. This enhanced level of analysis will serve to streamline and expedite later projects that are consistent with, and implement the policies and programs of, the 2035 General Plan.

The City intends to make full use of the streamlining allowed under Public Resources Code 21083.3 and CEQA Guidelines 15183. Under this provision, CEQA only applies to issues "peculiar to the site." Lead agencies can use programmatic EIRs for the general plan to analyze impacts of projects that could be accommodated under the plan, and greatly limit later project-level analysis to site-specific issues. CEQA Guidelines Section 15183 (f) provides that impacts are not peculiar to the project if uniformly applied development policies or standards substantially mitigate that environmental effect.

Public agencies can use uniformly applied policies or standards to mitigate effects of future projects, precluding the need to analyze these effects, unless new information arises that changes the impact analysis (Public Resources Code Section 21083.3 [d]). The General Plan Update process was used to investigate policies and implementation programs that can serve as uniformly applied standards and substantially limit the scope of analysis for projects consistent with the 2035 General Plan. This EIR includes references to General Plan policies and implementation programs, where appropriate, to address environmental impacts. Future CEQA documents may reference the same General Plan policies and implementation programs, where appropriate, to demonstrate

less-than-significant impacts and that later project-level issues are not "peculiar to the parcel" if they have been substantially mitigated by General Plan policies and implementation programs (uniformly applied development policies). Please refer to Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 for a more detailed description of impacts that are peculiar to the parcel and the use of uniformly applied development standards and policies.

1.4 TIERING AND STREAMLINING THE ANALYSIS OF GREENHOUSE GAS EMISSIONS

CEQA Guidelines Section 15183.5 includes the provision for tiering and streamlining the analysis of GHG emissions in CEQA documents. Under this provision, lead agencies may analyze and mitigate the effects of GHG emissions at a programmatic level, such as in a general plan, a long range development plan, or a separate plan to reduce GHG emissions, such as a Climate Action Plan developed by a local jurisdiction, or a sustainable communities strategy developed by the metropolitan planning organization. Later project-specific CEQA documents may tier and/or incorporate by reference that existing programmatic review if the proposed project is consistent with the applicable regional or local plan that adequately addresses GHG emissions, and that that plan has been evaluated pursuant to CEQA and has a certified or approved environmental document.

CEQA Guidelines Section 15183.5(b)(1) suggests a greenhouse gas reduction plan, such as the 2035 CAP, should include the following plan elements:

(A) "Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;

(B) Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;

(C) Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;

(D) Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;

(E) Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; [and]

(F) Be adopted in a public process following environmental review."

Woodland's 2035 CAP has been prepared consistent with the requirements of CEQA Guidelines Section 15183.5. Following adoption the CAP will be used to streamline CEQA review when projects demonstrate consistency. The City has prepared estimates of existing and future greenhouse gas emissions associated with the 2035 General Plan, as detailed in Chapter 2 of the 2035 CAP and also in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy." Chapter 4 of the 2035 CAP includes reduction strategies demonstrated to reduce emissions consistent with its emissions reductions targets for 2020 and 2035, as well as details on implementation

and monitoring (Chapter 5) to ensure these targets are achieved. This EIR represents the required environmental review for the CAP. Please see Chapter 3 of this EIR, "Project Description" and Section 4.5 for more detail.

1.5 SCOPE OF THE EIR

1.5.1 GEOGRAPHIC SCOPE

The geographic scope that could be affected by a proposed project varies depending on the issue topic. The geographic area associated with different environmental effects was used to define the area considered for impact analysis. The geographic scope for air pollutant impact analysis, such as those related to emissions of ozone precursors, is very broad, encompassing large areas within the same air basin. The geographic scope for stationary source noise impacts, on the other end of the spectrum, is relatively narrow, since noise attenuates substantially with distance, making impacts more localized. The environmental impact analysis throughout this EIR describes the environmental impacts of implementing the Proposed Plan throughout the City's Planning Area.

This EIR analyzes impacts of the 2035 General Plan and 2035 CAP relative to current conditions. In accordance with Section 15125 of the CEQA Guidelines, and unless otherwise noted, the discussion of the physical environment describes existing conditions within the Planning Area at the time the NOP was published.

1.5.2 TOPICAL SCOPE

Environmental review in compliance with CEQA (Public Resources Code Sections 21000 *et seq.*) is required as part of the City's consideration of the 2035 General Plan and 2035 CAP. The EIR has been prepared in accordance with CEQA, including the CEQA statutes (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 *et seq.*), and relevant court decisions. This EIR includes an evaluation of all required environmental topic areas, as well as other CEQA-mandated sections, as presented below:

1 Introduction
2 Executive Summary
3 Project Description
4 Environmental Impact Analysis
4.0 Approach to the Environmental Impact Analysis
4.1 Aesthetics and Visual Resources
4.2 Agriculture and Forestry Resources
4.3 Air Quality
4.4 Biological Resources
4.5 Climate Change, Greenhouse Gas Emissions, and Energy
4.6 Cultural Resources
4.7 Geology, Soils, Mineral Resources, and Paleontological Resources
4.8 Hazardous Materials and Toxics
4.9 Hydrology, Flooding, and Water Quality
4.10 Land Use Planning, Population, and Housing
4.11 Noise and Vibration
4.12 Public Services and Recreation
4.13 Transportation and Circulation

4.14 Utilities
5 Alternatives
6 Other CEQA Considerations
7 References
8 Preparers

Chapter 5 of this EIR, "Alternatives," includes an analysis of alternatives to the proposed 2035 General Plan and 2035 CAP, as required by Section 15126.6 of the CEQA Guidelines. The 2035 General Plan sets forth two different alternatives for growth, and the City Council will choose its preferred direction. This EIR accordingly evaluates each of these alternatives on an "equal weight" basis. As described in more detail below, Chapter 5 provides a summary of the equal weight analysis of the two alternatives presented in the 2035 General Plan and Chapter 4 of this EIR, and provides a comparative analysis of the No Project Alternative for both the 2035 General Plan and 2035 CAP. Other CEQA-mandated issues discussed within the context of this EIR are cumulative impacts, growth-inducing impacts, irreversible environmental effects, and significant and unavoidable adverse impacts (Chapter 6 of this EIR, "Other CEQA Considerations"). Chapter 7 of this EIR, "References," identifies the references and citations used in drafting the EIR, and Chapter 8 of this EIR, "Preparers," lists the preparers of the EIR.

1.6 ENVIRONMENTAL REVIEW PROCESS

The CEQA Guidelines have specific requirements for EIRs related to description of the project, environmental setting, and impact analysis. Table 1-1 identifies the required elements of an EIR (with CEQA Guidelines sections referenced) and the corresponding chapters or sections in which each item is discussed in this document.

Table 1-1. Analyses Required by the CEQA Guidelines

Required Description and Analysis	EIR Chapter or Section
Summary (Section 15123)	2
Project Description (Section 15124)	3
Description of the Existing Setting (Section 15125)	3 and 4
Environmental Impacts (Sections 15126 and 15143)	4
Alternatives (Section 15126.6)	4 and 5
Cumulative Impacts (Section 15355)	4, 5, and 6
Growth-Inducing Impacts (Section 15126[d])	6
Irreversible Environmental Effects (Section 15126.2[c])	6
Significant Environmental Effects Which Cannot be Avoided (Section 15126.2[b])	6

1.7 NOTICE OF PREPARATION

To assist the City in determining the focus and scope of analysis for this EIR, pursuant to the provision of Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) dated March 6, 2013 to government agencies, special service districts, organizations, and individuals with an interest in or jurisdiction over the project. The NOP is a brief notice sent by the lead agency to inform the public, interested parties, responsible agencies, trustee agencies, and potentially affected federal, state, and local agencies that the lead agency plans to prepare an EIR. The NOP also seeks comments regarding the scope and content of the EIR. The City held a public scoping meeting for the project on March 21, 2013.

Since that time, more details on the proposed project have been developed, including refined development projections and land use diagram. However, contents, structure, and objectives of the proposed project have remained similar in scope. Because more information on the proposed project became available, and because the City of Woodland as the lead agency determined that it would analyze two specific project alternatives at an equal level of detail, the City decided to release an Updated NOP to provide interested parties with an additional opportunity to comment on the scope and content of the environmental analysis. The Updated NOP was released on May 23, 2016. The Updated NOP specified that individuals and agencies that responded to the original NOP were not required to re-submit their comments. Please see Appendix A for the NOP, Updated NOP, and responses to both.

The City received NOP comment letters from:

- Office of Planning and Research (3/6/2013)
- National Exploration, Wells, and Pumps (3/11/2013)
- Yolo County Housing (3/12/2013)
- State Department of Transportation (Caltrans) (4/4/2013)
- Yolo Local Area Formation Commission (4/30/2013)
- Yolo Solano Air Quality Management District (6/2/2016)
- John McKean (6/16/2016)
- Christine Shewmaker (6/15/2016)
- FEMA (6/22/2016)

The City received oral comments during the scoping meeting from:

- Woodland Planning Commission
- Gayle Madson, Leisureville Mobile Home Park
- David Storer, Knaggs Property

The NOP comment letters and comments at the scoping meeting suggest that the following topics related to adverse physical environmental impacts should be particular areas of focus for the City's environmental analysis:

- Agricultural conversion
- Climate change
- Consistency with regional transportation plans
- Direct and cumulative state highway system impacts
- Disadvantaged unincorporated communities
- Multi-modal transit
- Native American consultation
- Noise, land use, and air quality concerns
- Parks and open space
- Population change
- Protecting right of way for new and expanded state highway system facilities
- Protection of historic resources
- Recent flood updates should be considered in baseline conditions

1.8 NATIVE AMERICAN CONSULTATION

The City sent the Notice of Preparation to the Cortina Band of Indians and Yocha Dehe Wintun Nation on March 6, 2013. The comment period ended April 5, 2013. No comments were received from either tribe. Subsequently in early 2016, for the purposes of the mandatory Housing Element update, the Native American Heritage Commission (NAHC) was queried regarding tribes with traditional lands or cultural places within the City limits. On March 14, 2016, the NAHC identified the Cortina Band of Indians and Yocha Dehe Wintun Nation. On May 10, 2013 the City sent letters to both tribes via certified mail offering the opportunity to consult for the purpose of identifying and preserving or mitigating impacts to cultural resources on land potentially affected by the Draft Housing Element. These letters included copies of the Draft Housing Element, the Planning Commission staff report on the Element, the General Plan NOP, and the web addressed for the General Plan update.

The City subsequently received inquiries from three tribes pursuant to Public Resources Code Section 21080.3.1 (Assembly Bill 52, Statutes of 2014) related to tribal cultural resources:

November 23, 2015	United Auburn Indian Community of the Auburn Rancheria
March 2, 2016	Ione Band of Miwok Indians
May 11, 2016	Torres Martinez Desert Cahuilla Indians

The General Plan update precedes the requirements of AB 52. However, the City added the three tribes to the General Plan mailing list. The City sent the updated NOP to all five tribes on May 23, 2016. The comment period for the updated NOP ended June 24, 2016. One tribal response was received.

The City received a letter dated June 16, 2016 from a representative of the Yocha Dehe Wintun Nation thanking the City for the notification letter, identifying that the Planning Area is within an area of cultural interest to the Yocha Dehe Wintun Nation, and requesting a project timeline, detailed project information, and the latest cultural study. New contact information was also provided. On July 19, 2016, the City sent email communication to the Native American Tribal representative of the Yocha Dehe Wintun Nation with an update on the project timeline, links to information about the 2035 General Plan, and inviting input. The email also noted that the 2035 EIR and 2035 CAP would be circulated for public review, and that the City is available to meet to discuss any input at the convenience of the Native American Tribal representative.

1.9 ORGANIZATION OF THE EIR

This EIR is organized as follows:

- **Chapter 1, "Introduction,"** describes the type of EIR prepared for the 2035 General Plan and CAP; the purpose, intended uses, and geographic and environmental scope of the EIR; the environmental review process; ; subsequent actions required; the EIR comment process; and other agencies expected to use this EIR.
- **Chapter 2, "Executive Summary,"** provides an overview of the findings and conclusions of this EIR.
- **Chapter 3, "Project Description,"** describes the project location; project objectives; project purpose; the General Plan Update and CAP process; General Plan development estimates; and the relationship between the 2035 General Plan, the 2035 CAP, and other agencies and plans.

- **Chapter 4, "Environmental Impact Analysis,"** evaluates in equal detail the environmental effects of the two alternatives presented in the 2035 General Plan and identifies mitigation for potentially significant and significant effects.

- **Chapter 5, "Alternatives,"** provides a comparative analysis between the project Alternatives. For this EIR, an equal weight analysis between the East Alternative and the South Alternative is provided in Chapter 4 relative to the existing baseline. The Alternatives chapter provides a summary of the relative environmental impacts of these alternatives and the No Project Alternative. This chapter also describes alternatives that were considered but eliminated from detailed consideration in the EIR and identifies the "environmentally superior" alternative.

- **Chapter 6, "Other CEQA Considerations,"** describes the impacts of implementing the *Cumulative Scenario of the Proposed Project* in combination with the impacts of related past, present, and reasonably foreseeable future projects (the cumulative condition). Various policies in the 2035 General Plan control the timing, location, and sequence under which the Planning Area could build out through the planning horizon year (2035), specifically with regard to development in new Specific Plan Areas under the East and South Alternatives. Under the policies that control the level of development, neither Alternative would involve full buildout of the City's Planning Area. The Cumulative Scenario for the Proposed Project, by contrast, *does* envision full buildout of the City's Planning Area. Although it is not possible to know what year the Cumulative Scenario would build out, or whether the Cumulative Scenario actually would fully build out, it would be after 2035. Chapter 6 also discusses the growth inducement potential of the 2035 General Plan and 2035 CAP, significant irreversible environmental changes associated with the plans, and significant and unavoidable effects of the plans.

- **Chapter 7, "References,"** lists the sources of information cited throughout the EIR.

- **Chapter 8, "List of Preparers,"** lists the individuals who contributed to preparation of the EIR.

- **Appendices** provide background and technical information.

1.10 SUBSEQUENT ACTIONS REQUIRED

Further actions or procedures required to allow implementation of the 2035 General Plan may include revisions to zoning, tentative maps, site plans, building permits, grading permits, and other actions. Future development project proposals, public investments, and other actions would also be subject to CEQA requirements, as appropriate. As detailed in Chapter 5 of the 2035 CAP, the City will monitor progress to meeting the 2020 and 2035 greenhouse gas reduction targets, making appropriate updates to the City's greenhouse gas inventory, changes to the City's reduction targets, and revisions to existing reduction strategies or development of new reduction strategies to maintain consistency with State legislation.

In California, general plans are cities' and counties' guiding policy documents. Local agencies implement general plans in part through the adoption and enforcement of zoning codes, subdivision ordinances, and other regulations. General plan land use designations and planning policy provide a framework for zoning designations and development standards. Cities and counties' design regulations and guidelines are also governed by general plans. General plans often contain policy that guides any municipal code sections and ordinances that regulate grading, building permits, open space dedications, landscaping requirements, parkland dedication, off-street

parking requirements, transportation infrastructure, signage, improvement standards, impact fees, and other planning-related codes and ordinances.

1.11 MITIGATION MEASURES

CEQA Guideline section 15370 defines mitigation to include:

(a) "Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments."

During development of the 2035 General Plan, the City took into account the potential impacts discussed in this EIR and included policies and implementation programs in the 2035 General Plan that would reduce potential impacts. In some instances, additional feasible mitigation measures are proposed in the EIR to clarify 2035 General Plan policies as they relate to environmental effects and to further reduce potentially significant impacts.

CEQA requires the adoption of a mitigation monitoring program for all adopted mitigation measures. The mitigation monitoring plan must be designed to ensure compliance during project implementation (Public Resources Code Section 21081.6, CEQA Guidelines Section 15097).

When the project subjected to CEQA analysis is a general plan or other plan-level document, the monitoring plan can be the annual plan implementation report required by statute, such as a report on general plan status (CEQA Guidelines Section 15097[b]).

1.12 AVAILABILITY OF THE EIR

Copies of the 2035 General Plan, the 2035 CAP, and this EIR are available through the City of Woodland Community Development Department. The City has circulated the document to public agencies, other public and private organizations, property owners, developers, and other interested individuals. Detailed information related to the 2035 General Plan, the 2035 CAP, and this EIR are available at the City of Woodland City Hall and online at the General Plan Update Website:
http://www.cityofwoodland.org/gov/depts/cd/woodland_general_plan_2035/default.asp

Comments on the EIR are invited in writing or via email to:

Cindy Norris
City of Woodland Community Development Department
300 First Street
Woodland, CA 95695
cindy.norris@cityofwoodland.org

Comments should be focused on the adequacy and completeness of the EIR, or should address questions about the environmental consequences of project implementation. "Adequacy" is defined as the thoroughness of the EIR in addressing significant adverse physical environmental effects, identifying mitigation measures for those impacts, and supplying enough information for public officials to make decisions about the merits of the project.

After the close of the public review period, a Response to Comments document will be prepared, containing all the comments received during the public review period, responses to those comments, and other information the City deems relevant. This document will be made available for review before the City certifies it as complete. The Response to Comments document, the Draft EIR, and any changes to the Draft EIR together will comprise the Final EIR.

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2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

This summary provides an overview of the Environmental Impact Report (EIR) for the Draft *City of Woodland 2035 General Plan* (2035 General Plan) and Draft *2035 Climate Action Plan* (2035 CAP) (referred to together as the Proposed Project).

The 2035 General Plan and 2035 CAP are summarized here (with more detail in Section 3 of this EIR, "Project Description"), along with alternatives to the Proposed Project, which are described in detail in Section 5 of this EIR, "Alternatives." Table 2-1, at the end of this section, summarizes the environmental impacts identified for the Proposed Project in each of the environmental issue sections of this EIR. These impacts are described in detail throughout Section 4 of this EIR, "Environmental Impact Analysis." The summary table at the end of this section outlines environmental impacts, the significance without mitigation, proposed mitigation measure(s), and the significance of the impact with implementation of identified mitigation measures.

2.2 PURPOSE AND INTENDED USE OF THE EIR

2.2.1 PURPOSE

The CEQA Guidelines charge public agencies with the responsibility of avoiding or minimizing environmental damage that could result from implementation of a project, where feasible. As part of this responsibility, public agencies are required to balance various public objectives, including economic, environmental, and social issues.

The purpose of an EIR is neither to recommend approval nor denial of a project but rather to provide substantial evidence support such a decision. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. An EIR describes the significant environmental impacts of a project, identifies potentially feasible measures to mitigate significant impacts, and describes potentially feasible alternatives to the project that could reduce or avoid significant environmental effects. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project.

The lead agency is the public agency with primary responsibility over the proposed project. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The City of Woodland, as the lead agency, has prepared this EIR to evaluate the environmental impacts of implementation of the 2035 General Plan and 2035 CAP. The EIR was prepared under the direction of the City and is provided for review by both the public and public agencies, as required by CEQA. The City Council must certify the final EIR before adopting the final General Plan and CAP.

If significant environmental effects are identified, the lead agency must adopt "findings" indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the significant environmental impacts are identified as significant and unavoidable, the lead agency may still approve the project if it determines that social, economic, legal, technological, or other factors override the unavoidable impacts.

The lead agency would then be required to prepare a "Statement of Overriding Considerations" that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record.

In making its decision about the proposed project, the City considers the information in this EIR, comments received on the EIR, and responses to those comments, along with other available information and technical analysis.

2.2.2 INTENDED FUTURE USE

The City will use this EIR to limit the scope of subsequent site-specific approvals. The City intends to use the EIR to streamline environmental review and approval of private and public projects that are consistent with the final General Plan and CAP. The City will make full use of existing streamlining provided by CEQA, and will make full use of emerging streamlining techniques, as appropriate.

Public Resources Code 21083.3 and CEQA Guidelines 15183 provide direction on using a programmatic EIR for future projects. Under these provisions, additional environmental review under CEQA would only be required for issues "peculiar to the site." Thus, a lead agency may prepare a programmatic EIR for a general plan and greatly limit later required project-level analysis to site-specific issues only. CEQA Guidelines Section 15183 (f) states that impacts are not peculiar to the project if uniformly applied development policies or standards substantially mitigate that environmental effect. The determination of whether or not uniformly applied development policies or standards would substantially mitigate each environmental effect shall be based on substantial evidence, but need not necessarily be presented in an EIR.

In order to maximize the value of the EIR to future projects that are consistent with and promote the objectives of the final General Plan and CAP objectives, the City has strategically integrated the General Plan, CAP, and the environmental review. The policy development process has been used to vet potential mitigation strategies. The General Plan Update process was used to investigate policies and programs that will serve as uniformly applied standards and substantially limit the scope of analysis for projects consistent with the 2035 General Plan and 2035 CAP.

Section 15152 of the CEQA Guidelines provides that where a first-tier EIR has "adequately addressed" the subject of cumulative impacts, such impacts need not be revisited in second- and/or third-tier documents. According to Section 15152(f)(3), significant effects identified in a first-tier EIR are adequately addressed, for purposes of later approvals, if the lead agency determines that such effects have been either:

> "mitigated or avoided as a result of the prior [EIR] and findings adopted in connection with that prior [EIR]"; or
>
> "examined at a sufficient level of detail in the prior [EIR] to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project."

CEQA provides streamlining coverage to the City and other public agencies that have authority to implement EIR mitigation measures. Public agencies can use uniformly applied policies or standards to reduce effects of future projects, avoiding the need to analyze these effects, unless new information arises that changes the impact analysis (Public Resources Code Section 21083.3 [d]). For this reason, this EIR includes references to 2035

General Plan and 2035 CAP policies, programs, and reduction strategies, where appropriate, to address environmental impacts. Future CEQA documents can reference the policies, programs, and reduction strategies to demonstrate less-than-significant impacts and substantiate that later project-level issues are not "peculiar to the parcel" if they have been "substantially mitigated" by policies, programs, and reduction strategies (uniformly applied development policies) adopted as a part of the final 2035 General Plan and CAP.

2.3 EIR SCOPE AND CONTENT

This EIR was prepared in compliance with CEQA (Public Resources Code Section 21000 *et seq.*) and the State CEQA Guidelines (California Code of Regulations Section 15000 *et seq.*). This EIR evaluates the environmental impacts that could result from implementation of the 2035 General Plan and 2035 CAP.

The geographic scope that could be affected by a proposed project varies depending on the issue topic. The geographic area associated with different environmental effects was used to define the area considered for impact analysis. For example, the geographic scope for air pollutant impact analysis, such as those related to emissions of ozone precursors, is very broad, encompassing large areas within the same air basin. The geographic scope for stationary source noise impacts, on the other end of the spectrum, is relatively narrow, since noise attenuates substantially with distance, making impacts more localized.

Generally, this EIR analyzes impacts of the 2035 General Plan and 2035 CAP relative to environmental and regulatory conditions at the time of the NOP. Where a different environmental baseline was determined to be appropriate this is identified herein.

Environmental review in compliance with CEQA (Public Resources Code Sections 21000 et seq.) is required as part of the City's consideration of the 2035 General Plan and 2035 CAP. The EIR has been prepared in accordance with CEQA, including the CEQA statutes (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 *et seq.*), and relevant court decisions. This EIR includes an Introduction, Summary, and Project Description (Chapters 1, 2, and 3 respectively), and an evaluation of all required environmental topic areas including:

4.1 Aesthetics and Visual Resources
4.2 Agriculture and Forestry Resources
4.3 Air Quality
4.4 Biological Resources
4.5 Climate Change, Greenhouse Gas Emissions, and Energy
4.6 Cultural Resources
4.7 Geology, Soils, Mineral Resources, and Paleontological Resources
4.8 Hazardous Materials and Toxics
4.9 Hydrology, Flooding, and Water Quality
4.10 Land Use Planning, Population, and Housing
4.11 Noise and Vibration
4.12 Public Services and Recreation
4.13 Transportation and Circulation
4.14 Utilities
5 Alternatives
6 Other CEQA Considerations

Chapter 5 of this EIR, "Alternatives," includes an analysis of alternatives to the proposed 2035 General Plan and

2035 CAP, as required by Section 15126.6 of the CEQA Guidelines. The 2035 General Plan sets forth two different alternatives for growth, and the City Council will choose its preferred direction. This EIR accordingly evaluates each of these alternatives on an "equal weight" basis. As described in more detail below, Chapter 5 provides a summary of the equal weight analysis of the two alternatives presented in the 2035 General Plan and Chapter 4 of this EIR, and provides a comparative analysis of the No Project Alternative, which includes the Preliminary 2020 Climate Action Plan, with the 2035 General Plan and 2035 CAP. Other CEQA-mandated issues discussed within the context of this EIR are cumulative impacts, growth-inducing impacts, irreversible environmental effects, and significant and unavoidable adverse impacts (Chapter 6 of this EIR, "Other CEQA Considerations"). Chapter 7 of this EIR, "References," identifies the references and citations used in drafting the EIR, and Chapter 8 of this EIR, "Preparers," lists the preparers of the EIR.

2.4 GENERAL PLAN PROJECT PURPOSE AND OBJECTIVES

The City's intent for development and conservation is outlined throughout the Elements of the 2035 General Plan. These key policy issues were developed based on direction from the City Council in the 2035 General Plan Guiding Principles. The City's Guiding Principles were developed to set a framework for the 2035 General Plan. They allow the City to measure future actions to ensure that the City grows consistent with its values. The Guiding Principles are referenced throughout the General Plan Elements to set the stage for goals, objectives, policies, and programs. The Guiding Principles also serve as the Project Objectives for this EIR. They include the following:

- **Quality and Character:** Retain and enhance Woodland's quality of life, its distinctive identity and small-town characteristics.
- **Orderly Development:** Promote new growth while achieving an orderly pattern of community development, consistent with economic, social, fiscal and environmental needs.
- **Historic Downtown:** Strengthen the historic downtown district as the City's center of shopping, dining, entertainment and employment.
- **Economic Development:** Foster economic growth and diversification with a range of employment opportunities for all residents.
- **Mobility Options:** Coordinate land use and transportation planning to provide a range of attractive and viable transportation options, such as bicycle, pedestrian, and transit.
- **Housing Choice:** Provide a variety of housing types to meet the needs for all generations and income levels.
- **Agricultural Heritage:** Preserve and protect prime agricultural lands and their uses within and surrounding the community.
- **Safety**: Ensure that Woodland remains a safe place to live, protected from natural and manmade hazards.
- **Environmental Stewardship:** Foster a sustainable community for the next generation and protect and improve the quality of the natural environment.

- **Public Services**: Provide realistic, supportable and appropriate levels of public service that are sustainable and fiscally sound.
- **Health and Recreation**: Provide all residents with opportunities to live an active, healthy, and green lifestyle.
- **Quality Education:** Foster quality educational and enrichment opportunities.

2.5 CLIMATE ACTION PLAN OBJECTIVES

The 2035 CAP is organized into six focus areas: Energy, Transportation and Land Use, Urban Forest and Open Space, Water and Solid Waste, Public Involvement, and Municipal Operations. Each of the six focus areas includes overarching objectives, strategies to achieve each objective, and implementation actions for each strategy. The following discussion summarizes the objectives of each focus area.

Progress in reducing GHGs by 2020 is expected to come primarily from lowering energy use, using renewable energy, reducing gas and diesel vehicle use, and increasing tree canopy. However, efforts in all areas are important to implementation success.

2.5.1 ENERGY

Much of the progress toward meeting Woodland's 2020 GHG reduction target can be achieved through individual actions to reduce energy demand and increase the proportion of energy obtained from renewable sources. Many factors are making it possible to achieve significant, immediate reductions in energy-related GHGs: rapidly improving technologies; availability of more energy-efficient building materials, lights, and equipment; and financing mechanisms, such as property-assessed clean energy programs, that make improvements more affordable. The following objectives are provided in the 2035 CAP to address energy demand:

- Reduce Building Energy Use
- Increase Renewable Energy Generation

2.5.2 TRANSPORTATION AND LAND USE

Transportation and land use strategies for GHG reduction are closely linked because of the influence land use policies can have on types, rates, and patterns of growth; the distances people travel for essential services; and the ease or difficulty of different modes of travel. Land use and transportation infrastructure choices that promote convenience of pedestrian, bicycle, and transit travel and that situate residents near workplaces, goods and services, and recreation opportunities are essential to reducing GHGs from motor vehicle use. The following objectives are provided in the 2035 CAP to address transportation and land use:

- Implement Land Use Policies to Support Reduced Motor Vehicle Use
- Reduce Vehicle Trip Mileage and Equipment Idling Emissions
- Replace Gas and Diesel Vehicles with Alternative-Fuel Vehicles

2.5.3 URBAN FOREST AND OPEN SPACE

With proper species selection, placement, and management, trees can help reduce GHG emissions by shading buildings, which reduces the need for air conditioning; shading pavement and reducing "heat island" effects;

insulating buildings from cold winds; capturing and storing atmospheric carbon dioxide; and using solar energy to convert moisture to water vapor, resulting in cooler air. The following objectives are provided in the 2035 CAP to address urban forest and open space:

- Increase Community Tree Canopy
- Maintain and Enhance Open Space Environmental Values

2.5.4 WATER AND SOLID WASTE

Reducing water use at the tap reduces the energy used by the City for water pumping and treatment and for wastewater treatment, as well as the energy used to heat water in homes and businesses. Solid waste contributes to GHG emissions through decomposition at landfills. The following objectives are provided in the 2035 CAP to address water and waste:

- Reduce Per Capita Water Demand
- Achieve 75 percent Landfill Waste Diversion
- Achieve 90 percent Landfill Methane Capture

2.5.5 PUBLIC INVOLVEMENT

The success of most of the 2035 CAP strategies will depend on the combined actions of a great many individuals. Community engagement on the scale that is needed for success will require reliance, in part, on an effort driven by community members to educate and inspire other community members. The following objectives are provided in the 2035 CAP to address public involvement:

- Build Community Engagement in CAP Implementation
- Measure CAP Implementation Progress and Adjust Actions as Needed

2.5.6 MUNICIPAL OPERATIONS

Municipal operations that generate GHG emissions include the operation of gas and diesel vehicles and equipment and the use of electrical power to operate City buildings, sports field lighting, streetlights and signals, wells, wastewater treatment processes, and stormwater pumps. The following objectives are provided in the 2035 CAP to address these sources:

- Incorporate Sustainable Practices into All City Operations
- Reduce Emissions from Municipal Electricity Use by 80 percent or More
- Reduce Vehicle Fleet and Employee Commute Emissions

2.6 SUMMARY OF PROJECT DESCRIPTION

The Proposed Project is adoption of the 2035 General Plan and 2035 CAP. The 2035 General Plan is the City's overarching policy and planning document. The 2035 General Plan indicates the City's long-range objectives for physical development and conservation. The 2035 General Plan provides decision makers, City staff, other public agency staff, property owners, interested property developers and builders, and the public-at-large with the City's policy direction for managing land use change.

The 2035 General Plan is comprehensive in scope, addressing land use, transportation, community design, housing, conservation of resources, economic development, public facilities and infrastructure, public safety, and open space, among many other subjects.

The 2035 General Plan chapters include:

- Introduction and Administration
- Land Use, Community Design, and Historic Preservation Element
- Transportation and Circulation Element
- Public Facilities and Services Element
- Healthy Lifestyles Element
- Conservation and Open Space Element
- Safety Element
- Economic Development Element
- Housing Element

The Elements of the 2035 General Plan present background and context to help the reader understand the focus and content of goals, objectives, policies, and programs. Goals are a description of an ideal future end. Policies are specified ends or conditions that are an intermediate step towards attaining a goal; they are specific statements to guide decision-making. Policies are also used to mitigate environmental impacts associated with buildout of the 2035 General Plan.

The 2035 CAP identifies measures that implement the 2035 General Plan, while also contributing to the state's climate protection efforts and complying with applicable Yolo-Solano Air Quality District standards. In addition, the 2035 CAP measures increase community resilience and efficiency of human / economic activities that consume resources which, in turn, lead to greenhouse gas emission (e.g., increasing local energy independence, reducing transportation-related emissions, improving building energy and water efficiency, and extending the life of area landfills). The 2035 CAP also supports regional collaborations among local jurisdictions on climate change issues. Chapters of the 2035 CAP include:

- Executive Summary
- Introduction and Overview
- Emissions Inventories and Targets
- Guide to Focus Areas
- Energy
- Transportation and Land Use
- Urban Forest and Open Space
- Water and Waste
- Public Involvement
- Municipal Operations
- Additional Actions
- 2020 and 2035 Target Process
- Implementation and Monitoring

The 2035 General Plan plans for a total population of approximately 75,000, 27,000 dwelling units, 45,340 local jobs, and 37.2 million nonresidential square feet at buildout. In addition, the 2035 General Plan plans for additional parks and recreational facilities, school facilities and expansions, open space for conservation and for passive recreational use, open space buffers, drainage areas and non-vehicular trails, public infrastructure, and other improvements.

Adoption and implementation of the Proposed Project will include (not limited to) the following actions by the City of Woodland:

- Adopt a resolution certifying the Final Environmental Impact Report for the 2035 General Plan, adopting Findings of Fact, and adopting a Statement of Overriding Considerations
- Adopt a resolution adopting the final 2035 General Plan and final Climate Action Plan
- Direct staff to petition the Yolo Local Agency Formation Commission to amend the Woodland Sphere of Influent to reflect the voter approved Urban Limit Line and the 2035 General Plan
- Direct staff to commence update of the Zoning Ordinance (Chapter 25 of the Woodland Municipal Code)

2.7 PROJECT ALTERNATIVES

The environmental analysis in this EIR evaluates two different alternatives for growth, the East Alternative and the South Alternative. The analysis considers whether different locations, amounts, or design of development would reduce potentially significant impacts attributable to General Plan implementation.

The East Alternative. This alternative envisions growth occurring in the areas labeled SP-1A, SP-2, and SP-3 by 2035. SP-2 is a new development area in the eastern portion of the Planning Area that was designated Urban Reserve in the 2002 General Plan and that is not anticipated for development under the South Alternative. The East Alternative plans for approximately 19,300 new residents, 7,000 new housing units, 17,386,000 new square feet of non-residential building space, and 19,340 new jobs.

The South Alternative. This alternative envisions growth occurring in the areas labeled SP-1A, SP-1B, SP-1C, and SP-3 by 2035. The South Alternative would have the City grow primarily in the southern area, in those areas labeled SP-1A, 1B, and 1C, as well as in the north in the area labeled SP-3. These areas are primarily used for agricultural purposes, consisting of large rural open and minimally developed parcels and agricultural fields, and would be developed with mixed-uses, consisting of research and technology business parks, various residential and commercial property types, and public facilities (schools, libraries, etc.). The South Alternative plans for approximately 19,300 new residents, 7,000 new housing units, 16,685,000 new square feet of non-residential building space, and 18,210 new jobs

As an alternative to both the East and the South Alternatives, this EIR also considers the legally required No Project Alternative, which is defined as buildout of the 2002 General Plan and implementation of the 2020 Preliminary CAP. This alternative assumes that the 2035 General Plan would not be implemented and instead the City would build out as provided in the 2002 General Plan, as it has been amended. This alternative also assumes the 2035 CAP would not be implemented and instead the 2020 Preliminary CAP would continue to be implemented. The 2020 Preliminary CAP does not contain reduction targets beyond 2020, and it does not satisfy

the requirements of Section 15183.5 of the CEQA Guidelines related to "Tiering and Streamlining the Analysis of Greenhouse Gas Emissions". The No Project Alternative assumes approximately 14,930 new residents, 5,420 new housing units, 5,545,000 new square feet of non-residential building space, and 8,170 new jobs.

For the purposes of this EIR, the No Project Alternative is environmentally superior. The next most environmentally superior alternative is the South Alternative. Please refer to Chapter 5 of this EIR, "Alternatives," for more detail.

2.8 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Section 15123(b)(2) and (3) require the EIR summary to address areas of controversy know by the City including issue raised by agencies and the public, and issues to be resolved including the choice among alternatives and whether and how to mitigate significant effects.

Issues raised during the NOP comment period include:

- Agricultural conversion
- Climate change
- Consistency with regional transportation plans
- Direct and cumulative state highway system impacts
- Disadvantaged unincorporated communities
- Multi-modal transit
- Native American consultation
- Noise, land use, and air quality concerns
- Parks and open space
- Population change
- Protecting right of way for new and expanded state highway system facilities
- Protection of historic resources
- Recent flood updates should be considered in baseline conditions

All of these issues have been addressed within various section of the 2035 EIR. In addition Chapter 4 (Environmental Impact Analysis) addresses mitigation for significant effects and 5 (Alternatives) addresses choices to be made by the City among alternatives. Other areas of controversy and/or issues to be resolved may emerge during the course of the public review and decision-making process.

2.9 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Information in Table 2-1, "Summary of Environmental Impacts and Mitigation Measures," has been organized to correspond with the environmental issues discussed in Section 4 of this EIR, "Environmental Impact Analysis," of this document. The summary table is arranged in four columns: Impacts; Level of Significance before Mitigation; Mitigation Measures; and Level of Significance after Mitigation.

This EIR also provides an analysis of cumulative impacts of the 2035 General Plan, taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). Cumulative impacts are described in

detail in Section 6 of this EIR, “Other CEQA Considerations,” along with growth-inducing impacts and significant irreversible environmental changes, and summarized below.

Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.1 Aesthetics and Visual Resources			
IMPACT 4.1-1 Substantial Adverse Effect on a Scenic Vista. Implementation of the Proposed Project would change views of farmland from individual parcels, but it would not have a substantial adverse effect on a scenic vista. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.1-2 Substantially Damage Scenic Resources, Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway. There is no state scenic highway within or in close proximity to the Planning Area. In addition, policies and implementation programs in the Proposed Project require that the city's tree canopy is managed and improved and that historic buildings are preserved. There are no rock outcroppings in the Planning Area. The impact is less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.1-3 Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings. The Proposed Project facilitates new development that will change the existing visual character of the Planning Area. However, impacts on visual character and quality of the site are subjective and variable between different individuals. The impact is considered significant.	S	None available.	SU
IMPACT 4.1-4 Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area. Implementation of the Proposed Project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The impact is considered significant.	S	**Mitigation Measure 4.1-4 – The 2035 General Plan should be amended to include the following new policies:** Policy 2.F.4 Light Pollution. Control artificial lighting to avoid spill-over lighting and preserve the night sky. Policy 2.F.5 Glare. Control artificial lighting to prevent glare.	SU
4.2 Agriculture and Forestry Resources			
IMPACT 4.2-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use. Implementation of the Proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. The impact is considered significant.	S	**Mitigation Measure 4.2-1 – The 2035 General Plan should be amended to include the following modified policy:** Policy 2.A.3 Agricultural Mitigation. For impacts to agriculture within the ULL, require one acre to be permanently conserved for every acre converted to urban development. <u>The farmland being conserved must be of the same Farmland Mapping and Monitoring Program type (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance) as the farmland that is being converted, or of a type of higher quality, and the conserved farmland should be located as close to the Woodland ULL as possible.</u>	SU
IMPACT 4.2-2 Conflict with Existing Zoning For Agricultural Use, or a Williamson Act Contract. There are parcels currently zoned for agricultural use in the Planning Area; however, the 2002 General Plan specifies that the City may allow development on land zoned Agriculture when it is needed for urban development. There are properties adjacent to new growth areas under Williamson Act contracts, but policies in the 2035 General Plan reduce potential impacts on these properties. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.2-3 Involve Other Changes in the Existing Environment that, Due to Their Location or Nature, Could Result in Conversion of Farmland, to Non-Agricultural Use. Policies in the 2035 General Plan emphasize the importance of agriculture to Woodland and support the viability of farming operations; however, implementation of the Proposed Project would result in the conversion of farmland to non-agricultural use. The impact is considered significant and unavoidable.	S	**Mitigation Measure 4.2-3 – The 2035 General Plan should be amended to include the following new policy:** Policy 7.C.5 Agricultural Buffer. Require new development that occurs at the edge of the ULL to be set back a minimum of 300 feet from adjacent agricultural land where possible. Exceptions and alternative means of providing agricultural buffers may be considered by the Planning Commission on a case by case basis for parcels whose dimensions would preclude or severely limit development potential with the required buffer size. The buffer shall be landscaped and may include public right of way.	SU

CC = cumulatively considerable LTCC = less than cumulatively considerable LTS = less than significant NI = no impact PS = potentially significant S = significant SU = significant and unavoidable

Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.3 Air Quality			
IMPACT 4.3-1 Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors. Emissions of criteria air pollutants and precursors could exceed an ambient air quality standard or contribute substantially to an existing or predicted air quality exceedance. The level of construction emissions could conflict with or obstruct implementation of the applicable air quality plan. YSAQMD recommends that lead agencies incorporate construction mitigation measures, and the Proposed Project has policies that would reduce this impact. However, given the scale of the Proposed Project, the City cannot determine that potential construction impacts would be below relevant significance thresholds throughout the planning horizon. The impact is considered significant.	S	**Mitigation Measure 4.3-1a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Air Quality 1)** New developments that could generate a potentially significant short-term air quality impact shall incorporate feasible construction mitigation strategies, including those listed below, those included in an updated set of mitigation recommendations prepared by the Yolo-Solano Air Quality Management District, or those determined by the City to be as effective: a. Water all active construction areas at least twice daily. b. Haul trucks shall maintain at least two feet of freeboard. c. Cover all trucks hauling soil, sand, and other loose materials. d. Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut-and-fill operations and hydroseed area. e. Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). f. Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. g. Plant vegetative ground cover in disturbed areas as soon as possible. h. Cover inactive storage piles. i. Sweep streets if visible soil material is carried out from the construction site. j. Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips or mulch. k. Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel. l. Limit all idling of vehicles and equipment that use gasoline or diesel fuel to five minutes maximum. m. Use alternative power source, such as electricity, for construction equipment or use reformulated and emulsified fuels, incorporate catalyst and filtration technologies, and generally modernize the equipment fleet with cleaner and newer engines. **Mitigation Measure 4.3-1b – Policy 7.F.2. will be amended as follows:** Policy 7.F.2 Best Management Practices. Require <u>all</u> projects to implement Best Management Practices (BMPs) for reducing air pollutant emissions associated with the construction and operation of development projects <u>as a standard City condition of approval</u>.	SU
IMPACT 4.3-2 Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors. Long-term operational emissions would be generated from day-to-day activities associated with residential and non-residential land uses under the Proposed Project. Operational emissions associated with the Proposed Project would exceed applicable YSAQMD thresholds. The level of operational emissions could conflict with or obstruct implementation of the applicable air quality plan. Proposed Project policies would reduce potentially significant impacts, but not to a level that would be below relevant thresholds. The impact is considered significant.	S	**Mitigation Measure 4.3-2 – Implement Mitigation Measure 4.3-1b.**	SU
IMPACT 4.3-3 Expose Sensitive Receptors to Substantial Pollutant Concentrations. Project-related vehicle trips would contribute vehicles to local intersections that could cause a CO hotspot (i.e., exceedance of the CO ambient air quality standard). However, it is not anticipated that the Proposed Project's land uses would contribute substantial vehicle volumes to existing or future intersections that could cause a CO hotspot. During construction and operation of the Proposed Project, localized air quality emissions would be generated that could affect existing and proposed sensitive receptors. Construction activities would generate diesel particulate matter (diesel PM) emissions that could affect existing and proposed sensitive receptors. Existing regulations and proposed policies and implementation programs would reduce potential exposure to substantial pollutant concentrations. The impact is considered significant.	S	**Mitigation Measure 4.3-3a – Policy 7.F.3 should be amended as follows:** Policy 7.F.3. Protect Sensitive Receptors. For the purposes of environmental review <u>of potential toxic air contaminant impacts</u>, consider residentially designated land uses, hospitals <u>and other medical facilities</u>, ~~and~~ residential care facilities, <u>schools, day care centers, playgrounds</u> to be "sensitive receptors." Discourage the location of new sensitive receptor uses within 500 feet of a limited access state highway (SR 113 and 1-5). <u>Implement applicable buffer distances recommended by the California Air Resources Board between sensitive uses and sources of substantial pollutant concentrations.</u> **Mitigation Measure 4.3-3b – Implement Mitigation Measure 4.3-1b.**	LTS for construction-related SU for stationary source exposure

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Mitigation Measure 4.3-3c – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Air Quality 2) a. New development shall be required to demonstrate adherence with applicable YSAQMD-recommended health risk thresholds involving sensitive receptors, uses that involve substantial truck trips, and large gas stations, as defined by the applicable regulations. "Substantial truck trips" is defined as more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or TRU unit operations that exceed 300 hours per week. A "large gas station" is one that would be anticipated to accommodate a throughput of 3.6 million gallons per year or greater. b. Proposed uses that include sensitive receptors may demonstrate compliance with this implementation program by providing a minimum 1,000-foot buffer from existing uses that involve substantial truck trips and a minimum 50-foot buffer from existing large gas stations. c. Proposed uses that involve substantial truck trips may demonstrate compliance with this implementation program by providing a minimum 1,000-foot buffer from properties where the City's land use designation would allow sensitive receptors. d. Proposed large gas stations may demonstrate compliance with this implementation program by providing a minimum300-foot buffer, while typical gas dispensing facilities would provide a minimum50-foot buffer from existing sensitive receptors and from properties where the City's land use designation would allow sensitive receptors. e. Avoid siting new sensitive receptors within 500 feet of the edge of the closest travel lane of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day. f. Avoid siting new sensitive land uses within 300 feet of any existing dry cleaning operation. g. As an alternative to these buffer distances, proposed sensitive receptors, uses that involve substantial truck trips, and large gas stations may provide a site-specific health risk assessment, using methods consistent with applicable guidance from the Office of Environmental Health Hazard Assessment, with mitigation, if necessary, to demonstrate compliance with applicable YSAQMD-recommended health risk thresholds. When health risk impacts exceed YSAQMD-recommended thresholds, feasible on-site mitigation measures to reduce TAC exposure shall be implemented to mitigate health risk impacts below YSAQMD thresholds. On-site measures could include, but are not limited to providing enhanced filtration systems (e.g., MERV 13 or greater) for near-by sensitive receptor buildings, changes to the TAC emission source's operation, and positioning of exhaust and intake for ventilation systems to minimize exposure among others. **Mitigation Measure 4.3-3d – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Air Quality 3)** a. New development that would require the use of diesel-fueled construction equipment within 300 feet of an existing sensitive receptor use an equipment mix, incorporate buffering, schedule construction activities, or use other strategies to reduce potential health risk consistent with guidance from the Yolo-Solano Air Quality Management District. b. Alternatively, a project applicant may prepare a site-specific estimate of diesel PM emissions associated with total construction activities and evaluate for health risk impact on existing sensitive receptors in order to demonstrate that applicable YSAQMD-recommended thresholds for toxic air contaminants would not be exceeded or that applicable thresholds would not be exceeded with the application of alternative mitigation techniques approved by the City.	
IMPACT 4.3-4 Objectionable Odors Affecting a Substantial Number of People. The Proposed Project includes policies that would avoid exposure of a substantial number of people to objectionable odors. The impact is less than significant.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.4 Biological Resources			
IMPACT 4.4-1 Loss of Special-status Plants and Loss of Special-status Plant Habitat. Implementation of the Proposed Project would result in conversion of habitat for special-status plant species, which could result in loss of special-status plants either through direct removal or through habitat degradation. The impact is considered potentially significant.	PS	**Mitigation Measure 4.4-1a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Biological Resources 1)** a. The City will require biological inventory surveys for new developments that could affect special-status species or sensitive habitat in areas designated for development under the General Plan. b. The City will work with project applicants to identify opportunities to preserve special-status species occurrences and sensitive habitats through design and planning. If the HCP/NCCP is adopted and state and federal ITPs have been issued, the City shall implement the applicable requirements of the HCP/NCCP as relevant to any specific land use project. If the HCP/NCCP is not in place and/or ITPs have not been issued, the City shall follow the steps described below. c. If the City determines it is reasonable and feasible to do so, while still achieving the specific project development goals and objectives, the City will require preservation of occupied special-status species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status species and sensitive habitats. d. If the project would result in take of state or federally listed species, the City will require project proponent/s to obtain take authorization from the U.S. Fish & Wildlife Service or the California Department of Fish and Wildlife, as appropriate, depending on species status, and comply with all conditions of the take authorization. e. If the Yolo HCP/NCCP is not adopted or the affected species or habitat is not covered under the plan, the City will require project applicants to develop a mitigation and monitoring plan, in coordination with CDFW and/or USFWS, as appropriate depending on species status, to compensate for the loss of special-status species and sensitive habitats. The mitigation and monitoring plan will describe in detail how loss of special-status species or sensitive habitats shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, management and monitoring to avoid indirect habitat degradation (e.g., management of invasive plant species, maintenance of required hydrology), success criteria ensuring that habitat function goals and objectives are met and target special-status species are established, performance standards to ensure success, and remedial actions if performance standards are not met. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment). f. If available, purchase of mitigation credits at an agency-approved mitigation bank (i.e., approved by the agency with jurisdiction over the affected species or habitat) in Yolo County, will be acceptable for compensatory mitigation for special-status species that are not covered under the Yolo HCP/NCCP. **Mitigation Measure 4.4-1b – Policy 7.B.5., Policy 7.B.7, and Policy 7.B.11 should be amended as follows:** Policy 7.B.5 Open Space for Conservation. Where appropriate, permanently protect as open space areas of natural resource value, including sensitive habitat types (e.g., alkali sink and prairie, freshwater wetlands, freshwater marsh, riparian forest, drainages), ~~wetland preserves, riparian corridors, woodlands,~~ special-status plant occurrences, and floodplains. ~~Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.~~ Maintain connectivity between open space areas designated for habitat conservation values within the Planning Area as well as linkages to adjacent habitats outside of the Planning Area, such as Willow Slough, Cache Creek, and habitat preserves to the east. Policy 7.B.7 Woodland Regional Park. Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for ~~rare native~~ special-status plants and allow for public access that is compatible with and	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		promotes public education of the site's habitat value. Policy 7.B.11 Sensitive Site Planning. Site new development to maximize the protection of native tree species and ~~sensitive~~ special-status plant and wildlife habitats.	
IMPACT 4.4-2 Loss and Degradation of Habitat for Special-status Wildlife Species and Potential Direct Take of Individuals. Implementation of the Proposed Project would allow conversion of undeveloped land that currently supports known occupied and potential habitat for special-status wildlife species to residential, commercial, and other developed land uses. Buildout of the Proposed Project would result in loss and degradation of suitable habitat for several special-status wildlife species and could result in take of State- and Federally-listed wildlife species and loss or displacement of special-status wildlife populations. However, implementation of the 2035 General Plan policies and implementation program and compliance with state and federal laws, along with the General Plan Land Use Diagram would reduce potential impacts on special-status wildlife species. The impact is considered potentially significant.	PS	**Mitigation Measure 4.4-2a – Policy 7.B.6 and 7.B.8 should be amended as follows:** Policy 7.B.6. Open Space Buffer. Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29 and its existing wildlife habitat values. Policy 7.B.8 Native and Compatible Non-Native Plant Species. Require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in order to preserve the visual integrity of the landscape, ~~and~~ provide benefits ~~habitat conditions suitable~~ for native wildlife, and ensure that a variety of plants suited to the region are maintained. **Mitigation Measure 4.4-2b – Implement Mitigation Measure 4.4.1a** **Mitigation Measure 4.4-2c – Implement Mitigation Measure 4.4.1b**	LTS
IMPACT 4.4-3 Loss and Degradation of Riparian Habitat or Other Sensitive Natural Communities. Implementation of the Proposed Project would result in conversion of undeveloped land that currently supports a limited amount of riparian habitat and possibly remnant alkali prairie to residential, commercial, and other developed land uses. (All other sensitive natural communities, including vernal pool habitats and other freshwater wetlands found in the Planning Area are addressed under impacts on federally protected wetlands and are not discussed here.) Therefore, buildout of the Proposed Project could result in loss and degradation of riparian or alkali prairie habitat. However, implementation of the 2035 General Plan policies and implementation programs and compliance with state and federal laws, along with the General Plan Land Use Diagram would reduce potential impacts on riparian habitat and other sensitive natural communities. The impact is considered potentially significant.	PS	**Mitigation Measure 4.4-3a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Biological Resources 3):** If the project would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, the City will require project proponent/s to notify the California Department of Fish and Wildlife, obtain a Lake and Streambed Alteration Agreement if determined necessary by the California Department of Fish and Wildlife, and comply with all conditions of the Lake and Streambed Alteration Agreement. **Mitigation Measure 4.4-3b – Implement Mitigation Measure 4.4-1a** **Mitigation Measure 4.4-3c – Implement Mitigation Measure 4.4-1b** **Mitigation Measure 4.4-3d – Implement Mitigation Measure 4.4-2a**	LTS
IMPACT 4.4-4 Loss and Degradation of Federally Protected Wetlands. Implementation of the Proposed Project would result in conversion of land that currently supports waterways and ponds and may support freshwater marsh, vernal pools, and other freshwater wetlands to residential, commercial, and other developed land uses. These wetland habitats and other waters may be protected under Section 404 of the CWA. Therefore, buildout of the Proposed Project could result in loss and degradation of federally protected wetlands. The impact is considered potentially significant.	PS	**Mitigation Measure 4.4-4a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Biological Resources 3)** If the project would result in ground disturbance on sites containing waterways or other aquatic habitats, the City will require project proponent/s to complete a delineation of waters of the United States according to U.S. Army Corps of Engineers' methods, and to submit the completed delineation to the U.S. Army Corps of Engineers for jurisdictional determination. If the project would result in fill of wetlands or other waters of the United States, the City will require project proponent/s to obtain a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers and water quality certification from the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. If the project involves work in areas containing waters disclaimed by the USACE, project applicants shall obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board pursuant to the Porter Cologne Act. Project applicants shall be required to obtain all needed permits prior to project implementation, to abide by the conditions of the permits, including all mitigation requirements, and to implement all requirements of the permits in the timeframes required therein. **Mitigation Measure 4.4-4b – Implement Mitigation Measure 4.4-1a** **Mitigation Measure 4.4-4b – Implement Mitigation Measure 4.4-1b**	LTS
IMPACT 4.4-5 Interference with Wildlife Movement Corridors and Nursery Sites. The Proposed Project plans for development within the Pacific flyway, a major bird migration route. However, buildout of the Proposed Project would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds such that it would no longer function as a migratory corridor. This impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.4-6 Conflict with Local Ordinances Protecting Biological Resources. The 2035 General Plan policies and compliance with City ordinance would reduce potential impacts on protected trees. The impact is considered less than significant.	LTS	No mitigation is required	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
IMPACT 4.4-7 Conflict with an Adopted Habitat Conservation Plan Natural Community Conservation Plan. The General Plan Land Use Diagram and 2035 General Plan policies and implementation programs have been designed to provide consistency with the proposed Yolo HCP/NCCP. This impact is considered significant.	S	**Mitigation Measure 4.4-7a – Implement Mitigation Measure 4.4-1a** **Mitigation Measure 4.4-7b – Implement Mitigation Measure 4.4-1b** **Mitigation Measure 4.4-7c – Implement Mitigation Measure 4.4-2a**	LTS
IMPACT 4.4-8 Substantial Reduction in the Habitat of a Fish or Wildlife Species, Cause a Fish or Wildlife Population to Drop Below Self-Sustaining Levels, Eliminate a Plant or Animal Community, or Substantially Reduce the Number or Restrict the Range of an Endangered, Rare, or Threatened Species. Implementing the Proposed Project would not substantially reduce the habitat of a fish or wildlife species, eliminate a plant or animal community, or substantially reduce the number or restrict the range of any endangered, rare, or threatened species because the majority of known occurrences of special-status species and their habitat would be preserved. This impact is less than significant.	LTS	No mitigation is required.	LTS
4.5 Climate Change, Greenhouse Gas Emissions, and Energy			
IMPACT 4.5-1 Generation of Greenhouse Gas Emissions. Implementation of the Proposed Project would implement planned land uses that would involve short-term GHG emissions associated with construction and infrastructure improvements, along with long-term operational emissions. However, policies and reduction strategies within the 2035 General Plan and the 2035 CAP would ensure that the City achieves its share of AB 32, Executive Order B-30-15, and Executive Order S-3-05 emissions reductions. The impact is less than cumulatively considerable.	CC	**Mitigation Measure 4.5-1a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Greenhouse Gas Emissions 1)** a. The City will maintain a Climate Action Plan designed to achieve the reduction targets for land use-related emissions for the years 2020 and 2035 and put the City on a trajectory toward goals for longer-term years, such as 2050. The City's reduction targets may be revised over time, but will represent a rate of emissions that is efficient enough to provide for Woodland's share of AB 32, Executive Order B-30-15, SB 32,and Executive Order S-3-05 emissions reductions. b. The Climate Action Plan will focus on GHG emission sectors over which the City could have influence – either through entitlement authority, public investments, incentives, or other feasible means. When making the comparison between Woodland's GHG efficiency and that required for the state as a whole, the City can remove from consideration GHG sources that are beyond local control. c. The City will monitor relevant local, regional, State, and federal legislation and regulations related to GHG emissions, land use planning, and environmental review, and will make changes to the Climate Action Plan accordingly. Future regulations may have the effect of reducing GHG emissions associated with implementation of the Proposed Project. The effect of future regulations shall be taken into account in future revisions to the Climate Action Plan. New transportation modeling tools may become available that allow revisions to emissions estimates based on the City's policies related to land use, urban design, and transportation. d. The City will revise the Climate Action Plan, as necessary, based on updated inventories and assessments of the effectiveness of reduction strategies no less than every 5 years. If, based on the City's future updated assessments, existing reduction strategies would not achieve the City's reduction targets, the City will make revisions to strategies or develop new strategies. The City will make revisions to its reduction targets, if necessary, to ensure that the target continues to demonstrate an appropriate share of the State's emission reduction goals for Woodland. The City anticipates that a Climate Action Plan update will be needed after new statewide measures are adopted to reduce GHG emissions, such as when the State updates the Air Resources Board Scoping Plan. The City will make revisions to the Climate Action Plan, if necessary, as new technology becomes available that would affect emissions in the Planning Area or the City's ability to forecast future emissions. e. In maintaining the Climate Action Plan, during the CAP updates described above, the City will consider new or revised reduction strategies that may be necessary to achieve the City's reduction targets, while also promoting other goals of the City's General Plan. The City will identify additional plans, policies, projects, mitigation measures, and regulations that are necessary to reduce GHG emissions and achieve the City's reduction targets. The City will consider regulatory changes, infrastructure investment strategies, incentives, contributions to (or local use of) carbon offset programs, and other measures, as appropriate. The City shall consider financing programs for installation and use of renewable energy infrastructure in new and/or existing development, building codes to further increase energy efficiency in new buildings, incentive programs to assist existing property owners in making energy efficiency upgrades, travel demand management programs for new nonresidential projects, and other mechanisms that would reduce GHG	LTCC

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		emissions. The City will prioritize reduction strategies that offer co-benefits, such as reducing household or business transportation costs, reducing household and business utility bills, improving local air quality, reducing energy use, reducing traffic congestion, conserving water and other resources, moderating the heat island effect, preserving natural habitat, creating local jobs, among other benefits. f. The City anticipates that State funding for GHG-efficient transportation systems and other local applications of the State's GHG reduction mandates will be important in meeting the State's overall GHG goals. Local governments will rely on state funding to improve existing buildings and provide more energy- and GHG-efficient sources of electricity. The City will monitor grant and other funding programs that could be used to implement different components of the Climate Action Plan. **Mitigation Measure 4.5-1b – Implementation of Mitigation Measure 4.3-2a** **Mitigation Measure 4.5-1c – Implementation of Mitigation Measure 4.3-2b**	
IMPACT 4.5-2 Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases. 2035 General Plan policies and implementation programs and the 2035 CAP ensure that GHG emissions within the Planning Area occur at a rate that is consistent with goals set for the State government to reduce GHG emissions. Projects that seek to use streamlining identified under SB 375 would need to determine consistency with SACOG's MTP/SCS. The impact is potentially significant.	PS	**Mitigation Measure 4.5-2 – The 2035 General Plan should be amended to include the following new policy:** Policy 7.F.12. MTP/SCS Consistency. For projects seeking to utilize available CEQA streamlining, determine project consistency with the MTP/SCS as a component of application review.	LTS
IMPACT 4.5-3 Develop Land Uses or Development Patterns that Cause Wasteful, Inefficient, or Unnecessary Consumption of Energy. During construction and following buildout of the Proposed Project, energy would be consumed in the forms of fossil fuels and electricity. A large body of existing regulations would have the effect of reducing energy demand and would, then, also reduce potential adverse environmental effects associated with energy demand. The Proposed Project also includes many policies that promote additional energy conservation and savings and that would reduce peak demand and associated environmental effects. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.5-4 Require or Result in the Construction of New or Expanded Energy Production or Transmission Facilities, the Construction of which Could Cause Significant Environmental Effects Implementation of the Proposed Project would increases energy demand and would result in the need to extend services and infrastructure to new users in the Planning Area. Policies and implementation programs in the Proposed Project, as well as existing regulations would reduce potential impacts. Construction of facilities would occur within the assumed development footprint of the Proposed Project and impacts are considered throughout this EIR. There are no additional significant effects that are not already addressed. The impact is less than significant.	LTS	No mitigation is required	LTS
4.6 Cultural Resources			
IMPACT 4.6-1 Cause a Substantial Adverse Change in the Significance of Archaeological or Historical Resources as defined in CEQA Guidelines Section 15064.5. The Proposed Project plans for the construction of new buildings and structures. Modification of existing buildings and structures could also occur in the Planning Area. Although there are no previously recorded archaeological resources within the Planning Area, future projects involving intensive grading, trenching, excavation, soil stockpiling, and other earthmoving activities could impact previously unrecorded cultural resources. Implementation of the Proposed Project has the potential to damage or destroy archaeological and historic architectural resources that qualify as historical resources or unique archaeological resources under CEQA. The significance of such resources could be materially impaired because their ability to convey significance could be destroyed or diminished. This impact is considered significant.	S	**Mitigation Measure 4.6-1a – The 2035 General Plan should be amended to include the following modified policy:** **Policy 2.O.3. Relocation of Historic Buildings.** Where feasible and appropriate, encourage the relocation of reusable historic buildings within or into historic neighborhoods as a means of historic preservation. Relocation is only permitted ~~with reuse provisions and timing agreements in place.~~ Upon execution of an agreement covering reuse provisions and approval of a replacement project. **Policy 2.P.2. Environmental Review.** Require that environmental review be conducted for alterations and/or demolition of buildings designated as, or potentially eligible for designation as, historic structures as required by Chapter 12A of the Municipal Code and CEQA regulations. **Mitigation Measure 4.6-1b – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 1)** Projects that could have significant adverse impacts to potentially significant archaeological resources shall be required to assess impacts and provide feasible mitigation. The following steps, or those deemed equally effective by the City, will be followed: a. Request information from the California Native American Heritage Commission to obtain a review of the Sacred Lands File and a list of local Native American groups and individuals that may have specific knowledge of cultural resources in the area that could be affected by project implementation.	SU

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		Each Native American group and individual identified by the Native American Heritage Commission will be contacted to obtain any available information on cultural resources in the project area. Additional consultation with relevant tribal representatives may be appropriate depending on the relatively level of cultural sensitivity. b. Request updated information from the Northwest Information Center of the California Historical Resources Information System to determine whether the project area has been previously surveyed and whether archaeological resources were identified. In the event the records indicate that no previous survey has been conducted or existing survey data is greater than five years old, the applicant will retain the services of a qualified archaeologist to assess the adequacy of the existing data (if any) and assess the archaeological sensitivity of the project area. If the survey did not meet current professional standards or regulatory guidelines, or relies on outdated information, a qualified archaeologist will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources. c. If a survey is warranted, it will include all necessary background research in addition to an archaeological pedestrian survey. Based on findings of the survey, additional technical studies may be required, such as geoarchaeological sensitivity analysis, or other analysis scaled according to the nature of the individual project. A report will document the results of the survey and provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California Department of Parks and Recreation site record forms and cultural resources reports. d. Management recommendations may include, but are not limited to additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist to be sensitive for subsurface cultural resource deposits. e. Once approved by the City, provide the Northwest Information Center with appropriate California Department of Parks and Recreation site record forms and cultural resources reports for any resources identified. Any subsequent reports completed as a result of additional technical work will likewise be submitted to the Northwest Information Center. f. If no archeological resources are identified that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources. The exception would be in the event of the discovery of a previously unknown archaeological site inadvertently exposed during project implementation. In such an event, a qualified archaeologist will be retained to assess the discovery and provide management recommendations as necessary. g. When a project will impact a known archaeological site, and avoidance is not a feasible option, a qualified archaeologist shall evaluate the eligibility of the site for listing in the California Register of Historic Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment which could include preservation in place or data recovery. h. If a site to be tested is prehistoric, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. Appropriate mitigation may include curation of artifacts removed during subsurface testing. i. If significant archaeological resources that meet the definition of historical or unique archaeological resources are identified in the project area, the preferred mitigation of impacts is preservation in place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not limited to actions, such as data recovery excavations. If only part of a site will be impacted by a project, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the Northwest Information Center. Archaeological sites known to contain human remains shall be treated in	

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Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		accordance with the provisions of Section 7050.5 Health and Safety Code. **Mitigation Measure 4.6-1c – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 2)** For projects that could adversely affect a potential historic resources: a. Consult the City's Historic Resources Inventory and, as necessary, seek updated information from the North Central Information Center or other applicable data repositories to determine whether the project area has been surveyed, and whether historic built environment resources were identified. b. If a survey of the property or the area in which the property is located has not been conducted , a qualified architectural historian shall conduct a study of the project area for the presence of historic built environment resources. c. If a study is required, it will evaluate the significance of built environment resources greater than 50 years in age that may be directly or indirectly impacted by project activities. The study may include a field survey; background, archival and historic research; and consultation with local historical societies, museums or other interested parties; as necessary. d. If necessary, the qualified architectural historian's study will recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources on appropriate California Department of Parks and Recreation (DPR) series 523 forms. Recommended treatment for historical resources identified in the report shall be implemented. e. If no significant historic built environment resources are identified in the study or prior survey of the project area that may be directly or indirectly impacted by project activities, there is no adverse change to documented historical built environment resources and no further action is required. f. If a significant historic built environment resource could be directly or indirectly impacted by project activities, avoidance shall be considered the primary mitigation option. If avoidance is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties will reduce impacts to an acceptable level. If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required. g. If avoidance is not feasible and minimizing impacts through adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties is not feasible, documentation is required using, as appropriate, Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and/or Historic American Landscapes Survey (HALS) guidelines. **Mitigation Measure 4.6-1d – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 3)** a. During ground-disturbing activities necessary to implement proposed development and infrastructure projects, if any prehistoric or historic subsurface resources are discovered, all work within 100 feet of the resources shall be halted and a qualified archaeologist[1] shall be consulted within 24 hours to assess the significance of the find, according to CEQA Guidelines Section 15064.5, and implement, as applicable, CEQA Guidelines Sections 15064.5(d), (e), and (f). b. If any find is determined to be a historical resource according to CEQA Guidelines Section 15064.5, representatives from the City and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Cultural resources shall be recorded on appropriate Department of Parks and Recreation forms, and all significant cultural materials recovered shall be, as	

[1] The California Office of Historic preservation utilizes the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation as found in Code of Federal Regulations, 36 CFR Part 61. The minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or closely related field plus: 1. At least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management; 2. At least four months of supervised field and analytic experience in general North American archeology; and 3. Demonstrated ability to carry research to completion. In addition to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		necessary and at the discretion of the qualified archaeologist and in consultation with the local Native American community if the discovery is prehistoric in age, subject to scientific analysis, professional curation, and documentation according to professional standards. If it is determined that the proposed development or infrastructure project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with Section 21083.2 of the California Public Resources Code and CEQA Guidelines Section 15126.4, with a preference for preservation in place. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out. Preservation in place may be accomplished by planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. c. If avoidance is not feasible, the qualified archaeologist shall develop and oversee the execution of a treatment plan. The treatment plan shall include, but shall not be limited to, data recovery procedures based on location and type of archaeological resources discovered and a preparation and submittal of report of findings to the Northwest Information Center of the California Historical Resources Information System. Data recovery shall be designed to recover the significant information the archaeological resource is expected to contain, based on the scientific/historical research questions that are applicable to the resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable resource questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by project proponents' actions. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
IMPACT 4.6-2 Disturb Human Remains, including those Interred Outside of Formal Cemeteries. The Proposed Project would result in development and infrastructure improvement projects throughout the Planning Area that would involve earthmoving activities that could impact human remains. There is the potential for discovery of human remains during construction. This impact is considered significant.	S	**Mitigation Measure 4.6-2 – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 4)** a. Consistent with Health and Safety Code, Section 7050 through 7052 and Health and Safety Code Section 8010 through 8030, in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery during construction, the City and contractor/s shall take the following steps: (1) No further excavation or disturbance of the project site or any nearby area reasonably suspected to overlie adjacent human remains will occur until: (A) the coroner of Yolo County has been contacted to determine that no investigation of the cause of death is required, and (B) if the coroner determines the remains to be Native American: 1. the coroner shall contact the Native American Heritage Commission within 24 hours; 2. the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendant from the deceased Native American; and 3. the most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Section 5097.98 of the Public Resources Code; or (2) Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance: (A) the Native American Heritage Commission is unable to identify a most likely descendant or the most likely descendant fails to make a recommendation within 24 hours after being notified by the commission; (B) the most likely descendant identified fails to make a recommendation; or (C) the landowner or his or her authorized representative rejects the recommendation of the most likely descendant, and mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.	SU
4.7 Geology, Soils, Minerals Resources, and Paleontological Resources			
IMPACT 4.7-1 Seismic Hazards Related to Surface Fault Rupture, Strong Seismic Ground Shaking, and Liquefaction. Development and land use change consistent with the Proposed Project could subject people and structures to hazards associated with strong seismic ground shaking and liquefaction. Implementation of the policies in the 2035 General Plan, and compliance with relevant laws and ordinances, would reduce the potential for loss or damage from seismic hazards. This impact is less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.7-2 Impacts Related to Soil Erosion. Land use change under the Proposed Project would result in substantial grading, excavation, and movement of earth associated with site preparation activities. These activities would increase soil erosion, especially from wind and water, and the potential for siltation of local drainages. Implementation of the policies in the Proposed Project, combined with relevant laws and ordinances, would reduce the potential for soil erosion. This impact is less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.7-3 Geologic Hazards Related to Unstable Soils, Expansive Soils, and Soil Unsuitable for Septic Systems. Land use change under the Proposed Project would result in the placement of buildings and infrastructure in areas of unstable soils, soils with high a shrink-swell potential, and in locations where the soil is not appropriate for use with septic systems. With adoption and implementation of policies and the implementation program in the Proposed Project, combined with current construction regulations, this impact is considered significant.	S	**Mitigation Measure 4.7-3a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Soils 1)** Where soils are proposed for use as leach fields associated with wastewater treatment, the City shall require a site-specific evaluation by a licensed geotechnical engineer regarding the soil suitability, including a perc test, as appropriate. All septic systems or other forms of on-site wastewater treatment and disposal facilities shall be designed by a licensed geotechnical or civil engineer. On-site wastewater treatment systems shall be designed to meet the	LTS

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		following parameters: • provide available effective absorptive area in both primary and reserve disposal fields; • provide appropriate separation between the disposal field bottom and groundwater or a restrictive soil layer; • factor the ground slope in both the primary and reserve disposal field areas; • factor the influent wastewater strength and quantity in wastewater system design; • accommodate requirements for setbacks from wells, surface waters, and property boundaries; and • provide treatment of wastewater such that it does not adversely affect water quality or endanger public health.	
IMPACT 4.7-4 Loss or Damage to Paleontological Resources During Earth-Moving Activities. Paleontological resources could occur in the Planning Area and construction activities under the Proposed Project could result in damage to, or destruction of unknown subsurface paleontological resources. Paleontological resources could occur in Pleistocene-age sediments that underlie portions of the Planning Area. Construction activities in these areas could result in damage to, or destruction of unknown subsurface paleontological resources. With the policies and implementation program in the Proposed Project, this impact is considered significant.	S	**Mitigation Measure 4.7-4 – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Paleontological Resources 1)** • Prior to the start of earthmoving activities that would disturb 1 acre of land or more within the Riverbank or Modesto Formations, the project applicant shall inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. • If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the find and notify the City of Woodland Community Development Department. • The project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan. The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.	LTS
3.8 Hazards and Hazardous Materials			
IMPACT 4.8-1 Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials. Implementation of the Proposed Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, existing regulations and proposed policies in the Proposed Project would address this potential risk and the impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.8-2 Create a Significant Hazard to the Public or the Environment through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment. Implementation of the Proposed Project plans for a wide variety of uses, including commercial and industrial uses that could result in upset and accident conditions involving the release of hazardous materials into the environment. Individual projects under the Proposed Project for which there are potential significant impacts related to hazards would require a project-level environmental review at the time they are proposed. With existing regulations and Proposed Project goals and policies, the impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.8-3 Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School. Projects that could potentially occur under the Proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. However, existing regulations provide standards for uses involving the handling or emissions of hazardous materials within a quarter mile of schools. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.8-4 Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, Would Create a Significant Hazard to the Public or the Environment. Implementation of the Proposed Project could involve changes to sites included on a list of hazardous materials sites compiled pursuant to Government Code 64964.5. However, with existing regulations and Proposed Project goals and policies, the impact is considered less than significant.	LTS	No mitigation is required.	LTS

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IMPACT 4.8-5 For a Project Located within and Airport Land Use Plan or, where such a Plan has Not Been Adopted, within Two Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard For People Residing or Working within an Airport Land Use Plan Area. A portion of the Planning Area is in the SMF Airport Influence Area. The 2035 General Plan includes policies to avoid any adverse impact. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.8-6 Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan. Proposed Project policies support the mitigation of and preparation for emergencies. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.8-7 Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to Urbanized Areas or Where Residences are Intermixed with Wildlands. Most of the Planning Area is non-wildland/non-urban area that is not at risk for wildland fires. Implementation of the Proposed Project would result in new development in SP-1A, which is adjacent to a Moderate Fire Hazard Severity Zones. However, existing regulations related to fire flow, access, and clearances around structures would ensure a less than significant impact.	LTS	No mitigation is required.	LTS
4.9 Hydrology, Flooding, and Water Quality			
IMPACT 4.9-1 Violation of Water Quality Standards. Implementation of the Proposed Project would convert large areas of undeveloped land to residential, commercial, industrial, and mix-uses, as well as intensify land uses as infill in existing downtown and major corridor areas, resulting in impacts related to additional discharges of pollutants to receiving water bodies. Such pollutants would result in adverse changes to the water quality of local water bodies. However, with adoption and implementation of the proposed policies in the Proposed Project, combined with current land use, stormwater, grading, and erosion control regulations, this impact is considered significant.	PS	**Mitigation Measure 4.9-1 – Policy 5.1.4 should be amended as follows:** Policy 5.I.4. Low Impact Development. Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code <u>to reduce runoff rates, filter out pollutants, and facilitate groundwater infiltration</u>. Such features may include, but are not limited to: • Canopy trees or shrubs to absorb rainwater; • Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate; • Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas; • Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces; • On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and • Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.	LTS
IMPACT 4.9-2 Construction-Related Water Quality Impacts. Construction and grading activities during development consistent with the Proposed Project could result in excess runoff, soil erosion, and stormwater discharges of suspended solids and increased turbidity. Such activities could mobilize other pollutants from project construction sites as contaminated runoff to on-site and ultimately off-site drainage channels. Many construction-related wastes have the potential to degrade existing water quality. Construction activities that are implemented without mitigation could violate water quality standards or cause direct harm to aquatic organisms. However, with implementation of existing regulations and water quality policies contained in the 2035 General Plan, this impact is considered significant.	PS	**Mitigation Measure 4.9-2 – Implement Mitigation Measure 4.9-1**	LTS
IMPACT 4.9-3 On-Site and Downstream Erosion and Sedimentation and Alteration of Drainage Patterns – East and South Alternatives. Development and land use change consistent with the 2035 General Plan would increase the amount of impervious surfaces, thereby increasing surface runoff. This increase in surface runoff would result in an increase in both the total volume and the peak discharge rate of stormwater runoff, and therefore could result in greater potential for erosion, sedimentation, hydromodification, and on- and off-site flooding. However, with adoption and implementation of the proposed policies and actions in the 2035 General Plan, combined with current grading, erosion, and flood control regulations, this impact is considered significant.	PS	**Mitigation Measure 4.9-3 – Implement Mitigation Measure 4.4-1**	LTS
IMPACT 4.9-4 Interference with Groundwater Recharge or Substantial Depletion of Groundwater Supplies. Land use changes under the Proposed Project would result in additional impervious surfaces, which could reduce the amount of groundwater recharge and in turn, affect the yield of hydrologically connected wells. However, a substantial reduction in groundwater recharge is not anticipated. An increase in water demands and associated depletion of groundwater supplies could also result from the land use changes under the Proposed Project; however, access to new surface water supplies and	LTS	No mitigation is required.	LTS

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opportunities for conjunctive use through aquifer storage and recovery would result in a reduced reliance on groundwater supplies. With compliance with existing regulations and implementation of Proposed Project policies, this impact is considered less than significant.			
IMPACT 4.9-5 Place Housing Within a 100-Year Flood Hazard Area As Mapped on a Federal Flood Hazard Boundary Or Flood Insurance Rate Map or Other Flood Hazard Delineation Map. Implementation of the Proposed Project would place housing in new growth areas within a current 100-year flood hazard area only if a funded, comprehensive flood solution is secured. Additional policies in the Proposed Project limit the flooding risks of infill development. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.9-6 Place Within a 200-year Flood Hazard Areas Structures Which Would Impede or Redirect Flood Flows. Implementation of the Proposed Project would place structures within a 200-year flood hazard area; however, policies in the Proposed Project prohibit diversion of flood flows onto adjacent properties. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.9-7 Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam. The Proposed Project plans for infill and new growth development in areas within the levee and dam inundation areas. The impact is considered significant.	S	No feasible mitigation.	SU
4.10 Land Use Planning, Population, and Housing			
IMPACT 4.10-1 Physically Divide an Established Community. Implementation of the Proposed Project would not physically divide an established community. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.10-2 Conflict with Any Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction over the Project (Including, but not Limited to the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) Implementation of the Proposed Project would differ from the Yolo County 2030 General Plan, which has jurisdiction over unincorporated land in the Proposed Project Planning Area. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.10-3 Impacts Related to Inducing Population Growth. Implementation of Proposed Project would induce population growth substantially higher than that projected in the SACOG regional population projections and introduce Specific Plan Areas that are not anticipated to be fully developed by 2035, the planning horizon for the 2035 General Plan. The impact is considered significant.	S	No feasible mitigation.	SU
IMPACT 4.10-4 Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. The Proposed Project does not propose converting established residential areas to a nonresidential land use or changing the land use or development character of existing developed residential areas. However, if any housing or residences are displaced, it is assumed that construction of 7,000 residential dwelling units on the project site would fully replace any residential units removed and provide housing for any displaced residents. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
4.11 Noise and Vibration			
IMPACT 4.11-1 Exposure of Noise-Sensitive Land Uses to Short-Term (Construction). Future development and implementation of the policies in the Proposed Project would result in exposure of existing and proposed noise sensitive land uses to noticeable increases from construction activities. This impact is considered significant.	S	**Mitigation Measure 4.11-1 – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Noise 1)** a. Demolition, construction, site preparation, and related activities that would generate noise perceptible at the property line of the subject property are limited to the hours between 7:00 A.M. and 6:00 P.M. on Monday through Saturday and between 9:00 A.M. and 6:00 P.M. on Sunday and federal holidays. The building inspector may issue an exception to this limitation on hours in cases of urgent necessity where the public health and safety will not be substantially impaired. b. Idling times for noise-generating equipment used in demolition, construction, site preparation, and related activities shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes. c. Demolition, construction, site preparation, and related activities that do not involve pile driving proposed within 445 feet from the edge of properties with existing, occupied noise-sensitive uses shall incorporate all feasible strategies to reduce noise exposure for noise-sensitive uses, including:	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• Provide written notice to all known occupied noise-sensitive uses within 400 feet of the edge of the project site boundary at least 2 weeks prior to the start of each construction phase of the construction schedule; • Ensure that construction equipment is properly maintained and equipped with noise control components, such as mufflers, in accordance with manufacturers' specifications; • Re-route construction equipment away from adjacent noise-sensitive uses; • Locate noisy construction equipment away from surrounding noise-sensitive uses; • Use sound aprons or temporary noise enclosures around noise-generating equipment; • Position storage of waste materials, earth, and other supplies in a manner that will function as a noise barrier for surrounding noise-sensitive uses; • Use the quietest practical type of equipment; • Use electric powered equipment instead of diesel or gasoline engine powered equipment; • Use shrouding or shielding and intake and exhaust silencers/mufflers; and • Other effective and feasible strategies to reduce construction noise exposure for surrounding noise-sensitive uses. d. For construction of buildings that require the installation of piles, an alternative to installation of piles by hammering shall be used. This could include the use of augured holes for cast-in-place piles, installation through vibration or hydraulic insertion, or another low-noise technique.	
IMPACT 4.11-2 Exposure to or Generation of Long-Term Noise Levels. Future development of new noise-sensitive land uses would occur under the Proposed Project within areas that either are currently exposed to noise from both transportation and non-transportation noise sources, or will be in the future. Uses allowed under the 2035 General Plan could potentially expose existing or planned noise-sensitive uses to noise levels that exceed local standards. The impact is considered significant.	S	**Mitigation Measure 4.11-2a – Policy 8.G.3 should be amended as follows:** Policy 8.G.3 Noise Exposure from Transportation Sources. Require noise-reducing mitigation to meet allowable outdoor and indoor noise exposure standards in Table 8-6 [Table 4.11-13]. Noise mitigation measures that may be approved to achieve these noise level targets include but are not limited to the following: • Construct facades with ~~substantial weight and~~ sound insulation to achieve acceptable interior noise; • Use sound-rated windows for primary sleeping and activity areas; • Use sound-rated doors for all exterior entries at primary sleeping and activity areas; • Use ~~minimum~~ setbacks and/or sound ~~exterior~~ barriers where applicable, feasible, and reasonable; • Use acoustic baffling of vents for chimneys, attic and gable ends; • Install a mechanical ventilation system that provides fresh air under closed window conditions; and • Maximize site design so that buildings shelter outdoor areas. **Mitigation Measure 4.11-2b – The 2035 General Plan should be amended to include the following new policies:** Policy 8.G.13 Noise Attenuation Barriers. Noise attenuation barriers are strongly discouraged, except to attenuate noise for existing developed uses, and may be used in the context of new developments only when no other approach to noise mitigation is feasible. Policy 8.G.14 Vehicle Traffic. New developments shall disperse vehicular traffic onto a network of fully connected smaller roadways and minimize funneling of local traffic onto large-volume, high-speed roadways near existing or planned noise-sensitive land uses to the maximum extent feasible. Policy 8.G.15 Operational Noise. In new development areas, service, utility, loading areas, roof-mounted equipment, and noise-generating equipment shall be screened, designed, and located to reduce visibility and noise for surrounding properties and pedestrian areas.	SU
IMPACT 4.11-3 Exposure to or Generation of Vibration. Construction of projects under the Proposed Project could cause temporary, short-term disruptive vibration for locations near sensitive receptors. Under the Proposed Project, future development of new vibration-sensitive land uses could occur within vibration-generating areas (e.g., railroads). This impact is considered significant.	S	**Mitigation Measure 4.11-3a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Vibration 1)** a. New development that proposes the use of piles for foundations shall include all feasible measures necessary with the goal to ensure that vibration exposure for adjacent buildings is less than 0.5 PPV and less than 80 VdB for adjacent vibration-sensitive uses and less than 0.2 PPV for adjacent historic buildings.	SU

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		These performance standards shall take into account the reduction in vibration exposure that would occur through coupling loss provided by each affected building structure. If it is determined necessary to avoid damage, the project applicant shall coordinate with the Chief Building Official to implement corrective actions, which may include, but is not limited to building protection or stabilization. b. New developments that would generate substantial long-term vibration shall provide analysis and mitigation, as feasible, to achieve velocity levels, as experienced at habitable structures of vibration-sensitive land uses, of less than 80 vibration decibels. **Mitigation Measure 4.11-3b – Implement Mitigation Measure 4.11-1**	
IMPACT 4.11-4 Expose People to Excessive Airport Noise. The Planning Area is outside of the 60 dB CNEL contours of all nearby airports. The impact is less than significant.	LTS	No mitigation is required.	LTS
4.12 Public Services and Recreation			
IMPACT 4.12-1 Impacts Related to Fire Protection Services. Implementation of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for fire protection. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.12-2 Impacts Related to Police Protection Services. Implementation of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for police protection. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.12-3 Impacts Related to School Services. Implementation of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for schools. The impact is considered potentially significant.	PS	Funding for new school construction is provided through State and local revenue sources. Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) governs the amount of fees that can be levied against new development. Payment of fees authorized by the statute is deemed “full and complete mitigation.”	LTS
IMPACT 4.12-4 Impacts Related to Parks and Recreation Services. Implementation of the Proposed Project would require the provision of 5.0 acres of parkland per 1,000. The Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for parks. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.12-5 Impacts Associated with Other Public Facilities. Implementation of the Proposed Project could result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for other public facilities. The impact is considered potentially significant.	PS	**Mitigation Measure 4.12-5a – The 2035 General Plan should be modified to include the following new implementation program (Implementation Program Public Services 1):** Adopt a Municipal Facilities Master Plan that studies and identifies future space needs for city government offices, library facilities, and any other municipal service facilities not addressed in the Parks, Recreation, and Community Services Master Plan, and establishes space standards and ratios, as appropriate.	LTS
IMPACT 4.12-6 Impacts Related to Increased Use of Existing Parks and Recreational Facilities. Implementation of the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. The impact is considered less than significant.	LTS	No mitigation is required.	LTS
IMPACT 4.12-7 Impacts Related to Recreational Facilities. Implementation of the Proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The impact is considered less than significant.	LTS	No mitigation is required.	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.13 Transportation and Circulation			
IMPACT 4.13-1 Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in Unacceptable Levels of Service on City of Woodland Roadways. Implementation of the Proposed Project could cause unacceptable LOS conditions on some roadway segments, depending on the Alternative. The impact is considered significant for the East Alternative and less than significant for the South Alternative.	East Alternative – PS	**Mitigation Measure 4.13-1a – The 2035 General Plan should be amended to include the following modification of the Circulation Diagram in the East Alternative.** East Alternative Circulation Diagram: Include E. Gum Avenue from Bourn Drive to Pioneer Avenue as a 2-lane minor arterial. This action would result in potential physical changes to the roadway under this classification that may include access control and minor turn-lane widening at intersections. Under this classification, the LOS would be improved to LOS C and the impact would be **less than significant with mitigation**. OR **Mitigation Measure 4.13-1b – The 2035 General Plan should be amended to include the following modified policy:** – **Policy 3.A.1 Vehicle Level of Service (LOS) Standard.** Strive to develop and manage the roadway system to maintain LOS D or better as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board) during weekday AM and PM peak hour conditions with the following exceptions described below and mapped on Figure 3-1. A. LOS C - Kentucky Ave from East Street to County Road 98. This level of service is required to accommodate the mix of commercial/industrial truck traffic with residential driveways. B. LOS E – Freeway ramp terminal intersections and E. Gum Avenue from Bourn Drive to Pioneer Avenue. C. LOS F – LOS F is allowed for the following roadway segments and intersections where the City finds that the improvements or other measures required to achieve the LOS standard are unacceptable because of their impact on other community values. • Main Street from 6th Street to Cleveland St. • Maxwell Ave from Farnham Avenue to County Road 102 This action would recognize that potential physical changes to this section E. Gum Avenue to increase its capacity are not desirable due to access or right-of-way impacts on adjacent properties or the environment. The impact would be **less than significant with mitigation**. AND **Mitigation Measure 4.13-1c – The 2035 General Plan should be amended to include the following modified policy and new implementation program:** – **Policy 3.A.4 Reduce Vehicle Miles Traveled (VMT)**. Require new development projects to achieve a 10 percent reduction in VMT per capita or VMT per service population compared to the general plan 2035 VMT performance, or a 10 percent reduction compared to baseline conditions for similar land uses ~~Apply a VMT transportation performance metric threshold of 30 VMT per capita~~ when measuring transportation impacts for subsequent projects and making General Plan consistency findings. Reducing peak period VMT in particular is desirable due to the added benefit of minimizing severe congestion and reducing emissions. Use of VMT reduction strategies such as those in Chart 6-2 below taken from *Quantifying Greenhouse Gas Mitigation Measures*, CAPCOA, 2010 or similar professional research documents is encouraged. *[See Section 4.13 of this EIR, "Transportation and Circulation"]* taken from *Quantifying Greenhouse Gas Mitigation Measures*, CAPCOA, 2010 or similar professional research documents is encouraged. **Implementation Program 3.8** After final adoption of SB 743 CEQA Guidelines changes and any associated	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		technical advisory recommendations by the State of California, the City will assess the VMT reduction goal contained in Policy 3.A.4. The assessment should consider substantial evidence presented by the State in recommending any alternative VMT reduction goals as CEQA thresholds plus the community values expressed by the goals and policies. The City should strive to set thresholds consistent with the City's envisioned future while striving to achieve reasonable reductions in vehicle travel that produce air pollution and greenhouse gases.	
	South Alternative – LTS	No mitigation is required	LTS
IMPACT 4.13-2 Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in Unacceptable Levels of Service on Caltrans Roadways. Implementation of the Proposed Project would exacerbate unacceptable No Project LOS D conditions on the I-5 Mainline east of County Road 102 under 2035 conditions. The impact is considered potentially significant.	PS	**Mitigation Measure 4.13-2 – Implement Mitigation Measure 4.13-1c.**	LTS
IMPACT 4.13-3 Conflict with an Applicable Congestion Management Program by Resulting in Unacceptable Levels of Service on CMP Network Roadways. Implementation of the Proposed Project would cause unacceptable LOS conditions on one CMP roadway segment. The impact is considered significant.	S	**Mitigation Measure 4.13-3a – Implement Mitigation Measure 4.13-1c.** **Mitigation Measure 4.13-3b – The 2035 General Plan should be amended to include the following modification of the circulation diagram.** **East Alternative Circulation Diagram:** Include County Road 102 from E. Gibson Road to Farmers Central Road as a 4-lane principal arterial.	LTS
IMPACT 4.13-4 Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Taking into Account All Modes of Transportation. Implementation of the Proposed Project would not result in conflicts with applicable plans, ordinances or policies that have not already been discussed in Impacts 4.13-1 through 4.13-3. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.13-5 Result in Changes to Air Traffic Patterns. Implementation of the Proposed Project includes land use changes that would have only a limited influence on air traffic patterns. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.13-6 Substantially Increase Hazards Due to a Design Feature. Implementation of the Proposed Project will modify the existing transportation network to accommodate existing and future users that could change existing travel patterns or traveler expectations. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.13-7 Result in Inadequate Emergency Access. Implementation of the Proposed Project will alter land use patterns and increase travel demand on the transportation network that may influence emergency access. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.13-8 Result in Potential Conflicts with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Otherwise Decrease the Performance or Safety of Such Facilities. Implementation of the Proposed Project would not result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The impact is considered less than significant.	LTS	No mitigation is required	LTS
4.14 Utilities			
IMPACT 4.14-1 Exceed Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board. Implementation of the Proposed Project would not exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.14-2 Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects. Implementation of the Proposed Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. The impact is considered less than significant.	LTS	No mitigation is required	LTS

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Table 2-1
Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
IMPACT 4.14-3 Impacts Related to Construction or Expansion of Stormwater Facilities. Implementation of the Proposed Project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.14-4 Water Supply Impacts. Implementation of the Proposed Project would not result in having insufficient water supplies available to serve the project from existing entitlements and resources, nor are new or expanded entitlements needed. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.14-5 Wastewater Treatment Capacity Impacts. Implementation of the Proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. The impact is considered less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.14-6 Solid Waste Disposal Capacity Impacts. Development under the Proposed Project would be served by a landfill with sufficient permitted capacity to serve the project's solid waste disposal needs. The impact is less than significant.	LTS	No mitigation is required	LTS
IMPACT 4.14-7 Compliance with Federal, State, and Local Statutes and Regulations Related to Solid Waste. Implementation of the Proposed Project would be compliant with federal, State, and local statutes and regulations related to solid waste. The impact is considered less than significant.	LTS	No mitigation is required	LTS

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CUMULATIVE IMPACTS

As detailed in Chapter 6 of this EIR, "Other CEQA Considerations," the Cumulative Scenario of the Proposed Project, taken together with other past, present, and probable future projects producing related impacts, would have a significant impact in the following areas:

- Aesthetics and Visual Resources
- Agriculture and Forestry Resources
- Air Quality
- Cultural Resources
- Hydrology and Water Quality
- Land Use Planning, Population, and Housing
- Noise and Vibration
- Utilities and Service Systems

GROWTH-INDUCING IMPACTS

As stated in Chapter 6 of this EIR, "Other CEQA Considerations," the 2035 General Plan does anticipate development of currently undeveloped areas – both under the East Alternative and the South Alternative. This could result in infrastructure being extended into areas that are currently undeveloped and result in pressure to plan for and entitle development beyond that anticipated under the 2035 General Plan. The 2035 General Plan includes policies for both infill and new development that would avoid unplanned development that could be induced through infrastructure expansions into new growth areas. This reduces the potential for unplanned, induced growth. However, it is possible that, for the factors identified in Chapter 6, the Cumulative Scenario could induce growth that could have indirect effects. The purpose of the 2035 General Plan is to provide for future development of new housing and employment opportunities. There is no feasible mitigation to reduce this impact to a less-than-significant level without changing the purposes of the 2035 General Plan. The impact is **significant and unavoidable**.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Detailed assessments for each of the environmental topics are provided throughout Chapter 4 of this EIR, "Environmental Impact Analysis." Cumulative impacts associated with each of these topics are additionally addressed in detail in Chapter 6 of this EIR, "Other CEQA Considerations," The City acknowledges that there could be **significant** irreversible environmental changes. There is no feasible mitigation without changing the purposes of the 2035 General Plan. The impact is **significant and unavoidable**.

3 PROJECT DESCRIPTION

3.1 INTRODUCTION

The following describes the Proposed Project that is the subject of analysis in this EIR, the City of Woodland 2035 General Plan Update (2035 General Plan) and 2035 Climate Action Plan (CAP). These two documents are referred to as "the Proposed Project" in this EIR. Along with a description of the Proposed Project, this chapter provides a description of the location, history, and objectives of the Proposed Project and the relationship to related plans and regulations. This section also provides an overview of adoption and implementation of the Proposed Project.

3.2 REGIONAL LOCATION AND SETTING

The City of Woodland is the county seat of Yolo County and is located in California's Sacramento Valley. The City is located approximately 20 miles northwest of Sacramento, 8 miles west of the Sacramento International Airport, and 12 miles north of the city of Davis at the intersection of Interstate 5 (I-5) and State Route 113 (SR 113). The Yolo Bypass of the Sacramento River is approximately three miles east of the city, Willow Slough is located about one mile to the southeast, and Cache Creek is located approximately two miles to the north of the City limits. The incorporated area covers an area of approximately 9,624 acres or 15 square miles of total land area, and is surrounded by agricultural land uses.

Exhibit 3.2-1 shows Woodland in its regional context.

3.2.1 THE CITY'S PLANNING AREA AND THE EIR PROJECT SITE

For the City's General Plan, one important geographic area is the *Planning Area*. According to State law, each city must include in its General Plan all territory within the boundaries of the incorporated area as well as "any land outside its boundaries which in the planning agency's judgment bears relation to its planning" (California Government Code Section 65300).

For the City, the Planning Area is defined by the Urban Limit Line (ULL), established by the City's voters in 2006. The Planning Area encompasses 12,781 acres, or approximately 20 square miles (Exhibit 3.2-2). It is bounded roughly by Churchill Downs Avenue to the north, County Road 98 to the west, and County Road 25A to the south. Various agricultural and industrial parcels form the boundary to the east. The Planning Area includes 9,619 acres within existing City limits and 3,162 acres in unincorporated territory. Most unincorporated portions of the Planning Area are vacant or in agricultural use, with the exceptions of the Yolo County Fairgrounds and several industrial parcels on the north end of East Street

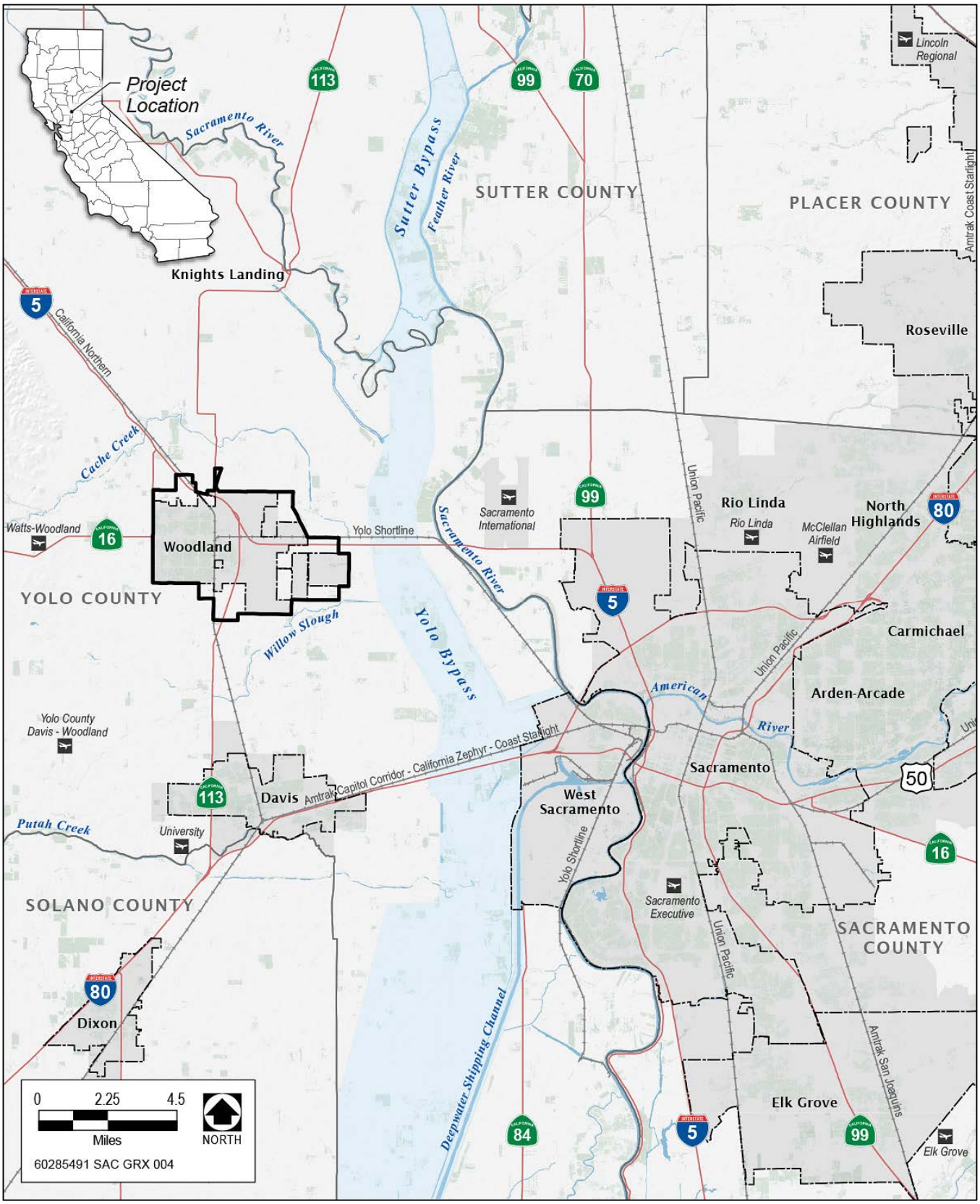

Exhibit 3.2-1. **Regional Location**

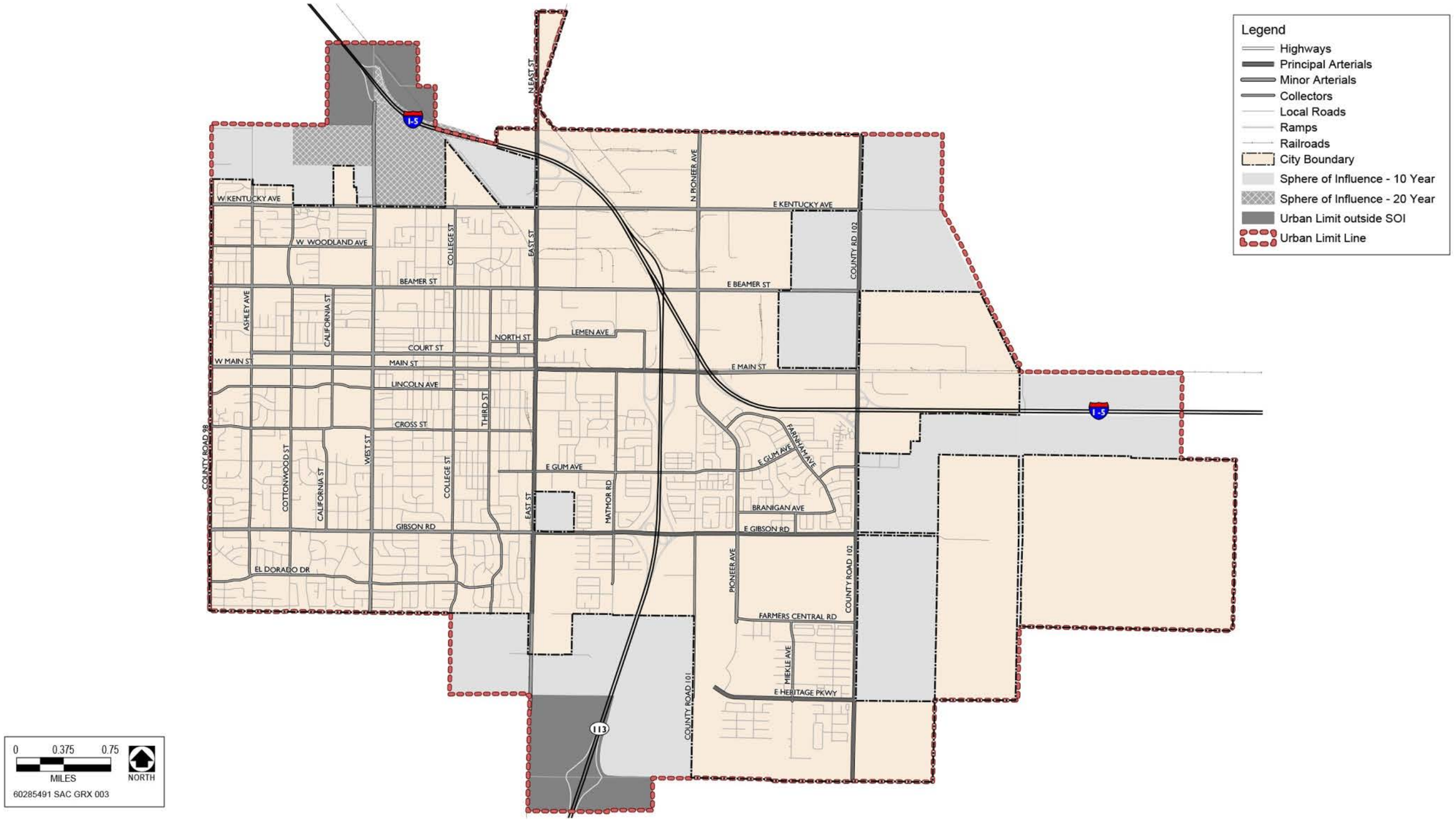

Exhibit 3.2-2. **Existing Planning Boundaries**

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Just as the Planning Area is important for a General Plan, for an EIR, the *project site* is an important geographic area. The "project site" for the analysis in this EIR is the same as the General Plan Planning Area.

3.2.1.1 SPHERE OF INFLUENCE

Contained within the Planning Area and project site is Woodland's Sphere of Influence (SOI). The SOI is a boundary that encompasses lands that are expected to ultimately be annexed by the City. Yolo County Local Agency Formation Commission (LAFCO), an entity empowered to review and approve proposed boundary changes and annexations by incorporated municipalities, determines the SOI. For Yolo County communities, the SOI is divided into a 10-year boundary and a 20-year boundary, based on LAFCO's determination of when the land would need to be annexed to accommodate growth. Although LAFCO does not have land use authority, the SOI is intended to guide urban land uses into an efficient development pattern, with consideration given to preserving prime farmland and other open space lands. LAFCO must also consider consistency with a city's general plan and any specific plans.

Upon adoption of the 2035 General Plan, the City will petition the Yolo Local Agency Formation Commission (LAFCO) to amend the Woodland Sphere of Influence (SOI) to reflect the voter approved Urban Limit Line and the 2035 General Plan. This EIR provides CEQA coverage for that SOI amendment.

3.2.2 EXISTING PLANNING AREA LAND USES

Within the City's Planning Area, vacant and agricultural land each occupy approximately 18 percent of the total land area, and thus together account for more than one-third of the Planning Area acreage. Nearly 86 percent of vacant land is located inside City limits, whereas nearly 86 percent of agricultural land is located outside city limits, concentrated in the eastern and southern sections of the Planning Area. A large concentration of agricultural land is also located in the northwest corner of the Planning Area. Currently, approximately 21 percent of the total land area is residential (16.4 percent low density, 3.5 percent medium density, and 1.4 percent high density). Industrial uses currently occupy about 12 percent of the Planning Area, and public and institutional uses such as schools, City buildings, and hospitals account for 10 percent of the Planning Area.

3.3 PROJECT BACKGROUND

3.3.1 STATE LAW

A city's general plan has been described as its *constitution* for development—the framework within which decisions must be made on how to grow, provide public services and facilities, and protect and enhance the environment. The framework for land use change provided in the General Plan allows the City and other public service providers (such as community services districts, public utility districts, fire districts, water and irrigation districts, and school districts) to plan for services and facilities consistent with the Plan. The General Plan is also the basis for all other planning efforts, such as specific plans, community plans and redevelopment plans, which must be consistent with the General Plan.

The 2035 General Plan has been prepared to fulfill the requirements of State law and guidelines adopted by the California Office of Planning and Research (OPR). State law specifies that each general plan address seven issue areas, known as "elements," which must be consistent with one another (Government Code Section 65302).

According to OPR's General Plan Guidelines, topics from different elements may be combined, but all must be addressed within the general plan. The seven required elements include:

1 **Land use**: The land use element must designate the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan.

2 **Circulation**: A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.

3 **Open space**: The open-space element details plans and measures for the preservation of open space for natural resources, for the managed production of resources, for outdoor recreation, and for public health and safety.

4 **Conservation**: A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element may also cover: reclamation of land and waters; prevention and control of the pollution of streams and other waters; regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan; prevention, control, and correction of the erosion of soils, beaches, and shores; protection of watersheds; the location, quantity and quality of the rock, sand and gravel resources; and flood control.

5 **Housing**: The housing element provides standards for the improvement of housing and the provision of adequate sites for housing to meet the needs of all economic segments of the community.

6 **Noise**: The noise element shall identify and appraise noise problems in the community. The noise element shall address noise sources, such as highways and freeways; primary arterials and major local streets; passenger and freight on-line railroad operations and ground rapid transit systems; commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation; industrial plants, including, but not limited to, railroad classification yards; and other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

7 **Safety**. A safety element for the protection of the community from risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction and other seismic hazards, and other geologic hazards known to the legislative body; flooding; and wild land and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.

The 2035 General Plan includes these mandatory elements (combining conservation together with open space and safety together with noise) and also includes the additional elements of public facilities and services, economic development, and healthy lifestyles, as described below.

3.4 GENERAL PLAN UPDATE PROCESS

Prior to this Update, the City of Woodland General Plan was last comprehensively updated in 1996, with a technical update in 2002, and an update of the Housing Element in 2013. In addition, the City has approved 18 project-driven amendments since the last update. The horizon year for the current plan is 2020 with the exception of the current Housing Element, which has a horizon that extends through September of 2021.

Beginning in 2013, the General Plan Update process provided an important opportunity for Woodland to take stock of what it has accomplished over the past decade and lay out a vision for its future. The City engaged in a comprehensive community participation program to obtain the input of residents, businesses, property owners, City staff, and elected officials, to ensure that the General Plan accurately addresses community needs and values. The outreach included meetings with a General Plan Steering Committee comprised of representatives from various facets of the community on eight separate occasions.[1] A series of small-group interviews with key stakeholders was conducted over two days in early February 2013. In addition, three series of community workshops were held. Workshop notices were published in both English and Spanish, and the City provided Spanish translation services at each of the workshops. The first series was conducted on three separate dates in April and May 2013 to initiate dialogue with community members on the future of Woodland and to begin to identify common themes, visions, and planning issues for the 2035 General Plan. The workshop held on May 2, 2013 was conducted in Spanish. A Steering Committee meeting on April 30, 2013 focused on the City's Housing Element and included discussion of the purpose and required contents of the Housing Element, along with the City's housing needs and concomitant revisions to the City's housing policies and programs. Additional workshops were conducted on April 27, 2015 to gain community feedback on alternative planning scenarios and on August 8, 2016 to collect comments on the Public Review 2035 General Plan. A website dedicated to the General Plan 2035 project was developed and regularly updated, and a newsletter with a mail-in survey in both English and Spanish was sent to all households. Study sessions with the Planning Commission and City Council were held regularly throughout the process as well, providing decision-makers the opportunity to give guidance at key points during plan development.

3.4.1 CLIMATE ACTION PLAN

On July 15, 2014, the Woodland City Council adopted a "Preliminary 2020 Climate Action Plan," which included a 2005 GHG emissions inventory, a 2020 GHG reduction target, and preliminary strategies to achieve the 2020 target. This effort was considered "preliminary" in acknowledgement of the work being done to update the General Plan and prepare an integrated final CAP for adoption.

The City's proposed 2035 CAP will replace the Preliminary CAP. The 2035 CAP comprehensively describes the strategy to reduce greenhouse gas (GHG) emissions. It identifies specific reduction strategies the City will

[1] The Steering Committee met on February 7, 2013; April 30, 2013; April 7, 2014; May 12, 2015; June 9, 2015; May 4, 2016; July 25, 2016 and August 15, 2016.

undertake and quantifies their benefits, in order to be consistent with State directives for reducing GHGs, including CEQA Guidelines Section 15183.5, which describes tiering and streamlining GHG emissions analysis through the use of climate action plans. With an adopted CAP, projects consistent with the General Plan and CAP would be able to undergo a streamlined process for analysis and mitigation of GHG emissions under CEQA. Consistent with the suggested "Plan Elements" described in CEQA Guidelines Section 15183.5 (b)(1), the City's 2035 CAP provides a quantified estimate of GHG emissions under baseline (2005) and future conditions (2020 and 2035), presents reduction targets consistent with State law and direction arising out of recent court decisions, evaluates the City's progress toward meeting the targets through emission reduction strategies, and includes a mechanism to monitor progress toward the City's targets and make adjustments to the reduction strategies, if necessary, to achieve the CAP's targets.

The CAP strategies provide tools for addressing GHG emissions of future development and are aimed at reducing Woodland's GHG emissions 15 percent below 2005 levels by 2020 and reducing emissions further, to 2.25 metric tons of carbon dioxide equivalent (MT CO_2e) per service population (service population = residents plus jobs) per year by 2035. These goals are consistent with the reductions the State will need in order to achieve its statewide goals for 2020 and 2030. These goals for the State are embodied in Assembly Bill (AB) 32 (2006), the California Global Warming Solutions Act of 2006, which requires reduction of statewide GHG emissions to 1990 levels by 2020, and in Executive Order B-30-15 and SB 32, which establishes a goal for the State government of 40 percent below 1990 statewide emissions levels by 2030. Achieving this level of GHG emissions efficiency in Woodland for the 2035 General Plan horizon year also demonstrates the City's progress toward the longer-term reduction target year of 2050 established under Executive Order S-3-05, which establishes a goal for State government of 80 percent below 1990 levels. This is because the efficiency based reduction target of 2.25 MT CO_2e per service population per year is extrapolated between the State's goals for 2030 and 2050. The 2035 CAP strategies and analysis are based upon a 2005 base year emissions inventory, representing the starting point from which the 2020 and 2035 emissions forecasts were developed. The base year inventory reports community-wide emissions in the following sectors:

- Transportation
- Energy
- Solid Waste
- Wastewater Reuse
- Water and Wastewater
- Municipal Operations

Transportation emissions come from vehicle use. Energy emissions are a result of electricity and natural gas use within the Planning Area. Solid waste emissions result from the decomposition of waste disposed of in landfills. Wastewater reuse emissions result from agricultural applications in which organic material in the wastewater biodegrades to create carbon dioxide (a GHG) and nitrogen dioxide among the byproducts. The water and wastewater sector estimates emissions related to energy use in pumping, treating, and transporting water and wastewater, and the process emissions that occur during wastewater treatment. The inventory also estimates municipal operations emissions resulting from energy consumption and vehicle and equipment use at the local government level. Table 3.4-1 shows the 2005 base year emissions by sector.

Table 3.4-1. 2005 Base Year Emissions	
Sector	MT CO_2e
Transportation	367,567
Energy	166,859
Solid Waste	22,244
Wastewater Reuse	4,377
Water and Wastewater	2,666
Municipal Operations	2,676
Total	**566,389**

Notes: MT CO_2e = metric tons of equivalent carbon dioxide
Wastewater Reuse refers to GHG emissions resulting from agricultural applications of wastewater; the organic material in the wastewater biodegrades to create carbon dioxide (a GHG) and nitrogen dioxide among the byproducts
Water and Wastewater refers to GHG emissions related to energy use in pumping, treating, and transporting water and wastewater, and the process emissions that occur during wastewater treatment at the City's wastewater treatment facility
Source: City of Woodland Climate Action Plan 2016

Table 3.4-2 shows the 2020 emissions forecasts by sector. Emissions are projected to decrease 4 percent below 2005 levels by the year 2020, resulting from implementation of statewide actions.[2] Transportation emissions are forecast to decline as a result of fuel efficiency improvements and lower carbon content in vehicle fuels. Similarly, electricity emissions are projected to decrease as PG&E increases its share of renewable energy sources in compliance with the Renewables Portfolio Standard. The remaining emissions sectors or subsectors are expected to experience emissions growth, as population and employment growth occurs in the community during this time period. The 2035 CAP identifies Woodland's 2020 GHG reduction target as 60,226 metric tons of equivalent carbon dioxide (MT CO_2e) and identifies reduction strategies that would achieve this target.

[2] The CAP projected population and employment growth within the community were used as proxies for emissions growth. The emissions forecasts were developed under an adjusted business-as-usual scenario, which considers the impact that several statewide emissions reduction strategies will have upon local emissions. This analysis included the emissions reduction potential of the state's Renewables Portfolio Standard, Low Carbon Fuel Standard, and Clean Car Program. The business-as-usual scenario forecasts do not assume implementation of any local emissions reduction strategies (beyond those already existing in 2005) or other changes to local emissions generation rates beyond those estimated to occur as a result of the previously identified statewide actions.

Table 3.4-2. 2020 Emissions Forecasts	
Sector	MT CO_2e
Transportation	359,648
Energy	153,783
Solid Waste	18,968
Wastewater Reuse	4,559
Water and Wastewater	2,025
Municipal Operations	2,674
Total	**541,657**

Notes: MT CO_2e = metric tons of equivalent carbon dioxide
Notes: MT CO_2e = metric tons of equivalent carbon dioxide
Wastewater Reuse refers to GHG emissions resulting from agricultural applications of wastewater; the organic material in the wastewater biodegrades to create carbon dioxide (a GHG) and nitrogen dioxide among the byproducts
Water and Wastewater refers to GHG emissions related to energy use in pumping, treating, and transporting water and wastewater, and the process emissions that occur during wastewater treatment at the City's wastewater treatment facility
Source: City of Woodland Climate Action Plan 2016

The 2035 CAP uses the same planning horizon (2035) and the same land use assumptions that are used throughout the 2035 General Plan and this EIR. Both the East and South Alternatives were analyzed in the CAP to estimate their different 2035 emissions levels based on the amount and location of growth described in each. As shown in Table 3.4-3, the emissions results from the East and South Alternatives are similar. Both Project Alternatives forecast further emissions reductions below the 2020 projected levels in the transportation sector based on a longer implementation period for the statewide actions. Emissions in all other sectors and subsectors are projected to increase from the 2020 forecast levels with planned residential and employment growth through 2035. The different land use assumptions associated with the two Project Alternatives result in slightly different amounts of emissions growth. Based on subsequent analysis, the City's 2035 GHG target will require emissions reductions totaling approximately 336,000 MT CO_2e per year for the East Alternative and 334,000 MT CO_2e per year for the South Alternative, including both statewide actions (existing and future) and local reduction strategies.

Table 3.4-3. 2035 Emissions Forecasts		
	MT CO_2e	
Sector	East Alternative	South Alternative
Transportation	247,390	245,270
Energy	206,353	205,171
Solid Waste	25,858	25,616
Wastewater Reuse	4,880	4,880
Water and Wastewater	2,469	2,469
Municipal Operations	3,205	3,205
Total	**490,155**	**486,611**

Notes: MT CO_2e = metric tons of equivalent carbon dioxide

Notes: MT CO_2e = metric tons of equivalent carbon dioxide

Wastewater Reuse refers to GHG emissions resulting from agricultural applications of wastewater; the organic material in the wastewater biodegrades to create carbon dioxide (a GHG) and nitrogen dioxide among the byproducts

Water and Wastewater refers to GHG emissions related to energy use in pumping, treating, and transporting water and wastewater, and the process emissions that occur during wastewater treatment at the City's wastewater treatment facility

Source: City of Woodland Climate Action Plan 2016

The 2035 General Plan directly supports 2035 CAP targets with several policies and implementation programs that would directly reduce GHG emissions. Specifically, the 2035 CAP is designed to:

- Translate high-level objectives and quantified goals into a realistic, understandable set of implementation actions;
- Demonstrate that significant reductions in GHG emissions are attainable through local actions;
- Inspire community members to work collectively to achieve these reductions;
- Dovetail with General Plan policies that are required to address climate change impacts and adaptation, including those for land use, transportation, building design, and infrastructure; and
- Provide a predictable approach to mitigation strategies for the compliance of future development projects with the California Environmental Quality Act (CEQA).

The CAP will evolve over time. The specific activities needed to successfully achieve the community's GHG reduction target may change with the availability of new technologies and as the City changes. Chapter 5 of the 2035 CAP describes the City's implementation and monitoring commitments. As described, the City will update GHG inventories, evaluate the performance of individual strategies, evaluate progress toward the City's reduction targets, and make revisions to strategies, as necessary, to ensure that the City will achieve its targets.

An important element of the CAP is periodic assessments of progress (Public Involvement Objective 2). If the assessments find that sufficient progress is not being made toward achieving the 2020 and 2035 GHG-reduction targets, further actions will be selected for implementation from a menu provided in Chapter 4G of the 2035 CAP.

3.5 GENERAL PLAN PROJECT OBJECTIVES

One early step in the General Plan process was the development of a vision for the future and guiding principles to inform the method to achieve that vision. The vision statement is an aspirational description of what the community would like to be in the future, in this case, looking forward to 2035, and represents a compilation of input from the community through the public process. Guiding principles are shared values that will be used to develop policies that would, once implemented, achieve the vision. The vision statement and guiding principles are outlined below.

3.5.1 VISION STATEMENT

The 2035 General Plan Vision Statement is:

> In 2035, Woodland is a highly desirable community to live, learn, work and recreate. It has maintained its small-town feel while maturing into an attractive, vibrant, and sustainable city that celebrates its architectural heritage and cultural diversity. Woodland is a healthy community with livable neighborhoods, a thriving downtown, well maintained infrastructure, excellent schools and recreational amenities connected by a seamless network of trails and paths.
>
> The city is the region's center of agricultural technology and food production and is recognized globally as a leader in sustainable agriculture. The community is prosperous and fiscally sound, offering abundant employment opportunities to its diverse and creative workforce.
>
> Woodland has become a destination for visitors seeking to experience its unique agricultural, historical, recreational, cultural and entertainment amenities.

3.5.2 GUIDING PRINCIPLES

The General Plan's Guiding Principles highlight the most critical shared values that were used in developing the policies and implementation measures in the 2035 General Plan Update. They include:

1 **Quality and Character**: Retain and enhance Woodland's quality of life, its distinctive identity and small-town characteristics.

Preserve Woodland's unique small town charm and quality of life by maintaining the city's distinct urban edge and surrounding agricultural open space, promoting the downtown and historic resources, and developing a variety of recreational, community and cultural facilities. Preserve and enhance the best qualities of Woodland's existing neighborhoods and promote the development of new neighborhoods with similar qualities while fostering healthy and attractive commercial and employment centers.

Promote development that strengthens the physical form of the City, enhances livability, incorporates sustainable design practices and continues to enhance Woodland's unique sense of place. High quality design and pleasing physical form promotes Woodland as offering a high quality of life and a desirable place to live, learn, work and recreate.

2 **Orderly Development**: Promote new growth while achieving an orderly pattern of community development, consistent with economic, social, fiscal and environmental needs.

Provide for urban development and expansion of associated services on a logical and incremental basis to accommodate projected population and employment growth. Growth will be managed to ensure adequate infrastructure, public services, and amenities that the City can sustain, provide and maintain. New growth areas will be carefully planned to enhance and not detract from existing neighborhoods and commercial centers. Infill and adaptive reuse of underutilized and vacant buildings is promoted.

3 **Historic Downtown**: Strengthen the historic downtown district as the City's center of shopping, dining, entertainment and employment.

Promote Downtown as the civic, cultural, and entertainment center of Woodland. The General Plan promotes a broad mix of uses, including increased dining, retail, and entertainment destinations with an array of urban housing and professional office/technology companies. Provide support to new business ventures and private reinvestment with policies and actions to assist revitalization and re-use of historically significant structures.

4 **Economic Development**: Foster economic growth and diversification with a range of employment opportunities for all residents.

The General Plan promotes a diversified economic base and seeks to capitalize on Woodland's location and assets—access to I-5, Sacramento International Airport, rail service, prime farmland, and U.C. Davis—by supporting and assisting business development and mitigating constraints to economic investment. The Plan provides sites in a variety of infill and new growth locations to attract hotel, office, industrial, and research and development uses, which in turn will provide jobs and help the City achieve fiscal sustainability. The General Plan seeks partnerships in higher education, seed research, agricultural technology, food production, and other locally appropriate sectors. It supports linkages with Woodland's strong historical and cultural resources and promotes tourism.

5 **Mobility Options**: Coordinate land use and transportation planning to provide a range of attractive and viable transportation options, such as bicycle, pedestrian, and transit.

Support development choices and transportation improvements that allow and encourage more residents, workers and visitors to walk, bike or use transit. Promote the development of "complete streets" to safely and effectively serve the needs of all modes of travel. Promote and seek opportunities to develop a seamless network of trails and paths to support a healthy and active lifestyle, livable neighborhoods and access to schools and amenities.

6 **Housing Choice**: Provide a variety of housing types to meet the needs for all generations and income levels.

Encourage and enable a mix of housing types and densities that will provide Woodland residents with access to a full range of housing opportunities, and enable the City to meet its fair share of the region's housing need. Housing types facilitated by the General Plan range from larger lot to small-lot single-family homes, townhomes, apartment buildings and lofts in a variety of locations and settings. Infill development in the Downtown and along mixed-use corridors is encouraged. Promote design practices that support high quality design and neighborhood development.

7 **Agricultural Heritage**: Preserve and protect prime agricultural lands and their uses within and surrounding the community.

Woodland's surrounding agriculture is an important part of the community's heritage, plays a major role in the city's economy, and endows Woodland with a unique sense of place. To help maintain this important resource, the General Plan maintains the voter-approved Urban Limit Line within which urban development will be contained. Development will occur in an orderly, contiguous manner to preserve agricultural use of land as long as possible. Outside the current city limits, the City will encourage and support continued agricultural use of land.

8 **Safety**: Ensure that Woodland remains a safe place to live, protected from natural and manmade hazards.

Protect community livelihood and investment through requirements for structures to withstand seismic activity, provide fire protection and minimize flood risk. Ensure a sense of personal and public safety as essential in developing a high quality of life. The General Plan supports appropriate levels of prevention and response.

9 **Environmental Stewardship**: Foster a sustainable community for the next generation and protect and improve the quality of the natural environment.

Encourage the preservation of the area's natural resources and continue to support regional efforts. Promote land use patterns that improve air quality and reduce greenhouse gas emissions, minimize vehicle miles traveled, and encourage conservation. Support proactive solutions to protect areas at risk of flooding.

10 **Public Services**: Provide realistic, supportable and appropriate levels of public service that are sustainable and fiscally sound.

Balance the fiscal realities of providing sustainable public services with community desires for high quality amenities and facilities to ensure that meeting today's needs does not compromise the community's fiscal future. Require new development to pay for itself, including new facilities and on-going operations. Support the continuing maintenance and expansion of existing public facilities as the most efficient and effective means of living within the community's means. The City will continue to strive to improve the efficiency and quality of its public facilities and services.

11 **Health and Recreation**: Provide all residents with opportunities to live an active, healthy, and green lifestyle.

Promote healthy lifestyles by enhancing opportunities for physical activity, healthy eating and sustainable living. The General Plan ensures that adequate parks and recreational amenities are well integrated in new neighborhoods. The Plan promotes creation of a recreational greenbelt and expansion of walking and biking paths to enable residents to use active transportation options to connect to work, schools, grocery stores, and variety of open spaces.

12 **Quality Education**: Foster quality educational and enrichment opportunities.

The General Plan underscores the importance of high quality educational opportunities—including K-12 education, higher education, workforce training, and general community enrichment—to Woodland's quality of life. The City recognizes the link between education, safety, and opportunities for economic advancement in the community for youth, their families, and all Woodland residents. To this end, the Plan supports continued partnership with the Woodland Joint Unified School District, the County Office of Education, and

Woodland Community College in planning, facility sharing, extracurricular activities and recreation, and promoting academic achievement, as well as linkages between Woodland's growing cluster of agricultural technology and research establishments and higher education.

3.6 CLIMATE ACTION PLAN OBJECTIVES

The CAP is organized into six focus areas: Energy, Transportation and Land Use, Urban Forest and Open Space, Water and Solid Waste, Public Involvement, and Municipal Operations.[3] Each of the six focus areas includes overarching objectives, strategies to achieve each objective, and implementation actions for each strategy. The following discussion summarizes the objectives of each focus area and the resulting potential reduction in GHG emissions.

3.6.1 ENERGY

A major portion of the progress toward meeting Woodland's GHG reduction targets can be achieved through individual actions to reduce energy demand and increase the proportion of energy obtained from renewable sources. Many factors are making it possible to achieve significant, immediate reductions in energy-related GHGs: rapidly improving technologies; availability of more energy-efficient building materials, lights, and equipment; and financing mechanisms, such as property-assessed clean energy programs, that make improvements more affordable. The following objectives are provided in the CAP to address energy demand:

- Reduce Building Energy Use
- Increase Renewable Energy Use

3.6.2 TRANSPORTATION AND LAND USE

Transportation and land use strategies for GHG reduction are closely linked because of the influence land use policies can have on types, rates, and patterns of growth; the distances people travel for essential services; and the ease or difficulty of different modes of travel. Land use and transportation infrastructure choices that promote convenience of pedestrian, bicycle, and transit travel and that situate residents near workplaces, goods and services, and recreation opportunities are essential to reducing GHGs from motor vehicle use. The following objectives are provided in the CAP to address transportation and land use:

- Implement Land Use Policies to Support Reduced Motor Vehicle Use
- Reduce Vehicle Miles Traveled and Equipment Idling Emissions
- Replace Gas and Diesel Vehicles with Alternative-Fuel Vehicles

[3] The GHG emissions calculations and forecasts are presented in the six categories shown in Tables 3.4.1 through 3.4.3 because each category entailed the use of a different GHG calculation method. By contrast, the CAP's six focus areas were developed to represent the simplest practical groupings of GHG-reduction actions that can be undertaken at the local level. Therefore, the six CAP focus areas do not correspond to the six GHG emissions calculation categories. For example, whereas several different calculations were necessary to encompass the GHG emissions from solid waste decomposition, water and wastewater processing, and wastewater reuse, only a few strategies entailing water use and solid waste generation are proposed to address these emissions, and these are presented in the CAP in a single focus area, Water and Solid Waste.

3.6.3 URBAN FOREST AND OPEN SPACE

With proper species selection, placement, and management, trees can help reduce GHG emissions by shading buildings, which reduces the need for air conditioning; shading pavement and reducing "heat island" effects; insulating buildings from cold winds; capturing and storing atmospheric carbon dioxide; and using solar energy to convert moisture to water vapor, resulting in cooler air. The following objectives are provided in the CAP to address urban forest and open space:

- Increase Community Tree Canopy
- Maintain and Enhance Open Space Environmental Values

3.6.4 WATER AND SOLID WASTE

Reducing water use at the tap reduces the energy used by the City for water pumping and treatment and for wastewater treatment, as well as the energy used to heat water in homes and businesses. Solid waste contributes to GHG emissions through decomposition at landfills. The following objectives are provided in the CAP to address water and solid waste:

- Reduce Per Capita Water Demand
- Achieve 75% Landfill Waste Diversion

3.6.5 PUBLIC INVOLVEMENT

The success of most of the CAP strategies will depend on the combined actions of a great many individuals. Community engagement on the scale that is needed for success will require reliance, in part, on an effort driven by community members to educate and inspire other community members. The following objectives are provided in the CAP to address public involvement:

- Build Community Engagement in CAP Implementation
- Measure CAP Implementation Progress and Adjust Actions as Needed

3.6.6 MUNICIPAL OPERATIONS

Municipal operations that generate GHG emissions include the operation of gas and diesel vehicles and equipment and the use of electrical power to operate City buildings, sports field lighting, streetlights and signals, wells, wastewater treatment processes, and stormwater pumps. The following objectives are provided in the CAP to address these sources:

- Incorporate Sustainable Practices into All City Operations
- Reduce Emissions from Municipal Electricity Use by 80% or More
- Reduce Vehicle Fleet and Employee Commute Emissions

3.7 2035 GENERAL PLAN

3.7.1 PROJECT ALTERNATIVES

The Land Use Diagram of the 2035 General Plan (Exhibit 3.7-1) assigns a land use to every parcel within the Planning Area and ULL. Acreages corresponding with the Land Use Diagram are shown in Table 3.7 -1.

Table 3.7-1. Acreage of Land Use Designations

Land Use Designation	Inside City Limits	Outside City Limits	Total Planning Area
Low Density Residential (LD)	2,502	54	2,556
Medium Density Residential (MD)	645	0	645
High Density Residential (HD)	35	0	35
Downtown Mixed Use (DX)	140	0	140
Corridor Mixed Use (CX)	491	52	543
Neighborhood Commercial (NC)	14	0	14
Community Commercial (CC)	110	0	110
Regional Commercial (RC)	305	102	406
Business Park (BP)	0	142	142
Industrial (IN)	1,490	754	2,244
Specific Plan (SP)	890	994	1,884
Public/Quasi Public (PQ)	1,012	90	1,102
Open Space (OS)	408	264	673
Flood Study Area (FS)	76	445	521
Right of Way	1,501	264	1,766
Total	**9,619**	**3,161**	**12,781**

Source: Dyett & Bhatia 2016

Rather than analyze one specific project, the 2035 General Plan EIR analyzes two alternative ways in which growth and development could occur through the planning horizon year (2035). While the Project Alternatives use the same Land Use Diagram, they offer different approaches regarding the timing, location, and sequence under which the Planning Area could build out through 2035, particularly in terms of "greenfield" growth in Specific Plan areas. One Alternative introduces new greenfield growth in the East while the other continues to concentrate new greenfield growth in the South. Hence the two Alternatives are termed the *East Alternative* and the *South Alternative*.

The vast majority of policies in the 2035 General Plan are the same for both the East and South Alternatives. The only policies that differ between the Alternatives are related to phasing of new growth in Specific Plan areas and issues specific to the growth in the Specific Plan areas. In order to help the reader distinguish where the document would differ for each Project Alternative, the 2035 General Plan shows text that is specific to the East Alternative in blue and text specific to the South Alternative in green. Text that pertains to both Alternatives is shown in black.

This EIR analyzes both of these Project Alternatives with equal consideration or "equal weight." In the following chapter, the impacts of each Alternative are fully evaluated relative to the baseline and established significance

criteria. The analysis in this EIR will inform the development of the final General Plan to be adopted by the City Council, which will only include one growth scenario, not two alternatives.

The differences in the expected amount, location, and phasing of growth between the two Project Alternatives are explained more fully below.

3.7.1.1 EAST ALTERNATIVE

The East Alternative anticipates 19,300 new residents and 19,340 new jobs by 2035, as shown in Table 3.7-2. This new development is envisioned to occur in both infill areas and the new growth areas labeled SP-1A, SP-2, and SP-3 in Exhibit 3.7-1. While the East Alternative expects that the entire acreage of SP-1A and SP-3 would develop, it only assumes 25 percent of land designated as SP-2 would develop by 2035. Refer to Section 3.8.2 Specific Plans for an explanation of each Specific Plan area.

Table 3.7-2. Anticipated Growth of East and South Alternatives through General Plan Horizon (2035)[1, 2]

	East Alternative New Growth[3]		South Alternative New Growth	
	New Growth	Total (2035)	New Growth	Total (2035)
New Population	19,300	74,990	19,300	74,990
New Jobs	19,340	45,340	18,210	44,210
New Jobs/Housing Ratio	2.76	1.68	2.60	1.64

Notes:

[1] To calculate development yields for the Project Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limits, a density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development. For Specific Plan areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C where a lower density of 3.0 dwelling acres per unit was assumed.

[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.

[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.

Source: Dyett & Bhatia 2016

Table 3.7-3 shows the expected location of new housing units. The East Alternative anticipates that 51 percent of new housing units will be located in infill areas with the remaining 49 percent occurring in new growth areas. Thirty-seven percent of new residential development will occur in the Spring Lake Specific Plan area, eight percent in Downtown, and six percent along corridors and in other infill locations. New residential development in new growth areas will mostly occur in SP-1A and SP-2, with a smaller amount in SP-3. No new residential development is anticipated to occur in SP-1B or SP-1C through 2035.

Table 3.7-3. Locations of New Residential Units[1, 2]				
	East Alternative		South Alternative	
Development Area	Units	Percent of Total	Units	Percent of Total
Infill				
Downtown	550	8%	1,000	14%
Corridors/Other Infill	440	6%	950	14%
Spring Lake Specific Plan	2,600	37%	2,600	37%
Industrial Area	0	0%	0	0%
Infill Total	**3,590**	**51%**	**4,550**	**65%**
New Growth Areas				
SP-1	1,600	23%	2,200	31%
SP-1A	1,600	23%	1,600	23%
SP-1B	0	0%	520	7%
SP-1C	0	0%	80	1%
SP-2[3]	1,600	23%	0	0%
SP-3	210	3%	250	4%
SP-3A	200	3%	200	3%
SP-3B	10	0%	50	1%
New Growth Areas Total	**3,410**	**49%**	**2,450**	**35%**
TOTAL	**7,000**	**100%**	**7,000**	**100%**

Notes:

[1] To calculate development yields for the Project Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limits, a density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development. For Specific Plan areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C where a lower density of 3.0 dwelling acres per unit was assumed.

[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.

[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.

Source: Dyett & Bhatia 2016

Table 3.7-4 shows the expected location of new non-residential development. The East Alternative anticipates that 76 percent of new non-residential square footage will be located in infill areas, with the remaining 24 percent occurring in new growth areas. Forty-nine percent of the total new non-residential square footage will occur in the Industrial Area and 22 percent will occur along corridors and in other infill locations. A smaller amount will be located Downtown and in the Spring Lake Specific Plan area. New non-residential square footage in new growth areas will mostly occur in SP-1A, with smaller amounts in SP-1B, SP-2, and SP-3.

Table 3.7-4. Locations of New Non-Residential Square Footage[1, 2]

Development Area	East Alternative		South Alternative	
	Non-Residential Square Feet	Percent of Total	Non-Residential Square Feet	Percent of Total
Infill				
Downtown	266,000	2%	484,000	3%
Corridors/Other Infill	3,878,000	22%	3,700,000	22%
Spring Lake Specific Plan	530,000	3%	530,000	3%
Industrial Area	8,552,000	49%	8,552,000	51%
Infill Total	**13,226,000**	**76%**	**13,266,000**	**80%**
New Growth Areas				
SP-1	2,358,000	14%	2,376,000	14%
SP-1A	2,160,000	12%	2,160,000	13%
SP-1B	198,000	1%	216,000	1%
SP-1C	0	0%	0	0%
SP-2[3]	865,000	5%	0	0%
SP-3	937,000	5%	1,043,000	6%
SP-3A	114,000	1%	220,000	1%
SP-3B	823,000	5%	823,000	5%
New Growth Areas Total	**4,160,000**	**24%**	**3,419,000**	**20%**
TOTAL	**17,386,000**	**100%**	**16,685,000**	**100%**

Notes:

[1] To calculate development yields for the Project Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limits, a density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development. For Specific Plan areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C where a lower density of 3.0 dwelling acres per unit was assumed.

[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.

[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.

Source: Dyett & Bhatia 2016

According to the 2035 General Plan, development in the new growth areas is expected to occur in phases, as shown in Table 3.7-5. Development of SP-1A is anticipated to occur first, likely between 2016 and 2025. Development of SP-2 and residential development in SP-3A is expected to occur later, though the exact timing is uncertain as Specific Plans for these areas may not be approved until a comprehensive flood solution and supporting funding have been secured. Development of SP-3B and the Southern Gateway business park in SP-1B can proceed at any time. Development of the remainder of SP-1B and SP-1C is not permitted prior to 2035 without a comprehensive General Plan Update and accompanying EIR.

3.7.1.2 SOUTH ALTERNATIVE

The South Alternative anticipates 19,300 new residents and 18,210 new jobs by 2035, as shown in Table 3.7-2. This new development is envisioned to occur in both infill areas and the new growth areas labeled SP-1 (areas A,

B, and C) and SP-3 in Exhibit 3.7-1, but not in SP-2. Refer to Section 3.8.2 Specific Plans for an explanation of each Specific Plan area.

Table 3.7-3 shows the expected location of new housing units. The South Alternative anticipates that 65 percent of new housing units will be located in infill areas with the remaining 35 percent occurring in new growth areas. 37 percent of new residential development will occur in the Spring Lake Specific Plan area, 14 percent in Downtown, and 14 percent along corridors and in other infill locations. New residential development in new growth areas will mostly occur in SP-1, with a smaller amount in SP-3. No development is anticipated to occur in SP-2 through 2035.

Table 3.7-4 shows the expected location of new non-residential development. The South Alternative anticipates that 80 percent of new non-residential square footage will be located in infill areas, with the remaining 20 percent occurring in new growth areas. 51 percent of the total new non-residential square footage will occur in the Industrial Area and 22 percent will occur along corridors and in other infill locations. A smaller amount will be located Downtown and in the Spring Lake Specific Plan area. New non-residential square footage in new growth areas will mostly occur in SP-1, with smaller amounts in SP-3.

According to the 2035 General Plan, development in the new growth areas is expected to occur in phases, as shown in Table 3.7-5. Development of SP-1A is anticipated to occur first, likely between 2016 and 2025. Development of SP-1B and SP-1C is expected to follow, approximately between 2026 and 2035. The exact timing for the development of SP-3A is uncertain as a Specific Plan for this area may not be approved until a comprehensive flood solution and supporting funding have been secured. Development of SP-3B and the Southern Gateway business park in SP-1B can proceed at any time. Development of SP-2 is not permitted prior to 2035 without a comprehensive General Plan Update and accompanying EIR, and is not planned to occur before 2035 under the South Alternative.

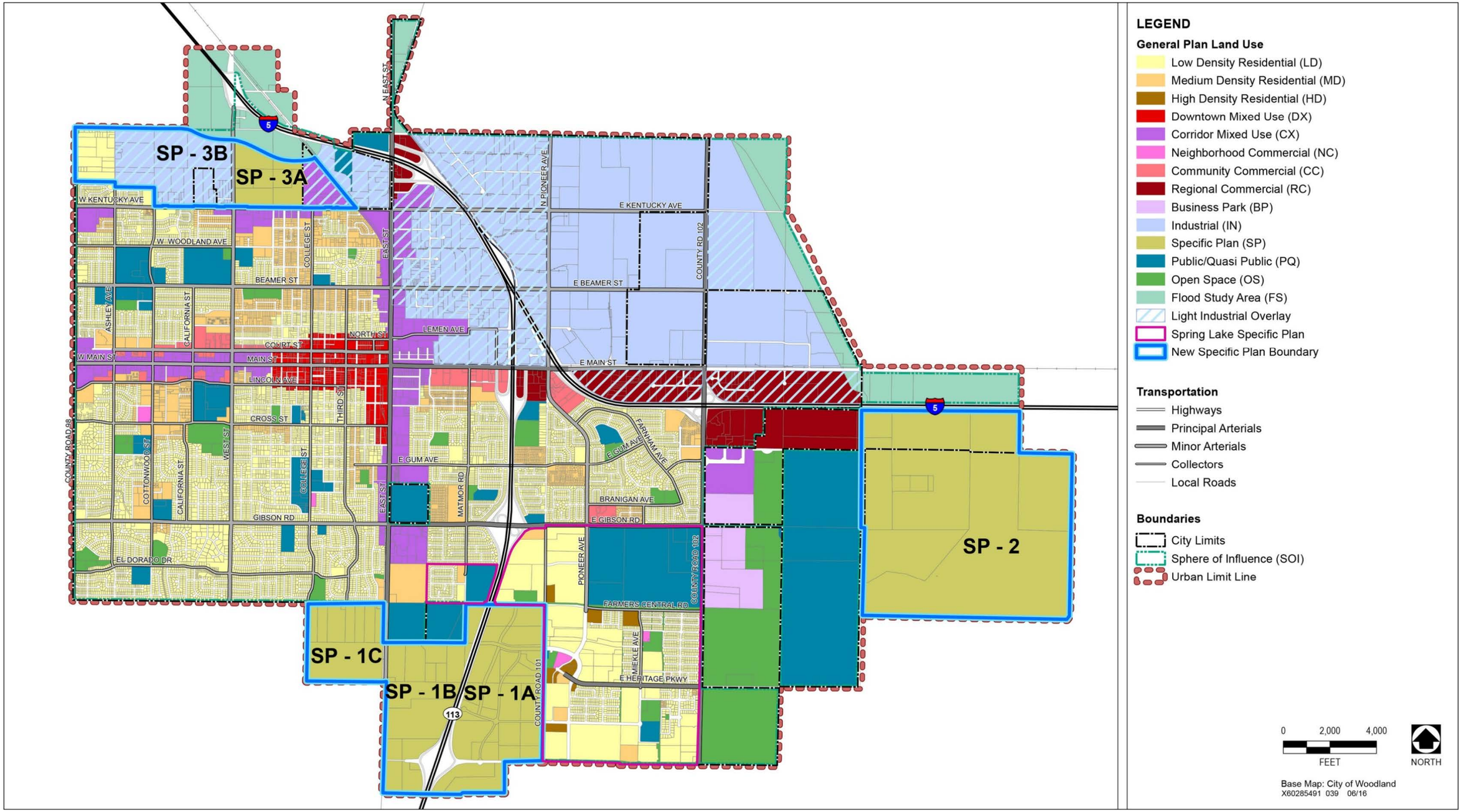

Exhibit 3.7-1. **Draft Land Use Diagram**

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Table 3.7-5. Phasing by New Growth Area

Development Area	East Alternative		South Alternative	
	Approximate Phasing	Restrictions	Approximate Phasing	Restrictions
SP-1A	2016 – 2025	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing	2016 – 2025	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
SP-1B	2036 or beyond	Not permitted prior to 2035 without a comprehensive General Plan Update and accompanying EIR	2026 – 2035	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
SP-1C	2036 or beyond	Not permitted prior to 2035 without a comprehensive General Plan Update and accompanying EIR	2026 – 2035	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
Southern Gateway (located within SP-1A and SP-1B)	Ongoing	None	Ongoing	None
SP-2	Unknown	Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.	2036 or beyond	Not permitted prior to 2035 without a comprehensive General Plan Update and accompanying EIR
SP-3A	Unknown	Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.	Unknown	Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.
SP-3B	Ongoing	None	Ongoing	None

3.7.2 ELEMENTS OF THE GENERAL PLAN

The 2035 General Plan (Plan) contains an Introduction and Administration chapter and eight elements:

a. Land Use, Community Design, and Historic Preservation
b. Transportation and Circulation
c. Economic Development

d. Public Facilities and Services
e. Healthy Community
f. Conservation and Open Space
g. Safety
h. Housing

Each Element of the Plan includes some background information to establish the context for policies in the chapter. This background information is followed by goals and policies, which together articulate a vision for Woodland that the Plan seeks to achieve. Goals are an ideal future end related to the public health, safety, or general welfare of the community; they set directions for policies. Policies are specified ends or conditions that are an intermediate step towards attaining a goal; they are specific statements to guide decision-making.

The following summarizes the contents of each Element, including major proposed improvements and policy directions.

3.7.2.1 LAND USE, COMMUNITY DESIGN, AND HISTORIC PRESERVATION ELEMENT

The Land Use, Community Design, and Historic Preservation Element addresses most of the State requirements for land use elements. (Areas subject to flooding are addressed in the Safety Element.) The Element directs the location and form of future development, shaping where people will live, work, play, and shop in Woodland. It presents the desirable pattern for the ultimate development of the City for the General Plan horizon (year 2035) and seeks to ensure that land use planning reflects the community's evolution and changing demographics, while promoting sustainability.

Goals and policies related to urban form and design will inform development decisions by providing a common understanding of the characteristics the community wishes to achieve and preserve. Each development project must consider its impact on the form and character of the community as a whole, particularly regarding the project's overall massing and its interaction with the street and public realm.

The Land Use Diagram in Exhibit 3.7-1 illustrates the land use framework of the General Plan, serving as a graphic representation of its goals and policies. It designates the general location, distribution, and extent of land uses. As noted above, the Land Use Diagram is the same for both proposed Project Alternatives. The legend of the diagram includes the land use designations summarized in Table 3.7-6.

Table 3.7-6. Density and Intensity Standards by Land Use Designation[1]		
Land Use Designation	Density (Dwelling units per gross acre)	Intensity (Allowable FAR)
Low Density Residential (LD)	0 to 8.0	N/A
Medium Density Residential (MD)	8.1 to 19.9	N/A
High Density Residential (HD)	20.0 to 40.0	N/A
Downtown Mixed Use (DX) [2, 3]	None specified	1.0 to 4.0 for all uses combined
Corridor Mixed Use (CX)[3]	20.0 to 40.0 Lower densities may be allowed where proposed development abuts low density residential development.	0.25 to 2.0 for single use; 0.5 to 3.0 for mixed use
Specific Plan (SP)[4]	8.0	0.3
Neighborhood Commercial (NC)	N/A	0.15 to 0.5
Community Commercial (CC)	N/A	0.15 to 0.5
Regional Commercial (RC)	N/A	0.15 to 0.7
Business Park (BP)	N/A	0.25 to 2.0
Industrial (IN)	N/A	Up to 0.8
Public/Quasi Public (PQ)	N/A	Up to 1.0
Open Space (OS)	N/A	None
Flood Study Area (FS)	N/A	None
Light Industrial Flex Overlay (IF)	N/A	Determined by base designation

Notes:

[1] For buildout calculation purposes, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX) which has no specified residential density limits, a density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development.

[2] The assumed maximum achievable density in the Downtown Mixed Use designation is 40 dwelling units per acre. Single-use development will be allowed off of West Main Street.

[3] New development may be allowed to exceed FAR limits if it offers significant community benefit, such as the provision of publically accessible open space, the restoration and/or adaptive reuse of a historic structure, or the promotion of transit accessibility.

[4] Density and intensity for the Specific Plan designation are both assumed averages across each individual Specific Plan area. SP-1C assumes a lower density of 3.0 dwelling units per acre and no non-residential development.

Source: Dyett & Bhatia 2016

This Element includes the following sections:

- **Growth and Change.** The General Plan assumes that the East Alternative and South Alternative would develop approximately 7,000 new housing units; however, the General Plan assumes that the South Alternative will develop less non-residential square footage (16.7 million square feet) as compared to the East Alternative (17.4 million square feet) over the planning horizon. Goals and policies in this section provide for strategic growth and change that preserves and enhances existing neighborhoods; prioritizes new growth in infill areas through the revitalization of Downtown, key corridors and employment centers; provides for orderly expansion to "greenfield" new growth areas; and maintains Woodland's unique agricultural and historical heritage.

- **Citywide Land Use and Community Design.** Provides a Land Use Diagram, descriptions of each land use designation and associated density and intensity standards, as well as goals and policies that address the development and design of each.

- **Historic Preservation.** Outlines goals and policies related to the preservation, promotion, and enhancement of Woodland's historic resources. Goals and policies are similar, although new implementation programs proposed as mitigation and included in Section 4.6 of this EIR, "Cultural Resources," provide detail on the City's approach, assessment, and mitigation of potential impacts to historic and prehistoric resources.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

The 2035 General Plan, if adopted, would comprehensively replace and supersede the City's current, 2002 General Plan. Table 3.7-7 compares the existing conditions with the anticipated new growth under the 2002 General Plan, the East Alternative, and the South Alternative.

Table 3.7-7. Anticipated Growth Through General Plan Horizon (2035)[1, 2]

	Existing Conditions (2013)	2002 General Plan		East Alternative New Growth[3]		South Alternative New Growth	
		New Growth	Total (2035)	New Growth	Total (2035)	New Growth	Total (2035)
New Population	55,690	14,930	70,620	19,300	74,990	19,300	74,990
New Housing Units	19,980	5,420	25,400	7,000	26,980	7,000	26,980
New Non-Residential Square Feet	19,824,400	5,545,000	25,369,000	17,386,000	37,210,000	16,685,000	36,509,000
New Jobs	26,000	8,170	34,170	19,340	45,340	18,210	44,210
New Jobs/Housing Ratio	1.30	1.51	1.35	2.76	1.68	2.60	1.64

Notes:

[1] To calculate development yields for the Project Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limits and an estimated maximum achievable density of 40 dwelling units per acre, a mid-range density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX), which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development. For Specific Plan areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C where a lower density of 3.0 dwelling acres per unit was assumed.

[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.

[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.

Source: Dyett & Bhatia 2016

The East and South Alternatives each plan for 19,300 new residents, which is approximately 30 percent more than the new residential development included in the 2002 General Plan. Both of the Project Alternatives plan for more than triple the amount of new non-residential building square footage and more than double the amount of new jobs as compared with the 2002 General Plan. The East Alternative plans for four percent more new non-residential building square footage and six percent more new jobs when compared with the South Alternative.

The East and South Alternatives have the same Land Use Diagram, land use designations, and the same associated density and intensity standards. The 2035 General Plan, including both Alternatives, proposes revisions to the land use designations used in the 2002 General Plan. Table 3.7-8 lists the land use designations and

corresponding maximum densities in dwelling units per acre (du/ac) and floor area ratio (FAR) in the 2002 General Plan and the 2035 General Plan. In general, the 2035 General Plan allows for higher residential and non-residential densities than the 2002 General Plan.

Table 3.7-8. Land Use Designations in the 2002 General Plan and 2035 General Plan

	2002 General Plan		2035 General Plan	
	Land Use Designation	Density	Land Use Designation	Density
Residential	Rural Residential	2.0 du/ac 0.4 FAR	Low Density Residential (LD)	0–8.0 du/ac
	Very Low Density Residential	1.0–4.0 du/ac 0.3 FAR	Medium Density Residential (MD)	8.1–19.9 du/ac
	Low Density Residential	3.0–8.0 du/ac 0.4 FAR	High Density Residential (HD)	20.0–40.0 du/ac
	Medium-Low Density Residential	5.0–12.0 du/ac 0.5 FAR		
	Neighborhood Preservation	3.0–8.0 du/ac 0.5 FAR		
	Medium Density Residential	8.0–16.0 du/ac 0.50 FAR		
	Planned Neighborhood	7. du/ac		
	High Density Residential	16.0–25.0 du/ac 0.5 FAR		
Commercial	Commercial/Residential Mixed Use	Up to 25.0 du/ac 0.6–1.5 du/ac	Downtown Mixed Use (DX) [1, 2]	No residential density specified 1.0–4.0 FAR
	Neighborhood Commercial	0.5 FAR	Corridor Mixed Use (CX)[2]	20.0–40.0 du/ac 0.25–2.0 FAR for single use; 0.5–3.0 FAR for mixed-use
	Central Commercial	5.0–12.0 du/ac 4.0 FAR	Community Commercial (CC)	0.15–0.5 FAR
	General Commercial	0.8 FAR	Neighborhood Commercial (NC)	0.15–0.5 FAR
	Service Commercial	0.8 FAR	Regional Commercial (RC)	0.15–0.7 FAR
	Highway Commercial	0.5 FAR		
Industrial	Industrial	0.6 FAR	Industrial (IN)	Up to 0.8 FAR
	Business Park	0.5 FAR	Light Industrial Flex Overlay (IF)	Determined by base designation
			Business Park (BP)	0.25–2.0 FAR
Other	Public Service	0.5 FAR	Public/Quasi Public (PQ)	Up to 1.0 FAR
	Open Space	0.1 FAR	Open Space (OS)	None
	Agriculture	0.4 FAR	Flood Study Area (FS)	None
			Specific Plan (SP)[3]	0.3 FAR
	Urban Reserve	N/A		

Notes:

[1] While no residential density is specified for the Downtown Mixed Use designation, it is estimated that the maximum achievable density is approximately 40 dwelling units per acre. Single-use development will be allowed off of West Main Street.

[2] Lower residential densities may be allowed where proposed development abuts low density residential development. New development may be allowed to exceed FAR limits if it offers significant community benefit, such as the provision of publically accessible open space, the restoration and/or adaptive reuse of a historic structure, or the promotion of transit accessibility.

[3] Density and intensity for the Specific Plan designation are both assumed averages across each individual Specific Plan area. SP-1C assumes a lower density of 3.0 dwelling units per acre and no non-residential development.

Source: City of Woodland 2002 General Plan; Dyett & Bhatia 2016

As explained above in Section 3.7.1, Project Alternatives, the phasing of new growth differs between the two Alternatives. New growth areas in the East Alternative are projected to have more development than new growth areas in the South Alternative (an additional 960 housing units and 741,000 non-residential square feet). However, the South Alternative assumes more infill growth than the East Alternative. As a result, both Alternatives expect the same overall population growth by 2035. Tables 3.7-7 and 3.7-9 show the amount of new housing units and non-residential development in infill and new growth areas under each Alternative, and the total amount of new growth by location is summarized in Tables 3.7-3 and 3.7-4.

Table 3.7-9. New Development by Location by 2035[1, 2]

	Housing Units			Non-Residential Square Feet		
	No Project	East Alternative	South Alternative	No Project	East Alternative	South Alternative
Infill	3,220	3,590	4,550	4,004,000	13,226,000	13,266,000
Percent of Total	59%	51%	65%	72%	76%	80%
New Growth Areas[3]	2,200	3,410	2,450	1,541,000	4,160,000	3,419,000
Percent of Total	41%	49%	35%	28%	24%	20%
Total	**5,420**	**7,000**	**7,000**	**5,545,000**	**17,386,000**	**16,685,000**

Notes:

[1] To calculate development yields for the Project Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limits and an estimated maximum achievable density of 40 dwelling units per acre, a mid-range density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development. For Specific Plan areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C where a lower density of 3.0 dwelling acres per unit was assumed.

[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.

[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.

The 2002 General Plan anticipates 59 percent of new housing units in infill areas. In comparison, the East Alternative anticipates a lesser percentage of new housing units in infill areas (51 percent), and the South Alternative anticipates a greater percentage (65 percent), as shown in Table 3.7-9. In terms of new non-residential development, the 2002 General Plan anticipates 72 percent of new development in infill areas, and both the East and South Alternatives anticipate a greater percentage of development in infill areas (76 percent and 80 percent, respectively).

3.7.2.2 TRANSPORTATION AND CIRCULATION ELEMENT

The Transportation and Circulation Element addresses the State requirements for circulation elements. This Element provides for the development of enhanced infrastructure to promote increased transportation choices to serve existing and new development. Specifically, it promotes an integrated, multimodal transportation system to reduce air pollution and greenhouse gas (GHG) emissions, reduce the need for costly roadway improvements, and facilitate travel for residents who cannot or choose not to use automobiles for short- and long-distance trips. Exhibit 3.7-2 shows two diagrams of planned citywide circulation – one for each Alternative. Notable transportation improvements include a new SR 113/I-5 interchange; roadway widening along certain sections of Kentucky Avenue, CR 102, and CR-25A; and planned roadways in Spring Lake, SP-1A, and east of CR 102. The

Circulation Diagram for the East Alternative also includes an additional freeway interchange on I-5 east of CR-103, and planned roadways in the SP-2 area. The Circulation Diagram for the South Alternative includes planned roadways for SP-1B.

This Element includes the following sections:

- **Walkable Environment.** Presents policies promoting safe, walkable communities in the city for residents to enjoy.
- **Bikeways.** Presents policies encouraging a comprehensive citywide bikeway network to facilitate increased bicycling.
- **Public Transit.** Presents policies promoting effective transit service.
- **Streets and Roadways.** Presents policies related to the overall planning and development of the city's circulation system, balancing the needs of all modes of travel through comprehensive network design. This section presents a circulation diagram as well as descriptions of street typologies.
- **Parking.** Presents policies providing adequate parking for existing and new development.
- **Goods Movement.** Presents policies facilitating the movement of goods by rail or trucks.
- **Air Transportation.** Presents policies supporting the operation of air transportation facilities, while protecting a quality living environment.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

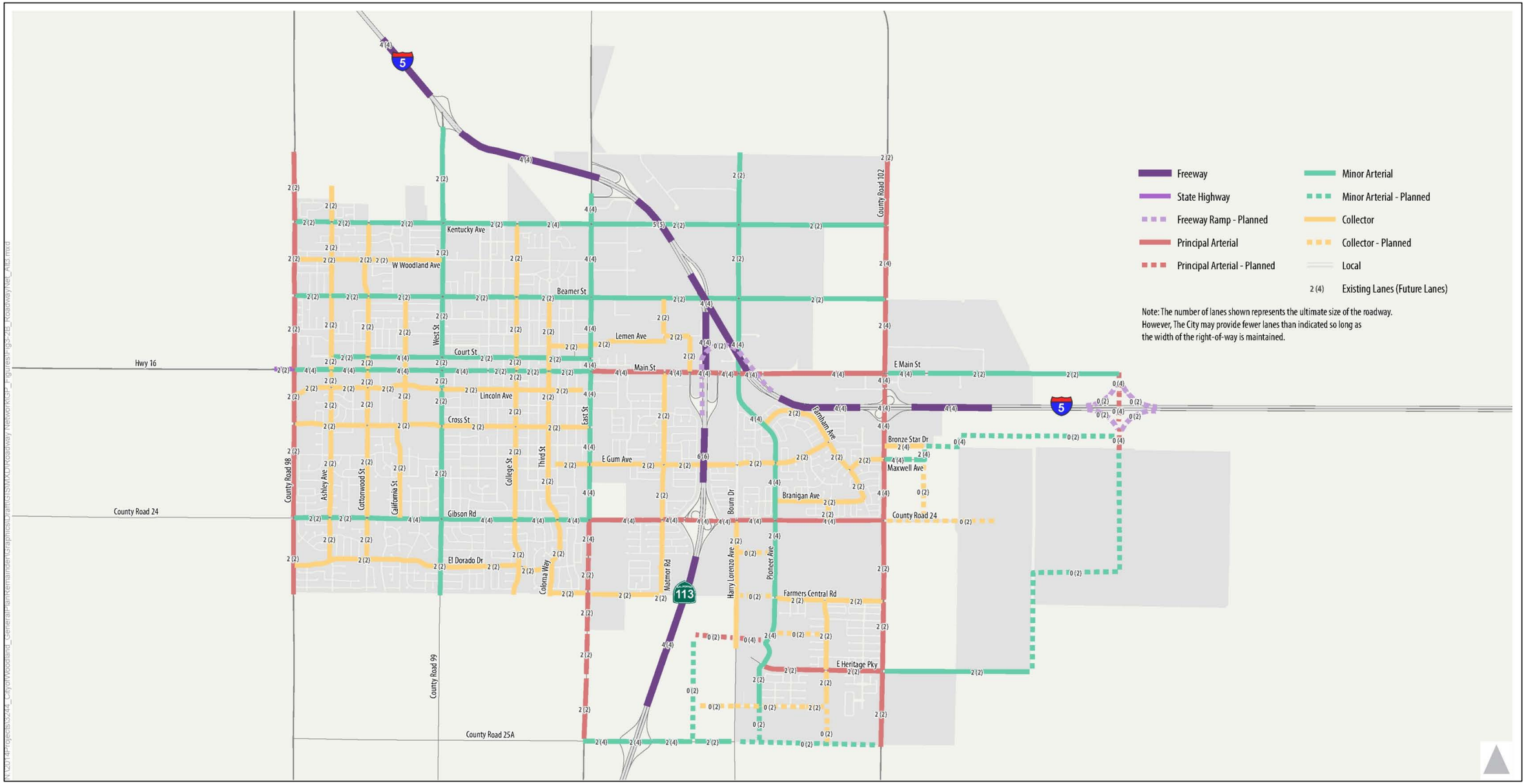
The Citywide Circulation Diagram referenced in Policy 3.C.1 of the 2035 General Plan differs slightly for the East and South Alternatives, primarily in the layout of planned roadways in the Specific Plan areas for SP-1 and SP-2, as needed to support new growth in the various new growth areas. This results in greater arterial road center lane miles under the East Alternative as compared to the South Alternative. The East Alternative Citywide Circulation Diagram also shows a new freeway ramp planned for Interstate 5 on the eastern edge of the Planning Area.

There are no differences in policies or text between the East and South Alternatives in the Transportation and Circulation Element.

The Transportation and Circulation Element of the 2002 General Plan is organized into the following topics:

- Street and Roadway System
- Residential Streets
- Automobile Parking
- Transit Facilities and Services
- Non-motorized Transportation
- Goods Movement
- Air Transportation

Both the 2035 General Plan and the 2002 General Plan aim to create a transportation system that provides for the safe and efficient movement of people and goods. One of the major differences in policies between the General Plans is the Level of Service (LOS) Standard. The 2002 General Plan requires maintenance of a LOS "C" or better in most places while the 2035 General Plan requires the maintenance of LOS "D" or better in most places. This shift supports the 2035 General Plan's goals and policies to create a more balanced transportation network that better accommodates multiple modes of travel in an increasingly urban environment. In addition, the 2035 General Plan includes policies that introduce new approaches, including a new transportation metric of 30 vehicle miles traveled per capita when measuring transportation impacts for subsequent projects; a requirement to develop a transportation demand management ordinance; a set of policies on Complete Streets; and a policy to encourage the reduction of the amount of land devoted to parking in the city.



Source: City of Woodland 2016

Exhibit 3.7-2.a. **Circulation Diagram East Alternative**

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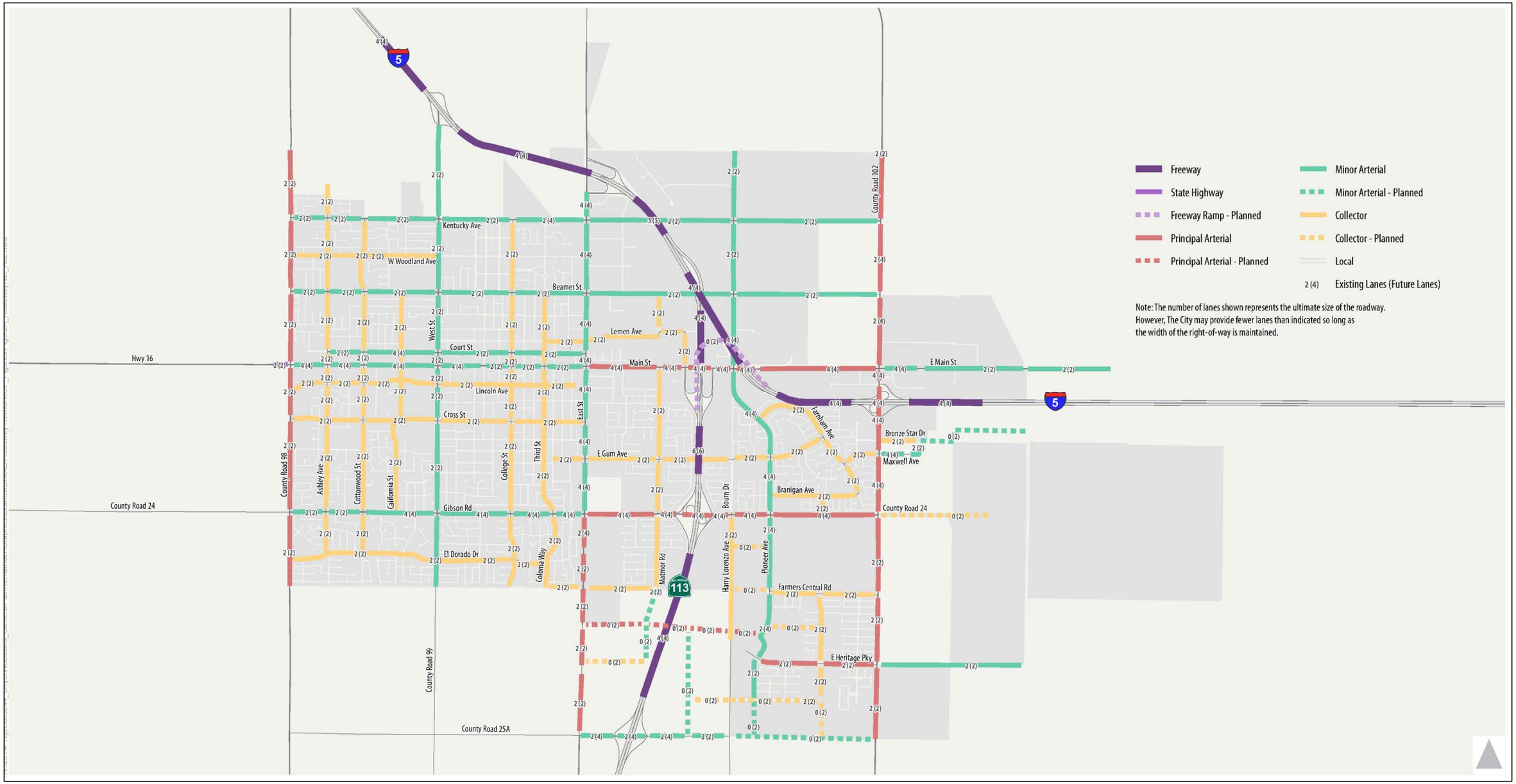

Source: City of Woodland 2016

Exhibit 3.7-2.b. **Circulation Diagram South Alternative**

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3.7.2.3 ECONOMIC DEVELOPMENT ELEMENT

While an economic development element is not required as a mandated element of a general plan, it is included as an additional element, as permitted by California Government Code Section 65303. The Economic Development Element contains goals and policies that will enable the City to direct local resources to retain, relocate, expand, and assist local businesses and attract new industries that will increase the City's tax base and economic diversity. This Element provides policy direction for fostering development and revitalization to support a vibrant downtown; promoting growth in key target areas; providing jobs for the growing population; creating opportunities for supply of retail goods and services that will be needed by the community and patronized by regional travelers, as well as business to business opportunities, and enhancing the City's ability to provide public services for current and future residents.

This Element includes the following sections:

- **Economics of Woodland.** Presents an overview of the Woodland economy, current and projected employment, and jobs-housing relationship.
- **The City's Role in Economic Growth.** Outlines the roles of the City of Woodland in promoting economic growth.
- **Fiscal Sustainability, Land Use, and Infrastructure.** Provides an overview of the City's fiscal base and explains the relationship between fiscal sustainability, land uses, infrastructure, and economic growth.
- **Business and Job Growth.** Presents strategies to attract and retain businesses in Woodland and promote job growth.
- **Tourism in Woodland.** Describes tourism in Woodland and associated benefits for the community and the City, and provides strategies to increase tourism in Woodland.
- **Developing Strong Partnerships.** Describes the benefits of strong partnerships and key organizations and institutions the City can partner with to realize benefits for the Woodland economy and community.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

There are no differences in policies between the East and South Alternatives in the Economic Development Element. The only differences in the chapter text are in relation to the difference in job growth (as described under the Land Use, Community Design, and Historic Preservation Element) and the identification of SP-2 as a focus area for economic growth under the East Alternative.

The Economic Development Element of the 2002 General Plan is organized into the following topics:

- Business Retention and Expansion
- Business Attraction and Formation
- Downtown Economic Development
- Tourism

The 2035 General Plan and the 2002 General Plan have many similar goals and policies related to economic development. One of the differences is that the 2002 General Plan includes a set of policies focused on economic development in the Downtown to promote residential, office, and commercial growth in the area. In the 2035 General Plan, most goals and policies regarding development and economic growth in the Downtown are located in the Land Use, Community Design, and Historic Preservation Element. However, policies in the Economic Development Element do require that the City provide incentives for infill and to support Downtown businesses. The 2035 General Plan includes new policies that address fiscal sustainability, strong partnerships with entities such as University of California at Davis, and the provision of infrastructure to support new growth.

3.7.2.4 PUBLIC FACILITIES AND SERVICES ELEMENT

The Public Facilities and Services Element contains information pertaining to land uses for education, public buildings and grounds, and solid and liquid waste disposal facilities; open space for outdoor recreation; water supply and demand; and police, fire and medical facilities, as required by California Government Code Section 65302(a), 65302(d) and 65302(g). The purpose of this Element is to provide a policy framework for the City to manage infrastructure and services, identify areas for improvement, and ensure that public utilities and services meet the needs of the community as the City grows. More specifically, the Public Facilities and Services Element addresses the planning, provision, and maintenance of police and fire services; parks and recreational facilities and programs; schools; water, wastewater, solid waste systems; and other public facilities.

This Element includes the following sections:

- **Police.** Describes police services in Woodland, response times, and service standards.
- **Fire and Emergency Medical Services.** Describes fire and emergency medical services in Woodland, response times, and international service organization rating.
- **Parks and Recreation.** Presents existing parks and recreational facilities and programs, planning improvements, and current standards and deficiencies.
- **Schools.** Provides an overview of existing educational facilities in Woodland, including public and private schools and higher education. Describes current unmet facility needs and joint-use agreements for facilities.
- **Public Utilities.** Discusses potable water, including water supply and water demand. Provides an overview of current capacity and planning improvements of Woodland's wastewater collection and facilities. Describes existing storm drainage facilities, planned improvements, and low impact development, and presents solid waste collection and disposal in Woodland. Also presents other utilities, including natural gas and telecommunications, such as broadband technology.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

There are no differences in policies between the East and South Alternatives in the Public Facilities and Services Element. However, there are differences in regards to police, fire, and school needs. To adequately cover the growth anticipated in this EIR, the City would require seven police beats, staffed continuously, for the East Alternative and six for the South Alternative. Currently the City staffs four full-time beats and one-part time beat. For the East Alternative, a new fire station would be needed in the SP-2 area to service the new population on the east side of the city. In addition, projected school enrollment in 2035 would exceed available capacity for

elementary and middle schools for the East Alternative and for elementary schools for the South Alternative. Under the East Alternative, a new school may need to be constructed to serve new residential development on the eastern side of the city.

The Public Facilities and Services Element of the 2002 General Plan is organized into the following topics:

- General Public Facilities and Services
- Public Facilities and Services Funding
- Water Supply and Delivery
- Wastewater Collection, Treatment, Disposal, and Reuse
- Stormwater Drainage
- Solid Waste Collection and Disposal
- Law Enforcement
- Fire Protection
- Public Utilities
- Information Technology

The 2035 General Plan and the 2002 General Plan have many similar goals and policies related to public facilities and services. Some of the policies related to these issues are included in different Elements of the respective General Plans—the 2002 General Plan includes policies relating to parks and schools in its Recreational, Educational, and Community Services Element.

The 2002 and 2035 General Plans strive to maintain the same law enforcement response times and the same fire protection services ISO (Insurance Service Organization) rating, although some of the other service standards have been adjusted. The 2002 General Plan requires the City to strive to attain a standard of six acres of parks per 1,000 residents (in the Recreational, Educational, and Community Services Element as discussed below), whereas the 2035 General Plan establishes the goal of five acres per 1,000 residents. The 2035 General Plan includes policies that address the most recent technologies, including WiFi.

3.7.2.5 HEALTHY COMMUNITY ELEMENT

While the inclusion of a health element is not required as a mandated element of a general plan, California Government Code Section 65303 indicates that a general plan may include additional elements that a community considers important to its physical development. The Healthy Community Element reviews current health conditions in Woodland and sets forth goals and policies to promote healthy lifestyles in Woodland, particularly pertaining to access to medical and health services and facilities, active lifestyles, healthy food, community services, and arts and culture. There are three distinct components of a healthy community that are addressed in the General Plan's goals and policies: Healthy Bodies, Healthy Minds, and Healthy Earth.

- **Healthy Bodies.** Goals and policies that promote healthy bodies are focused on physical wellbeing. Access to medical and health services and facilities facilitates care of physical health and is an important aspect of healthy bodies that is supported in this Element of the General Plan. Opportunities for residents to lead active and healthy lifestyles is another aspect of healthy bodies that is discussed in this Element, through promotion of walking, biking, exercise programs and classes, healthy diets, nutrition programs, and recreational facilities and programs.

- **Healthy Minds.** Goals and policies that encourage healthy minds are focused on social and mental wellbeing. Healthy minds are nurtured by opportunities for life-long learning, and the General Plan supports quality educational opportunities for residents of all ages in the Public Facilities and Services Element. A strong, supportive social network and sense of community contribute to healthy minds and are fostered in this Element. An appreciation of heritage, culture, and the arts and opportunities for enhanced creativity and expression also play important roles in cultivating healthy minds and are supported by this Element.

- **Healthy Earth.** Goals and policies that promote a healthy earth are focused on sustainability and the health of the environment. Protection and conservation of natural resources, including biological and ecological resources, is a key component of a healthy earth. Similarly, a healthy earth depends on improving air quality, reducing greenhouse gas emissions, protecting water quality, using water resources efficiently, and increasing energy efficiency and renewable energy usage. These topics are discussed in more detail in the Conservation and Open Space Element and the Public Facilities and Services Element.

This Element includes the following sections:

- **Physical Health and Environmental Justice.** Discusses physical health conditions in Woodland; access to medical and health facilities and services; and environmental justice as it relates to health.

- **Active Lifestyles.** Presents information related to current physical activity levels in Woodland and promotes opportunities and improvements related to an active lifestyle for the Woodland community.

- **Healthy Food.** Discusses current nutrition data in the Woodland community. Promotes access to healthy foods and urban agriculture in Woodland.

- **Community Facilities and Services.** Presents community facilities and services in Woodland, including services for youth and seniors.

- **Arts and Culture.** Promotes public art in the built environment and encourages the provision of arts and cultural facilities to serve the Woodland community.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

While, there are no differences in policies or text between the East and South Alternatives in the Healthy Community Element, development in the SP-2 area under the East Alternative would result in more housing located further from current community facilities and services (primarily located in Downtown Woodland) than development under the South Alternative.

As mentioned above, the 2002 General Plan does not include an element on Healthy Community, but it includes a similar element on Recreational, Educational, and Community Services, which is organized into the following topics:

- Parks and Recreation Development Framework
- Diversity in Recreation
- Community/Senior Centers
- Education
- School Siting and Financing

- Child Care Supply and Quality
- Child Care Referral
- Elder Care; Libraries
- Arts and Culture
- Community Involvement and Participation
- Community Diversity
- Family and Youth

The 2035 General Plan includes policies with a new approach that focuses on health, equity, and environmental justice. For example, the 2035 General Plan requires the City to consider the potential health impacts associated with land use decisions. The 2035 General Plan also includes a new set of policies on healthy food, which is not included in the 2002 General Plan. Policies on Child Care, Elder Care, and Family and Youth in the 2002 General Plan are not included in the 2035 General Plan.

3.7.2.6 CONSERVATION AND OPEN SPACE ELEMENT

The Conservation and Open Space Element satisfies most of the State requirements for both the conservation element and open space element. (Flooding, earthquake fault zones, unstable soil areas, high fire risk areas, and other areas that require special management or regulation because of hazardous or special conditions are addressed in the Safety Element. Water supply and demand, stormwater management, parks, and recreation are addressed in the Public Facilities and Services Element.)

This Element establishes goals and policies for the conservation of natural resources in Woodland. Woodland's natural resources – water, natural habitats, wildlife, vegetation, agricultural soils, minerals, and air – contribute to the city's economy and the quality of life of Woodland's residents. These resources exist in limited quantity and as a result, the General Plan promotes thoughtful planning and resource management that can help inform community discussion about weighing environmental conservation with other General Plan goals. The General Plan seeks to balance planned growth with conservation and enhancement of the area's natural resources.

This Element includes the following sections:

- **Water Resources.** Addresses surface water and groundwater resources and water conservation efforts.
- **Biological Resources and Open Space for Conservation.** Considers habitats and natural vegetation and special-status species.
- **Agricultural and Soil Resources.** Discusses farmland in and surrounding the Planning Area, as well as soil resources.
- **Mineral Resources.** Addresses natural gas and other mineral resources in the Planning Area.
- **Cultural and Archaeological Resources.** Considers the preservation of prehistoric, cultural, and archaeological resources.
- **Air Quality and Greenhouse Gases.** Discusses air pollutants and contaminants, greenhouse gas emissions, and climate change.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

There are no differences in policies between the East and South Alternatives in the Conservation and Open Space Element. However, the chapter text specifies that for the East Alternative, before development of SP-2 occurs, the treatment of the processing water from Pacific Coast Producers must be alternatively accommodated.

The Environmental Resources Element of the 2002 General Plan is organized into the following topics:

- Water Resources
- Fish and Wildlife Habitat
- Vegetation
- Open Space for the Preservation of Natural Resources
- Air Quality-General
- Air Quality-Transportation

The 2035 General Plan and the 2002 General Plan have many similar goals and policies related to environmental resources, although the 2035 General Plan adds new policies that are more specific to certain resources and environmental concerns. Both the 2002 General Plan and the 2035 General Plan include policies to protect fish and wildlife habitat, and the Proposed Plan includes a new policy requiring the City to establish an urban forest management plan. Both include policies to encourage the protection of open space resources, and the 2035 General Plan includes policies specific to the protection of agricultural land and mineral and cultural resources. The 2035 General Plan includes a policy on the Surface Water Project, which was developed since the adoption of the 2002 General Plan. Both the 2002 General Plan and the 2035 General Plan include policies on air quality, and the 2035 General Plan introduces new policies on greenhouse gas emissions and climate change.

3.7.2.7 SAFETY ELEMENT

The Safety Element addresses the State requirements for both the safety element and noise elements. The purpose of this Element is to identify the natural and manmade public safety hazards that exist within the city, and to establish preventative and responsive policies and programs to mitigate their potential impacts. In addition, exposure to loud and/or unwanted noises can also affect community health and safety, as well as quality of life.

This Element includes the following sections:

- **Geologic and Seismic Hazards.** Explains the geologic makeup of the Planning Area and analyzes potential threats that may result from land instability or seismic activity.
- **Flood Hazards and Protection.** Provides an overview of State and regional flood regulations and requirements, flood hazards in the Planning Area, and flood protection efforts.
- **Fire Hazards.** Discusses the threat of urban and wildland fires.
- **Airport Hazards.** Addresses safety and noise issues that result from the Planning Area's proximity to nearby airports.
- **Hazardous Materials and Operations.** Provides an overview of hazardous materials sites in the Planning Area.

- **Emergency Response.** Introduces Woodland's Emergency Operations Plan and Local Hazard Mitigation Plan.

- **Noise.** Addresses existing sources of noise and introduces the General Plan noise standards.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

There are no differences in policies between the East and South Alternatives in the Safety Element. However, the chapter text identifies that the majority of SP-2 is susceptible to flooding depths of greater than seven feet. This specific plan area is only anticipated to develop before 2035 in the East Alternative.

The Health and Safety Element of the 2002 General Plan is organized into the following topics:

- Seismic and Geologic Hazards
- Flood Hazards and Protection
- Fire Hazards
- Aircraft Crash Hazards
- Hazardous Materials
- Emergency Response
- Noise

The 2035 General Plan and the 2002 General Plan have many similar goals and policies related to safety. However, there are some key distinctions between the Plans. One of the biggest differences is in a policy on the conditions of approval for new development in flood hazard zones. The policy in the 2035 General Plan includes more detail than that in the 2002 General Plan, pursuant to new State legislation from 2007 pertaining to development in flood hazard zones for jurisdictions in the Central Valley. In regards to noise standards, the 2035 General Plan generally accepts higher noise levels to reflect an increasingly urban environment.

3.7.2.8 HOUSING ELEMENT

The Housing Element addresses State requirements for housing elements. (The required assessment of housing needs, inventory of resources, and identification of constraints are provided in the Housing Element Background Data document located in Appendix E of the 2035 General Plan.) The purposes of this Element are to identify the community's housing needs; to state the community's goals and objectives with regard to housing production, rehabilitation, and conservation to meet those needs; and to define the policies and programs that the community will implement to achieve the stated goals and objectives.

This Element includes the following sections:

- **Development of Housing.** Outlines the city's quantified objectives for housing construction, rehabilitation and preservation between 2013 and 2021; Presents goals and policies that address the provision of housing for all Woodland residents.

- **Maintenance of Housing.** Presents goals and policies aimed at maintaining the existing housing stock and replacing unsafe or dilapidated housing.

- **Equal Opportunity in Housing.** Presents goals and policies that assure housing is available to all.

- **Energy Conservation and Sustainable Housing Development.** Presents goals and policies that encourage energy conservation and sustainable development practices.

Comparison of the East and South Alternatives to Existing Conditions and 2002 General Plan

There are no differences in policies or text between the East and South Alternatives in the Housing Element.

The 2002 General Plan was amended in 2009 to incorporate the 2008 Housing Element. The Housing Element was updated in 2013. The City's quantified objectives for construction, rehabilitation, and preservation of housing units that will be achieved through policies and programs of the 2008 Housing Element are given in Table 3.7-10, and the quantified objectives in the 2013 Woodland Housing Element are given in Table 3.7-11. The housing units are categorized by units affordable to households of extremely low-income (ELI), very low-income (VLI), low-income (LI), moderate (M), and above moderate (AM) income. The Housing Element in the 2035 General Plan anticipates the construction of almost three times as many housing units as the 2008 Housing Element. Approximately 60 percent of the new construction in the 2013 Housing Element is planned for households of above moderate income. In comparison, the 2008 Housing Element did not plan for new units for above moderate-income households.

Table 3.7-10. 2008 Housing Element Summary of Quantified Objectives

Program	ELI[1]	VLI[2]	LI[3]	M[4]	AM[5]	Total
New Construction	8	184	218	99	-	**509**
Rehabilitation	12	12	20	-	-	**11**
Conservation / Preservation	144	145	-	-	-	289[6]

Notes:
1 Extremely low-income
2 Very low-income
3 Low-income
4 Moderate income
5 Above moderate income
6 Total of Section 8 units at-risk of conversion to market rate units to be preserved.

Table 3.7-11. 2013 Housing Element Summary of Quantified Objectives

Program	ELI[1]	VLI[2]	LI[3]	M[4]	AM[5]	Total
New Construction	75	80	90	349	864	1,458
Rehabilitation	10	20	25			55
Conservation / Preservation	-	-	-	-	-	-

Notes: There are no subsidized rental housing units at-risk of conversion to market rate during the next 10 years.
1 Extremely low-income
2 Very low-income
3 Low-income
4 Moderate income
5 Above moderate income

The City submitted the 2013 Housing Element to the State Department of Housing and Community Development and received a letter dated August 8th, 2013 informing the City that the Housing Element met the statutory requirements of State housing element law. The City Council adopted the 2013 Housing Element on October 15, 2013. The Housing Element has been revised as a part of the 2035 General Plan to provide an update on the City's progress toward meeting housing goals included in the 2013 Housing Element. Since the 2013 Housing Element was adopted, the City has re-zoned and re-designated land available for housing, approved affordable housing rehabilitation projects, and had affordable housing constructed. Some of the residential designations have changed within the Spring Lake Specific Plan area, the City has rezoned land to accommodate affordable housing,

facilitated two multi-family rehabilitation projects with affordability covenants, and issued building permits for housing projects. As part of the 2035 General Plan, the City has developed new land use designations that will increase the number and allowable density of sites for housing development. The 2013 Housing Element has been updated to reflect these changes and to make appropriate revisions to the City's policies and programs.

3.8 SUMMARY OF LAND USE CHANGE

In 2013, there were approximately 55,700 residents of Woodland, 20,000 housing units, and 26,000 jobs. Table 3.8-1 provides an overview of existing conditions and new development expected by 2035 under the East and South Alternatives. Both Alternatives assume approximately 19,300 new residents and 7,000 new housing units by 2035. The South Alternative assumes 16.7 million square feet of new non-residential development, and the East Alternative assumes 17.4 million square feet of new non-residential development.

3.8.1 PLANNED GROWTH

According to the 2035 General Plan, much of Woodland, including existing residential neighborhoods, is not expected to change during the planning horizon of this General Plan. However, there are some areas where the City does expect to see change. These areas include Downtown, major corridors, the northeast industrial area, and large areas of land designated for future growth.

Table 3.8-1. Summary of Anticipated Growth through General Plan Horizon (2035)[1, 2]

	Existing Conditions (2013)	East Alternative		South Alternative[3]	
		New Growth	Total (2035)	New Growth	Total (2035)
Population	55,690	19,300	74,990	19,300	74,990
Housing Units	19,980	7,000	26,980	7,000	26,980
Non-Residential Square Footage	19,824,000	17,386,000	37,210,000	16,685,000	36,509,000
Jobs	26,000	19,340	45,340	18,210	44,210
Jobs/Housing Ratio	1.30	2.76	1.68	2.60	1.64

Notes:
[1] To calculate development yields for the Project Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limits and an estimated maximum achievable density of 40 dwelling units per acre, a mid-range density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower density development may be allowed due to proximity to low density residential development. For Specific Plan areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C where a lower density of 3.0 dwelling acres per unit was assumed.
[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.
[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.
Source: Dyett & Bhatia 2016

3.8.2 SPECIFIC PLANS

A significant portion of new residential development in Woodland will occur in new growth areas designated as "Specific Plan." Addressed in Government Code Section 65450, a specific plan is a comprehensive planning and zoning document for a defined geographic region of a city. It implements the General Plan by providing a special set of development policies and standards that are applied to the specific plan area, and by specifying zoning, needed infrastructure, and an infrastructure financing plan to facilitate implementation. This General Plan requires that major new residential development on "greenfield" or previously undeveloped land will be planned through

the Specific Plan process, as has been done successfully in the past with Spring Lake, the Southeast area, and others. Woodland has designated three areas within the ULL for future Specific Plan development: SP-1 in the south, SP-2 in the east, and SP-3 in the north.

3.8.2.1 SP-1

SP-1 is located in the southern portion of the Planning Area, generally south of CR 24A and west of CR 101. SP-1 is separated into three sub-areas. SP-1A encompasses 347 acres and is located on the eastern portion of the Specific Plan area between State Route 113 and Spring Lake. SP-1B is located between East Street and State Route 113, covering 248 acres. SP-1C is the smallest of the three at 151 acres and is located west of East Street. SP-1A and SP-1B are envisioned to develop as mixed-use neighborhoods anchored by a research and technology business park in the "Southern Gateway" located at CR 25 and SR 113. The highest intensity of development will occur within the business park area, and the remainder of these sub-areas will be largely residential with some open space and recreation areas. SP-1C will be entirely residential, with a lower density residential profile containing executive homes and rural estates on larger lots.

In the South Alternative, General Plan policies provide for the development of SP-1A, SP-1B, and SP-1C within the 2035 General Plan horizon. Policies for the East Alternative provide for the development of SP-1A and non-residential development in the Southern Gateway area of SP-1B by 2035; phasing policies specific to the East Alternative prevent the residential development of SP-1B and SP-1C within the 2035 planning horizon.

3.8.2.2 SP-2

SP-2 is located in the eastern portion of the Planning Area, south of Interstate 5 and to the east of the Water Pollution Control Facility. Due to its distance from the Downtown urban core, SP-2 is envisioned to function as a sustainable "complete neighborhood" with a town center so that all daily needs (schools, parks, grocery stores, public facilities, etc.) are located within the Specific Plan Area. In addition, sustainable development will be encouraged in SP-2 through use of renewable energy sources and water conservation tools with the goal of achieving zero net energy at the building and neighborhood level.

SP-2 is not included in the growth assumed for the South Alternative, and draft General Plan policies for the South Alternative do not allow development in SP-2 within the 2035 General Plan horizon. Because growth is envisioned for the East Alternative, draft policies for the East Alternative provide for the development of SP-2 upon the identification of a comprehensive flood solution with funding secured.

3.8.2.3 SP-3

SP-3 is located generally north of Kentucky Avenue, south of Interstate 5, between CR 98 and the Northern Pacific railroad tracks. It is separated into two distinct sub areas, with SP-3A encompassing the eastern half of the Specific Plan Area and SP-3B occupying the western half. Both the East and South Alternatives envision that SP-3A will contain a mix of residential, commercial, office, and light industrial uses, while SP-3B will continue to be largely industrial with some low-density residential uses at its western end.

2035 General Plan policies for both Project Alternatives provide for the development of SP-3A within the 2035 General Plan horizon upon the identification of a comprehensive flood solution with funding secured. Development of SP-3B will be ongoing, and not contingent on a comprehensive flood solution.

3.8.3 LOCATIONS OF NEW GROWTH

The location of new residential units for each Project Alternative is given in Table 3.7-3. The South Alternative assumes roughly twice the number of new infill units Downtown and along key corridors than the East Alternative. The South Alternative also expects 600 new units in SP-1B and SP-1C, while the East Alternative expects 1,600 new units in SP-2. The location of new non-residential development for each Project Alternative is given in Table 3.7-4.

3.8.4 2035 GENERAL PLAN AREA OF POTENTIAL EFFECT

The potential area of effect evaluated in this EIR is areas within the Woodland Urban Limit Line. The land area of both Alternatives is 12,781 acres, and includes all of the area within the City's Urban Limit Line. Table 3.8-2 shows the acreage of developed land under each Alternative.

For each of the land use designations listed below, reasonable assumptions were made regarding vacancy, the likelihood of redevelopment of underutilized and vacant sites, and other factors to arrive at a realistic development capacity for each Project Alternative for the EIR analysis. The EIR does not anticipate that every acre of each designation will build to its full potential. The 2035 CAP considers the same area of potential effect as the 2035 General Plan.

Table 3.8-2. Acreage of Development

Land Use Designation	East Alternative			South Alternative		
	Inside City Limits	Outside City Limits	Total	Inside City Limits	Outside City Limits	Total
Low Density Residential (LD)	2,502	54	2,556	2,502	54	2,556
Medium Density Residential (MD)	645	0	645	645	0	645
High Density Residential (HD)	35	0	35	35	0	35
Downtown Mixed Use (DX)	140	0	140	140	0	140
Corridor Mixed Use (CX)	491	52	543	491	52	543
Neighborhood Commercial (NC)	14	0	14	14	0	14
Community Commercial (CC)	110	0	110	110	0	110
Regional Commercial (RC)	305	102	406	305	102	406
Business Park (BP)	0	142	142	0	142	142
Industrial (IN)	1,490	754	2,244	1,490	754	2,244
Specific Plan (SP)	582	154	736	0	825	825
Public/Quasi Public (PQ)	1,012	90	1,102	1,012	90	1,102
Open Space (OS)	408	264	673	408	264	673
Flood Study Area (FS)	76	445	521	76	445	521
Right of Way	1,501	264	1,766	1,501	264	1,766
Total[1]	**9,311**	**2,321**	**11,633**	**8,729**	**2,992**	**11,722**

Note: Figures may not total due to rounding.

[1] For both Project Alternatives, not all acreage within the Planning Area is impacted. As a result, the totals in this table are less than the total acreage of the Planning Area (12,781 acres).

Source: Dyett & Bhatia 2016

3.9 ADOPTION AND IMPLEMENTATION

As a part the General Plan's adoption, the City will submit the revised 2035 Housing Element to the State Department of Housing and Community Development (HCD), consider adoption of the 2035 CAP, and consider certification of this EIR. Based on the review by HCD for compliance with State housing law, the City will either revise the 2035 Housing Element or adopt written findings explaining how the Element complies with applicable housing requirements. As a part of the required CEQA findings, the City will consider how to address each potentially significant impact, including the mitigation measures that are included in this EIR or why mitigation measures are infeasible. Similarly, the EIR certification process will also require the City to make findings related to the Project Alternative that is ultimately selected, as well as those that are rejected as a part of the adoption of the General Plan. If there are significant and unavoidable environmental impacts associated with the Proposed Project, the City is required, pursuant to State CEQA Guidelines Section 15093, to state in writing the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits that outweigh the unavoidable environmental effects.

Adoption and implementation of the Proposed Project will require (but not be limited to) the following actions by the City of Woodland:

- Adopt a resolution certifying the Final Environmental Impact Report for the 2035 General Plan, adopting Findings of Fact, and adopting a Statement of Overriding Considerations;
- Adopt a resolution adopting the final 2035 General Plan and final Climate Action Plan;
- Direct staff to petition the Yolo Local Agency Formation Commission to amend the Woodland Sphere of Influent to reflect the voter approved Urban Limit Line and the 2035 General Plan; and
- Direct staff to commence update of the Zoning Ordinance (Chapter 25 of the Woodland Municipal Code).

Following adoption of the 2035 General Plan, the City will begin the process of updating active specific plans, master plans, and other implementation documents to be consistent with the new plan, and reflect the adopted policy language, and design and development guidance. This will include repeal of the East Street Corridor Specific Plan.

3.9.1 SUBSEQUENT PROJECT REVIEW

Further actions or decisions required to support implementation of the 2035 General Plan may include revisions to zoning regulations, updates to infrastructure plans, modifications to capital improvement programs (such as the City's Major Project Financing Plan), and project-level approvals such as tentative maps, site plans, building permits, grading permits, and other actions. Future development project proposals, public investments, and other actions, will be subject to CEQA requirements, as appropriate; however the City will seek to use applicable CEQA tiering and streamlining much as possible.

3.10 AGENCIES EXPECTED TO USE THIS EIR

A number of other jurisdictional and permit-granting agencies have control over specific environmental concerns in the City. The following is a listing of agencies that may utilize this EIR.

- Yolo/Solano Air Quality Management District (monitors air quality and has permit authority over certain types of facilities);
- California Department of Conservation, Division of Mines and Geology (expertise in evaluating geologic and seismic hazards, as well as mineral resource issues);
- California Department of Fish and Game (streambed alteration agreement pursuant to Section 1600 of the California Fish and Game Code);
- California Department of Transportation (encroachment permits);
- California Department of Housing and Community Development (reviews the adequacy of housing elements and funding for affordable housing programs);
- California Public Utilities Commission (certificate of public convenience and necessity);
- Central Valley Regional Water Quality Control Board (water quality certification pursuant to Section 401 of the Clean Water Act, National Pollutant Discharge Elimination System permit);
- Yolo Local Agency Formation Commission (annexations or other service boundary changes);
- Sacramento Area Council of Governments (transportation planning and financing); and
- Native American Heritage Commission (mandated to preserve and protect places of special religious or cultural significance pursuant to Section 5097 et seq. of the Public Resources Code).

In addition to these agencies, the following federal agencies may use environmental information in the EIR for permitting decisions, in addition to other federal agencies:

- U.S. Army Corps of Engineers (Section 404 of the Clean Water Act permit), and
- U.S. Fish and Wildlife Service (Section 7 consultation or Section 10a Habitat Conservation Plan/Section 9 incidental take permit pursuant to the federal Endangered Species Act).

3.11 RELATIONSHIP TO OTHER PLANS AND REGULATIONS

The 2035 General Plan and this accompanying General Plan EIR both make reference to laws, plans, and regulations administered by other public agencies. In many instances, the City's policies are specifically designed to achieve consistency with regulations of another public agency. In other cases, the City commits to seeking input from other agencies on issues that may arise over the course of implementing the 2035 General Plan. Unless otherwise specified, any reference to "consulting with" or "coordinating with" other agencies in no way delegates the City's responsibility for land use entitlement or lead agency responsibilities for managing land use change. Some of the key areas of interaction with other agencies are described below.

3.11.1 FEDERAL GOVERNMENT

Although no federal plans directly control local land use policies, a number of federal laws have significant impacts on land use decisions at the municipal and private levels. Examples of such regulations include the Endangered Species Act, Section 404 of the Clean Water Act, and in the case of federally funded transportation and infrastructure projects, the National Environmental Policy Act. Numerous agencies have jurisdiction and exert influence on local land use processes. Individual topic areas of this EIR include a thorough discussion of relevant federal plans, policies, and regulations.

3.11.2 STATE GOVERNMENT

The State of California influences local policy decisions through a variety of regulations and procedures. For example, the California Department of Housing and Community Development (HCD) develops housing policy and building codes (i.e., the California Building Standards Code) and administers housing finance, economic development, and community development programs. California Department of Transportation (Caltrans) plans and oversees the State highway system and works with other governmental agencies and local jurisdictions to plan, develop, manage, and maintain California's transportation system. Yolo County is located in District 3, which also includes the Sacramento Valley counties of Sutter, Yolo, Yuba, Colusa, Glenn, Butte, Sacramento, and four mountain counties (Placer, El Dorado, Nevada, and Sierra). Caltrans has permitting authority for all access to and from State highways and therefore works closely with the City to ensure the safe and efficient function of State routes. The California Department of Fish and Wildlife administers compliance with the California Endangered Species Act and Fish and Game Code. Individual topic areas of this EIR include a thorough discussion of relevant State plans, policies, and regulations.

3.11.3 REGIONAL GOVERNMENT

Regional governmental agencies, such as the Sacramento Area Council of Governments (SACOG), the Yolo/Solano Air Quality Management District (YSAQMD), and the Central Valley Regional Water Quality Control Board (RWQCB), have been established in recognition of the fact that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues, such as air and water quality, transportation, affordable housing, and habitat conservation have resulted in the adoption of regional plans. The policies adopted by Woodland will be affected by these plans, and will in turn have effects on these other plans. Individual topic areas of this EIR include a thorough discussion of relevant regional plans, policies, and regulations.

4 ENVIRONMENTAL IMPACT ANALYSIS

4.0 APPROACH TO THE ENVIRONMENTAL IMPACT ANALYSIS

4.0.1 SCOPE OF ANALYSIS

Sections 4.1 through 4.14 of this EIR present the environmental impact analysis for the anticipated effects of implementation of the 2035 General Plan (2035 General Plan) and the 2035 Climate Action Plan (2035 CAP), collectively referred to as the Proposed Project. The environmental topics addressed in these sections are as follows:

4.1 Aesthetics and Visual Resources
4.2 Agriculture and Forestry Resources
4.3 Air Quality
4.4 Biological Resources
4.5 Climate Change, Greenhouse Gas Emissions, and Energy
4.6 Cultural Resources
4.7 Geology, Soils, Mineral Resources, and Paleontological Resources
4.8 Hazardous Materials and Toxics
4.9 Hydrology, Flooding, and Water Quality
4.10 Land Use Planning, Population, and Housing
4.11 Noise and Vibration
4.12 Public Services and Recreation
4.13 Transportation and Circulation
4.14 Utilities

This EIR presents a discussion of other analyses required under CEQA (including cumulative and growth-inducing impacts) in Chapter 6 of this EIR, "Other CEQA Considerations." Alternatives analysis is presented throughout Chapter 4, and in Chapter 5 of this EIR, "Alternatives."

4.0.2 ORGANIZATION OF THE EIR

As described in Chapter 1 of this EIR, "Introduction," the City has elected to include an enhanced level of analysis for this EIR. This enhanced level of analysis, along with uniformly applied development policies, will serve to streamline and expedite later projects that are consistent with, and implement the policies and implementation programs of, the 2035 General Plan and 2035 CAP, pursuant to Public Resources Code 21083.3 and CEQA Guidelines 15183.

Each sub-section in Section 4 of this EIR presents a detailed evaluation of a particular environmental topic, including potential environmental impacts, mitigation measures proposed to reduce significant environmental impacts (where necessary), and a determination of the level of significance after mitigation measures are implemented.

The goals, policies, and implementation programs of the 2035 General Plan and 2035 CAP reduce some impacts of the Proposed Project. In some sections, mitigating policies and implementation programs reduce the impacts to a less-than-significant level, whereas in other sections, mitigating policies and implementation programs are added or revised in order to further reduce impacts. These policies and implementation programs are considered

uniformly applied development policies that will streamline and substantially limit the scope of analysis for future projects that are consistent with the Proposed Project.

This EIR also addresses the adverse physical environmental effects associated with the 2035 CAP. The emission reduction strategies, actions, and performance standards in the 2035 CAP were developed to implement policies in the 2035 General Plan, and analysis of the 2035 General Plan also addresses impacts associated with the 2035 CAP.

4.0.2.1 ENVIRONMENTAL SETTING

This subsection provides relevant information about the existing physical environment related to the particular environmental topic. In accordance with Section 15125 of the CEQA Guidelines, the discussion of the physical environment describes existing conditions within the City at the time the NOP was filed—unless otherwise noted.

4.0.2.2 REGULATORY FRAMEWORK

This subsection describes federal, State, regional, and local plans, policies, regulations, and laws that may apply to the environmental topic under evaluation.

4.0.2.3 ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

This subsection focuses on an analysis of the potential environmental impacts of the project described in Section 3, "Project Description," of this EIR. Where applicable, the subsection summarizes the methods used to conduct the impact analysis. Next, thresholds of significance used to identify the potential environmental impacts of the Proposed Project are identified. Following this is an analysis of the potential environmental impacts. Specifically, this analysis uses the following format:

An impact analysis describes potential adverse physical environmental effects associated with implementation of either the 2035 General Plan East Alternative or the South Alternative and the 2035 CAP. An impact statement at the beginning of each impact discussion summarizes the potential impact of the 2035 General Plan and 2035 CAP and its level of significance under CEQA, based on the identified thresholds of significance.

Individual impact analyses are presented for the 2035 General Plan East Alternative and the South Alternative and 2035 CAP, both of which are compared to baseline environmental conditions. In many instances, the impacts are identical. In such instances, the EIR does not include two individual impact discussions.

Relevant General Plan policies and implementation programs and 2035 CAP strategies that would reduce or avoid impacts are summarized and the mitigating benefits of these policies and programs are described.

During development of the 2035 General Plan, the City took into account the potential impacts discussed in this EIR and included policies and implementation programs in the 2035 General Plan that would reduce potential impacts. When necessary and feasible, the analysis of the impact is followed by a description of one or more proposed mitigation measures. Mitigation measures are required by the CEQA Guidelines when a significant impact is identified.

4.0.3 DETERMINING LEVEL OF SIGNIFICANCE

For each potential environmental impact identified in this EIR, a statement of the level of significance of the impact is provided. Impacts are assessed as one of the following categories:

The term "no impact" is used when the environmental resource being discussed would not be adversely affected by implementation of the 2035 General Plan and 2035 CAP. It means no change from existing conditions. This impact level does not need mitigation.

A "less-than-significant impact" would cause a minor, but acceptable change in the physical environment. This impact level does not require mitigation, even if feasible, under CEQA.

A "significant impact" would have a substantial adverse effect on the physical environment, but can be reduced to a less-than-significant level with mitigation. Impacts may also be considered "potentially significant" if the analysis cannot definitively conclude that an impact would occur as a result of the implementation of the 2035 General Plan and 2035 CAP. Under CEQA, mitigation measures must be provided, where feasible, to reduce the magnitude of significant or potentially significant impacts.

A "significant and unavoidable impact" would cause a substantial adverse effect on the environment, and no known feasible mitigation measures are available to reduce the impact to a less-than-significant level. Under CEQA, a project with significant and unavoidable impacts may be approved, but the lead agency (in this case, the City) must prepare a "statement of overriding considerations" in accordance with Section 15093 of the CEQA Guidelines, explaining how the benefits of the project outweigh the potential for significant impacts.

4.0.4 FORMAT OF IMPACT ANALYSIS

Throughout the discussion, impacts, and mitigation measures are identified numerically and sequentially. For example, impacts discussed in Section 4.1 are identified as 4.1-1, 4.1-2, and so on. Mitigation measures, where needed, are identified numerically to correspond with the number of the impact being reduced by the measure (i.e., Mitigation Measure 4.1-1 would mitigate Impact 4.1-1). In the case of multiple mitigation measures for one impact, the mitigation measures are further identified alphabetically (i.e., Mitigation Measure 4.1-1a and Mitigation Measure 4.1-1b would mitigate Impact 4.1-1).

The format used to present the evaluation of impacts and mitigation measures for the Proposed Project is as follows:

IMPACT 4.1-1 Impact Title *The impact statement briefly summarizes the findings of the impact discussion below. The level of significance without mitigation is included at the end of the impact statement. Levels of significance listed in this EIR (as described above) are no impact, less than significant, or significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The impact discussion is contained in the paragraphs following the impact statement. The analysis compares implementation of the 2035 General Plan under the East Alternative and the South Alternative to existing conditions.

4.1 AESTHETICS AND VISUAL RESOURCES

4.1.1 INTRODUCTION

This section presents the environmental setting and impact analysis for visual resources and aesthetic character. It evaluates to what extent implementation of the Proposed Project will affect the visual quality of the Planning Area. Existing specific plans and design standards and the policies and Land Use Diagram of the Proposed Project were used to analyze the potential impacts of the Proposed Project.

There were no responses to the NOP regarding topics addressed in this section of the EIR.

4.1.2 ENVIRONMENTAL SETTING

4.1.2.1 SCENIC VIEWS

The topography in the Planning Area is almost completely level, providing no natural raised vistas of its surroundings. Farmland surrounds the Planning Area, and there are areas of farmland within the Planning Area that provide scenic resources. Because the city is surrounded by agricultural uses, farms with row crops and orchards are visible from ground level around the circumference of the urbanized Planning Area. Brief panoramic views of surrounding farmland are also visible from highway overpasses and from some main corridors. From the western edge of the Planning Area, there are limited views of the Coast Range.

4.1.2.2 SCENIC RESOURCES

In addition to scenic views, Woodland has a number of historic landmarks and buildings that serve as scenic resources. See Section 4.6, Cultural Resources, for more information. Downtown Woodland in particular includes many historically significant buildings and is recognized on the National Register of Historic Places. To this day, the Downtown Woodland Historic District ("District") retains much of its historic appearance and function. The District has major examples of several architectural styles, including Italianate, Richardsonian Romanesque, Spanish Colonial Revival, Streamline, and several versions of the Second Renaissance Revival. The historic integrity of the District is high due to the concentration of resources, the proportion, size, and importance of the contributing historic buildings, and the relative inconspicuousness of non-contributing buildings.

The Armstrong & Alge Building was built in 1890 and represents the Italianate architecture style.

The Richardson Romanesque style Jackson-Armfield Building was built in 1893 by architect Joseph J. Hall.

Woodland's City Hall is built in the Spanish Colonial Revival style and took several phases, from 1932 to 1976, to complete.

The Yolo Grocery building was built in 1939 and is an example of Streamline architecture in Woodland's downtown neighborhood.

Built in 1917, the historic Yolo County Courthouse building is an example of the Renaissance Revival style.

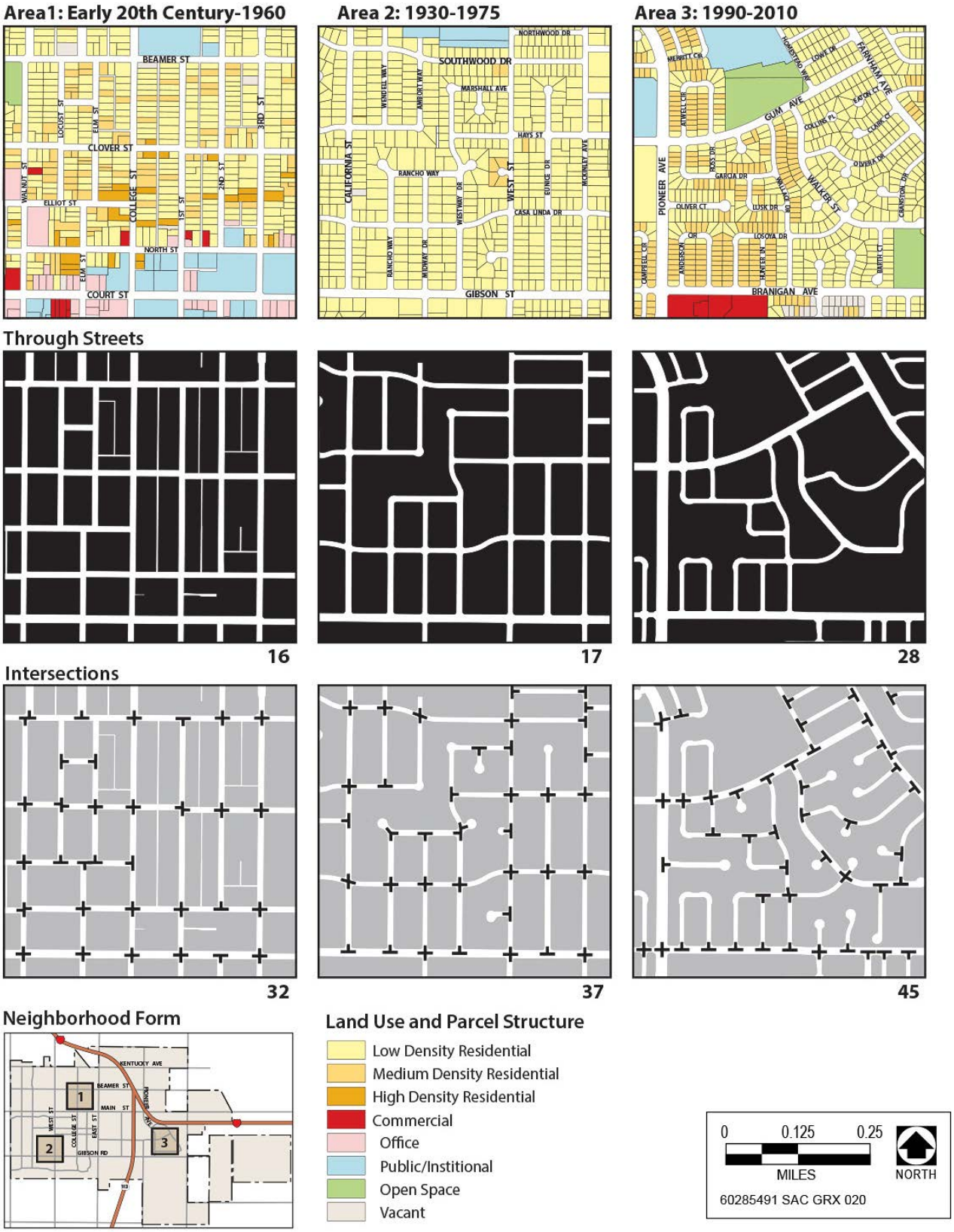
The Woodland Opera House and historic Yolo County Courthouse building are included on the National Register of Historic Places. Other downtown buildings on the National Register include the I.O.O.F. Building, Porter Building, Woodland Public Library, R.H. Beamer House, Jackson Apartments, and Hotel Woodland. Outside downtown, the Gibson Mansion Historical Museum is also a City historic building and listed on the National Register. In addition, Woodland's historic neighborhoods offer a variety of historically and architecturally significant structures.

4.1.2.3 PATTERNS OF CITY-WIDE AND NEIGHBORHOOD DEVELOPMENT

There are approximately 9,619 acres in the current city limits, and an additional 3,162 acres of land contained within the Planning Area outside of the city limits. See Section 4.10, Land Use Planning, Population, and Housing for a description of existing land uses in Woodland.

4.1.2.4 COMMUNITY CHARACTER

Different aspects of Woodland's built environment contribute to its community character. A comparison of block patterns and street network mobility between various Woodland neighborhoods is depicted in Exhibit 4.1-1. Woodland's newer residential neighborhoods east, south, and west of downtown generally reflect a different urban structure than the City's historic core. Although they are connected via arterial roads to the more regular, orthogonal grid of central Woodland, these neighborhoods are characterized by curvilinear streets, varying block sizes, and cul-de-sacs, which result in irregular parcel sizes and shapes. This development pattern was preferred in the latter half of the 20th century and utilizes a more pronounced street hierarchy as its organizing principle. That is, traffic is funneled from non-continuous neighborhood streets onto collector and arterial streets rather than dispersing in a more even fashion throughout the street grid (similar to the streets of downtown). In addition, Woodland's stock of well-preserved historic architecture, as described above, contributes to community character and local aesthetic resources.



Source: Dyett and Bhatia 2016

Exhibit 4.1-1. **Neighborhood Form Analysis**

Downtown

Downtown Woodland, shown in Exhibit 4.1-2, is the historic core of the city and the government center for Woodland and Yolo County. It is a distinctive historical downtown, with a substantial stock of historical buildings and designation as a National Register Historic District, as shown in Exhibit 4.1-3. It offers shops and restaurants and is walkable, with a grid system of streets that connect it to the adjacent neighborhoods. Residences in the City's historic core and adjacent neighborhoods represent an eclectic mix of early- and mid-20th century styles ranging from Victorian and Craftsman to Colonial Revival and Spanish Colonial, and many of these older buildings have been maintained or restored. .

Built in 1885, the Gable Mansion is a Victorian style home that is designated as a State Historical Landmark.

Residential (Outside of Downtown)

Woodland's other residential neighborhoods also contain numerous assets, including architectural variety in homes and buildings, mature trees and landscaping, and historic character. The predominant architectural styles in Woodland's residential neighborhoods generally reflect the time period in which development occurred. Neighborhoods developed in the latter half of the century as subdivisions tend to reflect a more uniform architectural style, with largely detached ranch homes, as well as some larger lot homes on the west side of town. Development in the Southeast Area Specific Plan, which has occurred since 1990, features a more curvilinear street pattern (shown in Exhibit 4.1-1) with large, two-story homes with prominent garage entrances on relatively small parcels. New residential development within the Spring Lake Specific Plan has the goal of emulating the characteristics of older neighborhoods, including a traditional street grid with smaller blocks, front porches, shallower front setbacks, historic style lighting, and monument features to create a sense of place.

Craftsman home in Woodland.

The Huff-Leake-Canevari home is a Spanish Revival bungalow that was built in 1924.

Detached ranch homes are prevalent on the west side of Woodland.

The Spring Lake Specific Plan includes design guidelines that reduce the amount of garage space in the front of a house and requires a certain amount of homes to include a front porch.

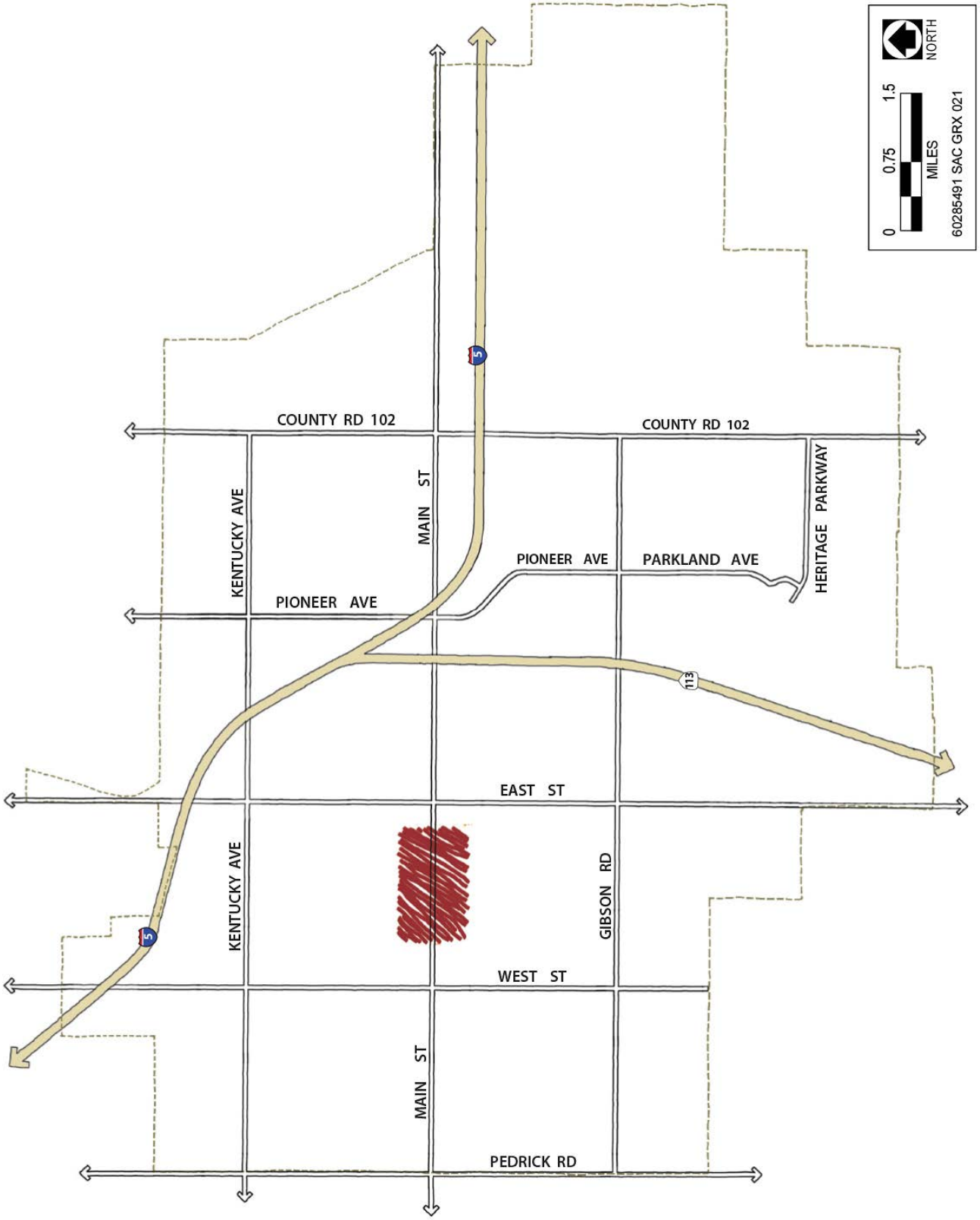
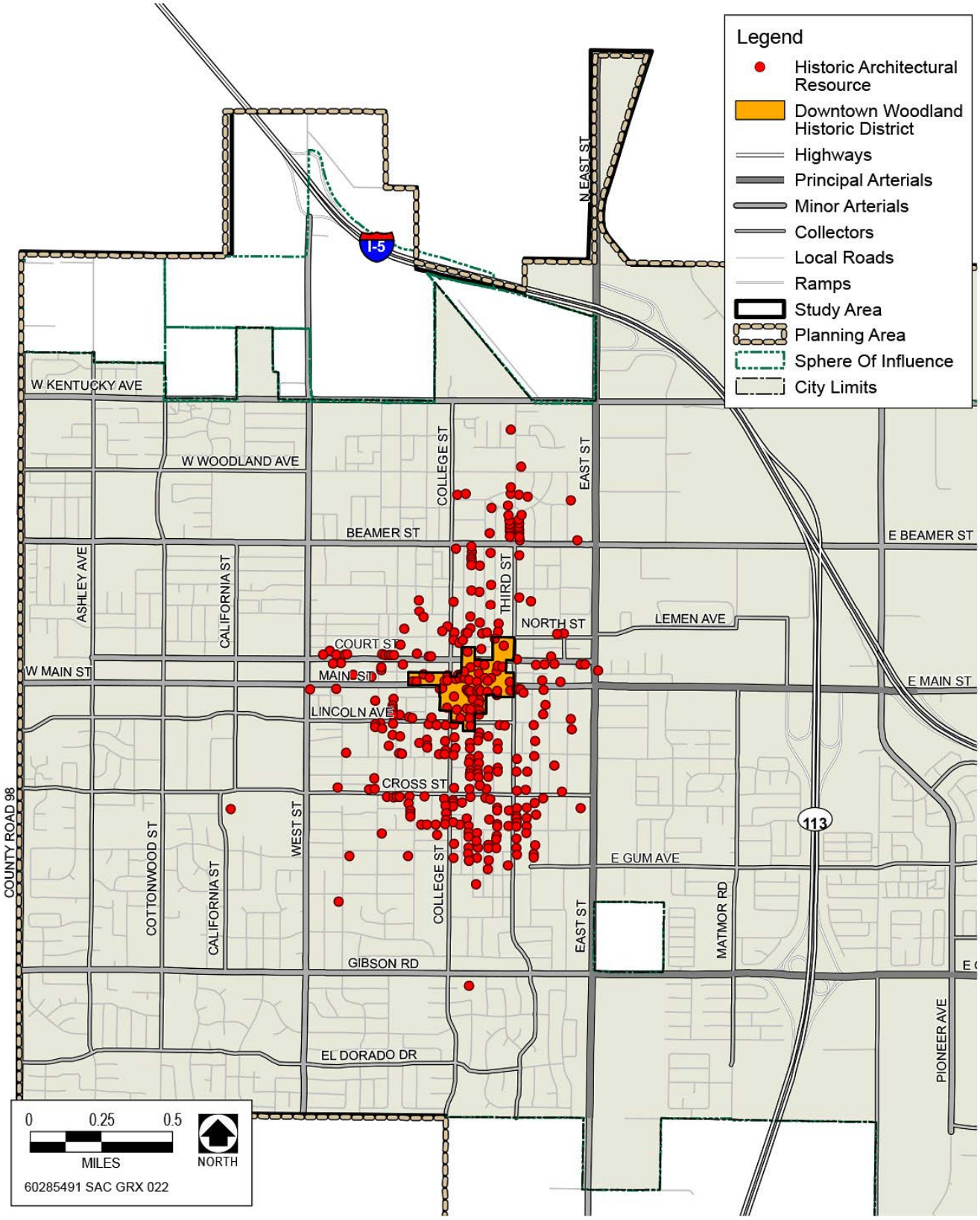


Exhibit 4.1-2. **Downtown Woodland**



Source: City of Woodland 2013, Yolo County 2013, SACOG Mapping Centre 2013, Dyett & Bhatlia 20103, AECOM 2013 NPS 1999

Exhibit 4.1-3. **Downtown Historic District**

Commercial Centers and Industrial Areas

The City of Woodland has a number of distinct centers that are hubs of activity, commerce, and employment. Downtown serves as the civic, cultural, and entertainment center of the City. In the historic downtown, commercial enterprises consist of local businesses housed in small, street-facing storefronts. With the growth of Woodland's population in the post-war years, much of the City's commercial activity moved out of downtown to commercial developments on the main arterials such as East Street and West Main Street. As in many communities, commercial development in the last 20 years has moved yet farther from downtown to large-scale developments around freeway nodes anchored by national retailers.

Most of Woodland's industrial space is concentrated in the northeastern part of the city, north of Main Street, and east of East Street. Woodland's industrial inventory comprises a mixture of building ages and sizes. The industrial area is characterized by very large blocks with private driveways providing access to parcels in the interior of the blocks. Most buildings are in the form of large-scale industrial structures and office parks. In some areas, industrial uses – sometimes with a mix of other uses – were developed before the expansion of Woodland city limits, and thus on County land and often out of compliance with current City standards. While there are office uses throughout the City, there are no business parks with large clusters of office buildings.

Street Grid

The street pattern affects scenic views because linear streets on a regular grid allow for uninterrupted views to farmland (and in some cases, the Coast Range) beyond the urban edge. In contrast, curvilinear streets or uneven blocks shorten the sight distance and disrupt views, thus limiting the public's access to scenic views. Downtown has a traditional street grid expanding out from Main Street and relatively consistent short and walkable block sizes. Woodland's newer residential neighborhoods east, south, and west of downtown generally reflect a different urban structure than the City's historic core. Although they are connected via arterial roads to the more regular, orthogonal grid of central Woodland, these neighborhoods are characterized by curvilinear streets, varying block sizes, and cul-de-sacs, which result in irregular parcel sizes and shapes. This development pattern was preferred in the latter half of the 20th century and utilizes a more pronounced street hierarchy as its organizing principle. That is, traffic is funneled from non-continuous neighborhood streets onto collector and arterial streets rather than dispersing in a more even fashion throughout the street grid (similar to the streets of downtown).

Corridors

Corridors along which the City anticipates the most development and redevelopment through 2035 include West Main Street, East Street, Kentucky Avenue, and County Road 102:

- **West Main Street.** Main Street is principally a commercial corridor consisting of single-story, stand-alone buildings and strip mall structures with large, street-fronting surface parking lots. Streetscape improvements to enhance bicycle and pedestrian mobility between CR 98 and West Street are planned for 2018.

- **East Street.** The East Street Corridor is highly auto-oriented with a mix of commercial and industrial uses, including grain silos, the Yolo County Fairgrounds, and the County Fair Mall. The active railroad tracks along the west side of East Street confine any street-fronting active uses to the east side of the corridor. The

City has begun exploring the feasibility of relocating the active railroad tracks that line the west side of the corridor, moving them east of city limits.

- **Kentucky Avenue.** Kentucky Avenue serves as a main truck route through town with a mix of mostly commercial service and industrial uses. The Kentucky Avenue Complete Streets Widening and Reconstruction Project has provided the corridor with numerous streetscape improvements between College Street and East Street, including bicycle lanes, landscape-separated sidewalks, and landscaped medians.

- **County Road 102.** County Road 102 (CR 102) is an important north-south corridor that provides access to Davis to the south and to unincorporated Yolo County to the north. Just south of I-5, the corridor is anchored by a large, regional commercial center. South of the shopping center, CR 102 is largely lined with residential development on the west side of the street, while it is generally vacant on the east side.

4.1.3 REGULATORY FRAMEWORK

4.1.3.1 FEDERAL

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

4.1.3.2 STATE

California Scenic Highways Program, Streets and Highway Code Section 260

Recognizing the value of scenic areas and the value of views from roads in such areas, the California State Legislature established the California Scenic Highway Program (Streets and Highway Code Section 260) in 1963. Under this program, a number of state highways have been officially designated as scenic highways. When a city or county officially designates a scenic highway, it must adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist. However, there are no designated scenic highways in the Planning Area.

4.1.3.3 REGIONAL

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The Yolo County's General Plan was most recently updated in 2009. The focus of the Land Use and Community Character Element of the Yolo County 2030 Countywide General Plan is to support the rural character of the County, as well as establish "goals for regional collaboration and equity, green building standards, sustainable community design and net community benefits from new growth." (Yolo County 2009) One of the goals of the Land Use and Community Character Element is to preserve farmland. Farmland outside of the city of Woodland, including in unincorporated Yolo County, provide scenic views from Woodland. In addition, the 2030 General Plan includes a goal to preserve the rural landscape, and there are a series of policies aimed at supporting this goal as listed below, including protecting views from scenic roadways.

- **Goal LU-2 Agricultural Preservation.** Preserve farm land and expand opportunities for related business and infrastructure to ensure a strong local agricultural economy.

- **Policy LU-2.4** Vigorously conserve, preserve, and enhance the productivity of the agricultural lands in areas outside of adopted community growth boundaries and outside of city SOIs.

- **Goal CC-1 Preservation of Rural Character.** Ensure the rural character of the County is protected and enhanced, including the unique and distinct character of the unincorporated communities.

- **Policy CC-1.2** Preserve and enhance the rural landscape as an important scenic feature of the County.

- **Policy CC-1.5** Significant site features, such as trees, water courses, rock outcroppings, historic structures and scenic views shall be used to guide site planning and design in new development. Where possible, these features shall become focal points of the development.

- **Policy CC-1.10** Protect existing ridgelines and hillsides from visually incompatible development.

- **Policy CC-1.12** Preserve and enhance the scenic quality of the County's rural roadway system. Prohibit projects and activities that would obscure, detract from, or negatively affect the quality of views from designated scenic roadways or scenic highways.

- **Policy CC-1.13** The following routes are designated as local scenic roadways, as shown in Figure LU-3 (Scenic Highways):

    - State Route 16 (Colusa County line to Capay)
    - State Route 128 (Winters to Napa County line)
    - County Roads 116 and 116B (Knights Landing to eastern terminus of County Road 16)
    - County Roads 16 and 117 and Old River Road (County Road 107 to West Sacramento)
    - South River Road (West Sacramento City Limits to Sacramento County line)

- **Policy CC-1.14** Designate other scenic roadways or routes where appropriate using the following criteria: the roadway or route traverses a scenic corridor, water feature, open space area or other interesting or unique areas, both urban and rural and may include bikeways, hiking and riding trails and pedestrian ways.

- **Policy CC-1.15** The following features shall be protected and preserved along designated scenic roadways and routes, except where there are health and safety concerns:

    - Trees and other natural or unique vegetation
    - Landforms and natural or unique features
    - Views and vistas
    - Historic structures (where feasible), including buildings, bridges and signs

- **Policy CC-1.16** The following features shall be stringently regulated along designated scenic roadways and routes with the intent of preserving and protecting the scenic qualities of the roadway or route:

    - Signage
    - Architectural design of adjoining structures
    - Construction, repair and maintenance operations

- **Policy CC-1.17** Existing trees and vegetation and natural landforms along scenic roadways and routes shall be retained to the greatest feasible extent. Landscaping shall be required to enhance scenic qualities and/or screen unsightly views and shall emphasize the use of native plants and habitat restoration to the extent possible. Removal of trees, particularly those with scenic and/or historic value, shall be generally prohibited along the roadway or route.

4.1.3.4 LOCAL

City of Woodland 2002 General Plan

The 2002 Woodland General Plan includes the following policies related to minimizing visual impacts of development and supporting landscaping and street trees.

- **1.E.5** The City shall require new commercial development to be designed to minimize the visual impact of parking areas on public roadways.

- **1.F.4** The City shall work jointly with the Redevelopment Agency to undertake and maintain streetscape improvements Downtown to give the area a clear and visually-appealing identity. The Downtown landscaping program should distinguish Downtown from the rest of Main Street and include special street plantings at the eastern and western entrances to Downtown.

- **1.H.5** The City shall seek to minimize the visual impacts of industrial development from Interstate 5, primarily through landscaping and fences.

- **1.K.7** The City shall continue its street-tree planting programs to extend and reinforce major street tree/boulevard plantings in order to enhance the visual character of special and important streets within Woodland.

- **1.K.10** The City shall promote efforts to improve the visual quality of entrances to Woodland and to Downtown. Figure 1-5 shows properties that are primary entranceways to the city. Development in these areas should include enhanced landscaping and site amenities that create pleasing gateways. Items that detract from the gateway image, such as attention-getting devices, outside storage, and off-premise signs should not be allowed.

- **3.A.2** The City shall develop and manage its roadway system to maintain LOS "C" or better on all roadways, except within one-half mile of state or federal highways and freeways and within the Downtown Specific Plan areas. In these areas, the City shall strive to maintain LOS "D" or better. Exceptions to these level of service standards may be allowed in infill areas where the City finds that the improvements or other measures required to achieve the LOS standards are unacceptable because of the right-of-way needs, the physical impacts on surrounding properties, and/or the visual aesthetics of the required improvement and its impact on community character.

- **3.C.7** The City shall encourage parking lots to be located at the back of buildings away from the primary street to reduce visual impacts in new and existing areas.

- **3.C.8** Parking lots along street frontages shall be well designed to reduce their visual impact and maximize pedestrian and bicycle compatibility and safety.

- **5.A.18** The City shall ensure that recreation facilities are sited to minimize negative impacts (i.e., parking, night lighting, excessive noise) on surrounding neighborhoods.

- **7.C.2** The City shall encourage landowners and developers to preserve natural vegetation in visually-sensitive areas and along transportation corridors.

- **7.C.9** The City shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

Spring Lake Specific Plan (2001, Revised 2007)

The Spring Lake Specific Plan was adopted in 2001 to provide policy and land use regulations and to identify infrastructure, phasing, and financing for development of the Specific Plan Area encompassing 1,097 acres. A summary of land uses in the Spring Lake Specific Plan is given in Table 4.1-1. In addition, the Specific Plan includes Design Standards that emphasize pedestrian convenience and neighborhood interaction. The Design Standards are intended to be used by planning staff, the Planning Commission, and the City Council in their review of development proposals. The Design Standards include design objectives and design standards for site planning and layout, detached housing, multi-family attached housing, neighborhood commercial standards, the Spring Lake Village Center, street design, and public facilities.

Table 4.1-1. Spring Lake Specific Plan Land Use Summary			
Use	Maximum Density (dwelling unit/acre)	Units	Approximate Area (Net Acres)
R-3	3	364	121.1
R-4	4	407	101.9
R-5	5	1,512	302.7
R-8	8	583	73.2
R-15	15	491	32.7
R-20	20	455	24.3
Subtotal Residential		*4,037*	*664.9*
Neighborhood Park			24.0
Central Park			4.0
Subtotal Parks			*28.0*
Elementary School			30.0
Middle School			20.0
High School			50.0
Private School			25.7
Woodland College			112.4
Subtotal Schools			*238.1*
Office/Commercial/Retail			11.0
Fire Station			1.0
Yolo County			31.0
Streets			106.3
Greenbelts			4.2
Drainage/Detention			12.5
Total		**4,037**	**1,096.9**
Sources: City of Woodland Spring Lake Specific Plan 2001. <http://www.cityofwoodland.org/gov/depts/cd/divisions/planning/online/spring_lake_specific_plan.asp>			

East Street Corridor Specific Plan (1998, Revised 2005)

The East Street Corridor Specific Plan was adopted in 1998. The intent of this Plan is to enhance the East Street Corridor as a mixed-use residential, shopping, service, and community district. East Street functions as an important north-south connection through Woodland's eastern neighborhoods and provides access to the City's northeast industrial sector. The land use designations in the Plan include: Neighborhood Preservation, Mobile Home Park, Mixed Use Residential/Commercial, Central Business District, General Commercial, and Service Commercial. In the Plan, about 12 acres are designated Mobile Home Park with an allowed density of 12 to 20 dwelling units per acre. There are approximately 228 acres of commercially designated land, which could accommodate up to 12.6 million square feet of commercial development with floor to areas ratios between 0.5 and 1.0. The Plan contains an extensive urban design element that establishes the following principles to guide the character of East Street: "unity in the public realm, private form, and chain of outdoor places." To achieve these principles, the urban design element provides requirements for both the public right of way and general private property. One set of requirements for private property is about placemaking, defined as "the creation of places that people recognize as unique and special" (East Street Corridor Specific Plan 1998). Aspects of placemaking in

the East Street Corridor Specific Plan include transitions from public to private space, observation of public space from private spaces, sufficient open space, and frequent pedestrian entrances. In addition, the urban design element states the following regarding light and glare: "New structures located on the property shall maintain access to light and air circulation and ensure the privacy of existing private open spaces on the subject property and adjoining properties" (East Street Corridor Specific Plan 1998).

The City of Woodland proposes to repeal the East Street Corridor Specific Plan after adoption of the Proposed Project, and it would be replaced with more modern policies of the General Plan and updated development regulations that will be prepared to implement the General Plan.

Downtown Specific Plan (1993, Revised 2003)

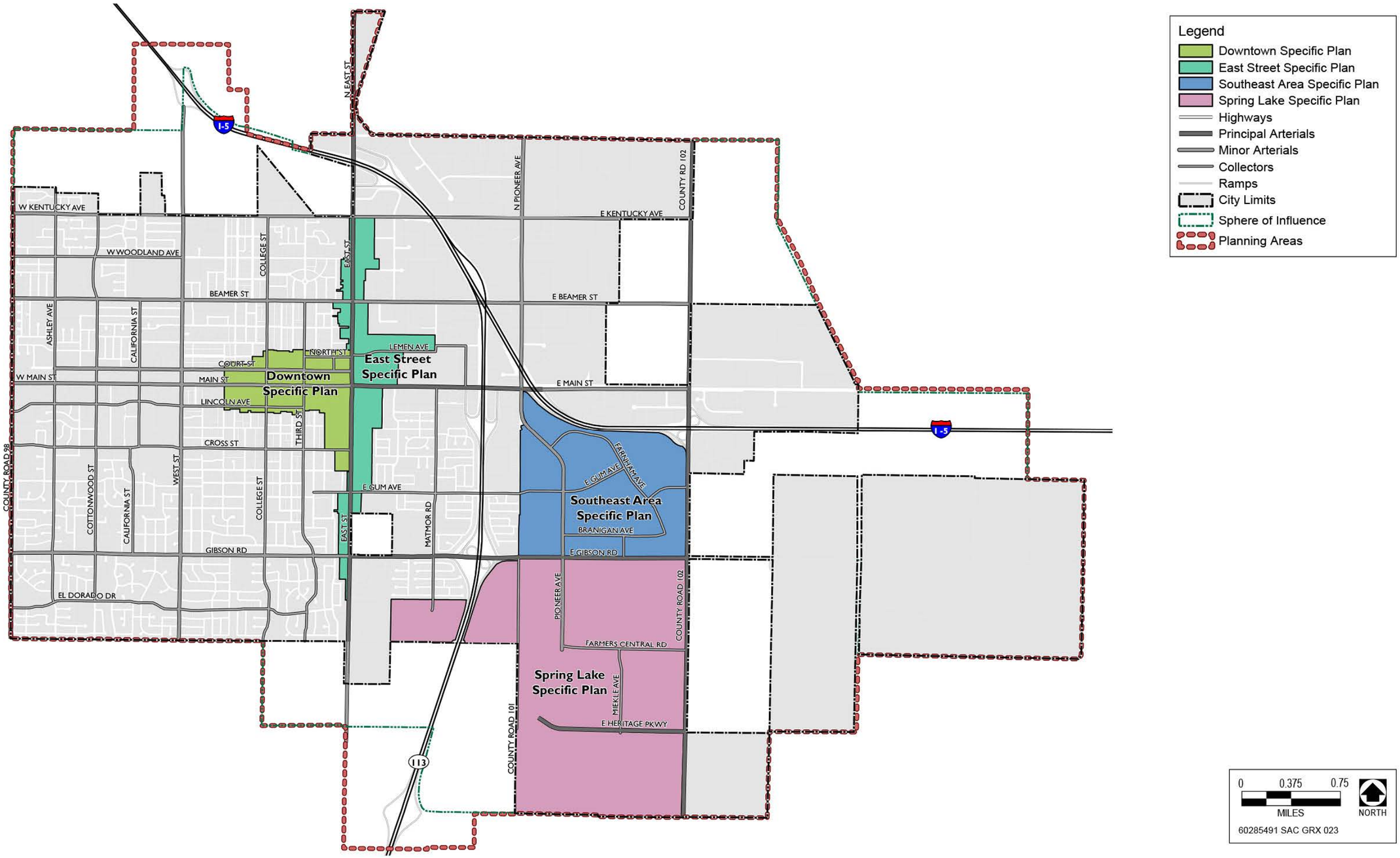
The location of each specific plan is shown in Exhibit 4.1-4.

The Downtown Specific Plan was adopted in 2003 to "develop a plan that is based on community input, develop a plan that has a clear vision for where the Downtown should be in the future, and develop a plan that is action-oriented to ensure the desired results." (City of Woodland Downtown Specific Plan 2003) The Downtown Specific Plan covers 139 acres bounded approximately by Cleveland Street on the west, North Street on the north, East Street on the east, and Lincoln Avenue on the south. A summary of land uses in the Downtown Specific Plan is given in Table 4.1-2. Chapter 6 of the Specific Plan includes Design Guidelines intended to guide renovations and development in the Downtown area. The Design Guidelines include both recommendations and specific requirements for five districts Downtown: Main Street, Government Center, Transition District, Mixed Use District, and Gateway.

Table 4.1-2. Downtown Specific Plan Land Use Summary

Use	Units	Non-Residential Square Feet
Residential (Medium)	37	
Residential (High)	84	
Subtotal Residential	121	
Retail		40,173
Restaurant		10,500
Office		241,730
Service Commercial		13,000
Subtotal Commercial		305,403
Park		1
Total	**242**	**610,807**

Sources: City of Woodland Downtown Specific Plan 2003.
<http://www.cityofwoodland.org/gov/depts/cd/divisions/planning/online/downtown_specific_plan.asp>



Source: Dyett and Bhatia 2016

Exhibit 4.1-4. **Specific Plan Areas**

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Southeast Area Specific Plan (1990, Revised 1995)

The Southeast Area Specific Plan, adopted in 1990, covers the portion of Woodland directly south of I-5 and east of State Route 113 (SR 113). In addition to land use and circulation programs, this Plan includes design guidelines and standards relevant to residential, commercial, and industrial development. A summary of land uses in the Southeast Area Specific Plan is provided in Table 4.1-3.

Table 4.1-3. Southeast Area Specific Plan Land Use Summary

Use	Approximate Area (Net Acres)	Units
Central Commercial	11.0	N/A
Highway Commercial	14.3	N/A
Neighborhood Commercial	12.5	N/A
Medium Density Residential (20 dwelling units/acre)	36.0	720
Low Density Residential (7 dwelling units/acre)	139.2	975
Low Density Residential (5 dwelling units/acre)	165.4	827
Low Density Residential (4 dwelling units/acre)	11.7	48
Institutional	11.5	N/A
Parks	17.1	N/A
Schools	8.0	N/A
Roads	42.3	N/A
Total	469.0	2,570

Sources: City of Woodland Southeast Area Specific Plan 1990.
<http://www.cityofwoodland.org/civicax/filebank/blobdload.aspx?blobid=5653>

Over the last 20 years, this Specific Plan Area has been completely built-out and generally reflects the land use pattern articulated in the plan. The Specific Plan Area is a primarily low- and medium-density residential neighborhood with some large-format commercial uses along Gibson Road and Pioneer Avenue, as well as public uses, including an elementary school, recreational fields, and two public parks.

City of Woodland Community Design Standards

The City of Woodland's Community Design Standards were adopted in 1998 and updated in 2004. The purpose of the Design Standards is to define the City's image and to clarify a shared vision for new, and modifications to existing, development in Woodland. Specifically, the Community Design Standards are used by the City Council and Planning Commission in the design review process for projects requiring discretionary approval and by City staff for projects that do not require discretionary approvals. The Design Standards address the following topics:

- Site planning and architectural design standards for new residential, commercial, and industrial development and modifications to existing buildings.
- Landscaping and screening techniques to preserve and enhance views along a corridor.

- Signs for new development.
- Landscaping and signage at entryways.
- Streetscape improvements such as street trees, landscaped medians and street furnishings to help improve the appearance of the corridor. (Community Design Standards 2004)

For each of the design topics, the Community Design Standards establish mandatory elements and techniques, as well as recommended elements or desirable features.

City of Woodland Municipal Code

Woodland Building Code, Chapter 6 of the Municipal Code

In addition to development patterns, location of development, and landscaping, light and glare can affect aesthetics and visual character. The City's Municipal Code does not have a specific section dedicated to prevention of nuisance light and glare, although there are regulations regarding light and glare from specific uses. The Municipal Code requires a certain amount of light outside of residential and commercial uses and in parking lots during the night, as established in the following regulations of the Municipal Code.

(a) Section 1020 is hereby added to read as follows: Section 1020 Residential Buildings. D. Lighting in multiple-family dwellings shall be as follows: (1) Aisles, passageways, and recesses related to and within the building complex shall be illuminated with an intensity of at least twenty-five one hundredth foot-candles at the ground level during the hours of darkness. Lighting devices shall be protected by weather and vandalism resistant covers. (2) Open parking lots and carports shall be provided with a maintained minimum of one foot-candle of light on the parking surface during the hours of darkness. Lighting devices shall be protected by weather and vandalism resistant covers. (Chapter 6 Building Codes, Article 1 General Provisions, Sec. 6-1-8)

(h) The following standards shall apply to lighting, address identification and parking areas: (2) All exterior commercial doors, during the hours of darkness, shall be illuminated with a minimum of one foot-candle of light. All exterior bulbs shall be protected by weather and vandalism resistant cover(s). (3) Open parking lots, and access thereto, providing more than ten parking spaces and for use by the general public, shall be provided with a maintained minimum of one foot-candle of light on the parking surface from dusk until the termination of business every operating day. (Chapter 6 Building Codes, Article 1 General Provisions, Sec. 6-1-8)

(b) Section 1021 Commercial Buildings. (h) The following standards shall apply to lighting, address identification and parking areas: (1) The address number of every commercial building shall be internally illuminated during the hours of darkness so that it shall be easily visible from the street. The numerals in these numbers shall be no less than six inches in height. This standard may be modified by the Fire Marshal. (2) All exterior commercial doors, during the hours of darkness, shall be illuminated with a minimum of one foot-candle of light. All exterior bulbs shall be protected by weather and vandalism resistant cover(s). (3) Open parking lots, and access thereto, providing more than ten parking spaces and for use by the general public, shall be provided with a maintained minimum of one foot-candle of light on

the parking surface from dusk until the termination of business every operating day. (Chapter 6 Building Codes, Article 1 General Provisions, Sec. 6-1-8)

Woodland Zoning Ordinance, Chapter 25 of the Municipal Code

The sections of the Woodland Zoning Ordinance given below also regulate light and glare from specific uses including off-sale liquor establishments and digital freeway signs.

(3) Requirements for Off-Sale Liquor Establishments Within the Central Business District. (B) If an on-site parking lot is provided, exterior lighting of the parking lot shall be kept at an intensity of at least one foot candle. (Chapter 25, Article 21 Special Provisions, Sec. 25-21-70. Alcoholic Beverage Establishments)

(x) Illumination. Digital freeway signs shall not operate at brightness levels of more than 0.3 foot-candles above ambient light, as measured using a foot-candle meter at a distance of two hundred fifty feet from the sign face. Each digital display area shall have a light sensing device that will adjust the brightness of the sign as ambient light conditions change throughout the day. Digital freeway signs shall create minimal glare, maintain contrast between the sign face and the surrounding area, have minimal impact on driver distraction, and create minimal light trespass into residential areas. The applicant shall demonstrate through field testing compliance with a 0.3 foot-candle increase, or less, over ambient light at a distance of two hundred fifty feet during nighttime conditions upon initial start-up, again at six months of operation and at the reasonable request of the city for the life of the sign. The applicant shall fund field testing by a qualified independent contractor or city staff trained in the use of a handheld photometer to demonstrate continued compliance. If increases in ambient light are found to be above the 0.3 foot-candle level, the dimming level shall be adjusted until this level can be demonstrated. This must be completed and demonstrated through follow-up field testing within twenty-four hours or the billboard shall not be operated until the lighting levels can be brought into compliance. (Chapter 25, Article 24 Signs, Sec. 25-24-30 Specific Regulations)

Trees, Chapter 20A of the Municipal Code

In addition, Chapter 20A of the Woodland Municipal Code regulates trees in the city. Under this chapter, the Director of Public Works is required to issue a tree permit for any activity that will interfere with, endanger, or result in the destruction of a street tree. Chapter 20A requires that all development projects include a tree plan with specific contents, and all non-heritage or non–landmark trees that are removed as a result of a development project must be replaced.

4.1.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1.4.1 METHODOLOGY

Aesthetics and visual resources are generally subjective by nature, and therefore the extent of visual impact associated with adoption and implementation of the Proposed Project is difficult to quantify. In addition, it is difficult to estimate the impact future development would have on scenic resources, since individual development projects can enhance the aesthetic quality of an area. As such, this analysis was conducted qualitatively, assessing potential implications of growth following the 2035 General Plan Land Use Diagram and the Proposed Project's

goals, policies, implementation programs (2035 General Plan) and objectives, strategies, and actions (2035 CAP), such as Strategy UF-1, UF-2, and UF-3 which relate to the planning, planting, and maintenance of urban trees, and UF-5, which encourages the preservation of open space.

4.1.4.2 THRESHOLDS OF SIGNIFICANCE

Implementation of the Proposed Project would have a potentially significant adverse impact if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.4.3 ISSUES NOT DISCUSSED FURTHER

All impact thresholds are discussed below.

4.1.4.4 IMPACT ANALYSIS

IMPACT 4.1-1 Substantial Adverse Effect on a Scenic Vista. *Implementation of the Proposed Project would change views of farmland from individual parcels, but it would not have a substantial adverse effect on a scenic vista. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

As noted in the Environmental Setting section, Woodland's relatively flat topography results in few scenic vistas. Views consist mainly of the farmland surrounding the built environment seen from some adjacent properties at the urban edge. Cul-de-sacs, walls, and T-intersections restrict views from public streets to agricultural areas; in contrast, streets in a regular gridded pattern and wide, straight corridors allow for uninterrupted views of surrounding farmland. There are also limited views of the coastal mountain range from the western edge of the Planning Area.

Development consistent with the proposed Land Use, Community Design, and Historic Preservation Element of the 2035 General Plan has the potential to obstruct views of farmland and the coastal range currently available to the public. Specifically, these views include farmland from developed areas currently at the edge of urban development. These views would be potentially or fully blocked in some public areas by new construction beyond the current edge of development. Overall, however, public views would not be significantly altered or blocked. Although views may be obstructed in localized areas due to proposed new development, views would not be impacted on an area-wide basis. There are no new growth areas in the Proposed Project along the western edge of the Planning Area, therefore the Proposed Project is not expected to affect views of the coastal mountain range.

Similarly, the 2035 CAP plans for an increase in renewable energy systems, such as solar arrays and wind energy systems. These energy systems could be located on open space or farmland, thus impacting scenic views from adjacent properties; however, the 2035 CAP includes actions that protect open space from development of solar energy systems.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County 2030 General Plan includes policies to protect farmland outside of incorporated cities' SOIs. Farmland in unincorporated Yolo County provides scenic views from Woodland.

Proposed Project

The following 2035 General Plan goals and policies and 2035 CAP actions reduce the impact on scenic vistas associated with the Proposed Project.

2035 General Plan

- **Policy 2.A.1 Urban Limit Line.** A permanent urban limit line (ULL) is established around Woodland to permanently circumscribe urban development and comply with provisions for agricultural lands. Public services and facilities shall not extend beyond the permanent Urban Limit Line. The City shall take such administrative steps as may be required to implement Policy 2.A.1. The City shall also identify funding for implementing a permanent urban limit line, including mitigation for developing on agricultural land. The City shall continually reevaluate residential land use densities, housing policies, and zoning to determine the potential for increased residential densities for both infill sites and undeveloped land within the Urban Limit Line. The City shall continually review existing non-residential zoning to determine the potential for conversion to higher density residential uses within the permanent Urban Limit Line. The City will encourage and support appropriately located agricultural and wildlife conservation easements to support implementation of the permanent urban limit line.

  This policy enacts Woodland Measure A (Ballot of June 2006), Urban Limit Line, and can only be modified by the voters.

- **Policy 3.A.7 Street Grid Network and Density.** Promote the use of grid and modified grid street patterns in new residential, commercial, or mixed-use development that propose to construct new streets. Modified grids may include combinations of grid and curvilinear streets. Greenbelts may intersect street grid to create an interconnected trail network that encourages biking and walking. The density of new streets should be similar to the existing residential neighborhoods in Woodland that have approximately nine centerline miles or arterials and collectors per square mile.

- **Goal 7.C Preserve Farmland.** Promote preservation and economic viability of agricultural land surrounding the ULL.

- **Policy 7.B.6 Open Space Buffer.** Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29.

- **Policy 7.C.3 Surrounding Agricultural Land.** Encourage Yolo County to conserve agricultural soils, preserve agricultural land surrounding the ULL, and promote the continuation of existing agricultural operations.

2035 CAP

- **Objective 2, Strategy E-6, Action.** Balance open-space maintenance with solar opportunities by promoting the installation of solar systems on existing development or in dual-use applications, such as parking lots, building roofs, and stormwater detention basins.

- **Objective 2, Strategy UF-5, Action.** Preserve open space from development of solar farms by focusing the installation of solar arrays on rooftops, developed land, and where solar would be compatible with an existing or intended use (e.g., stormwater detention basins).

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Policies in the Proposed Project ensure that impacts on scenic views are minimized. Goal 7.C establishes that the City is responsible for promoting the preservation of agricultural land surrounding the ULL. Policies 2.A.1, 7.B.6, and 7.C.3 reinforce the Urban Limit Line and require the City to work with Yolo County and the City of Davis on an open space buffer and protection of agricultural land around Woodland. Policy 3.A.7 requires the City to promote the use of grid and modified grid street patterns in new neighborhoods, which helps protect views of surrounding agricultural and open space land along transportation corridors. The 2035 CAP actions listed above protect open spaces, which provide scenic views, by focusing installation of renewable energy systems on developed land and structures.

    a. East Alternative–The East Alternative would result in no additional or different impacts than disclosed in the general analysis above. The impact is **less than significant.**

    b. South Alternative–The South Alternative would result in no additional or different impacts than disclosed in the general analysis above. The impact is **less than significant.**

Mitigation Measure

No mitigation is required.

IMPACT 4.1-2 Substantially Damage Scenic Resources, Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway. *There is no state scenic highway within or in close proximity to the Planning Area. In addition, policies and implementation programs in the Proposed Project require that the city's tree canopy is managed and improved and that historic buildings are preserved. There are no rock outcroppings in the Planning Area. The impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

There are no state scenic highways in Yolo County, although State Route 16 is deemed an "Eligible State Scenic Highway" according to the California Department of Transportation. The section of State Route 16 identified as "Eligible" extends northwest from Capay, more than 10 miles away from the western boundary of the Planning Area. Therefore, implementation of the Proposed Project will have no effect on scenic resources within a state scenic highway. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The city of Woodland has many street trees important to the city's character. Development and renovations on infill parcels may pose a threat to some existing trees Although Woodland has historic buildings, they do not serve as scenic resources within a state scenic highway. Woodland is relatively flat, and there are no rock outcroppings in the Planning Area.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Chapter 20A of the Woodland Municipal Code protects street trees from interference and requires that certain trees that are removed must be replaced.

Proposed Project

The following 2035 General Plan policies and implementation programs are relevant to the potential impact on scenic highways. There are no CAP objectives or strategies that relate to this impact.

- **Policy 2.E.5 View Corridors.** Create attractive view corridors that offer a sense of arrival into the community and feature distinctive architecture and landscaping complemented by well-designed and integrated signage.
- **Policy 7.B.9 Tree Canopy.** Manage, enhance, and improve the city's tree canopy as a valuable ecological resource.
- **Policy 7.B.10 Urban Forest Management Plan.** Establish an urban forest management plan to guide the protection and enhancement of the urban forest.

- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and sensitive plants and wildlife habitats.

- **Implementation Program 7.3.** Adopt a citywide tree palate for publically maintained street trees that includes native, compatible non-native, and pollution absorbing species.

- **Implementation Program 7.4.** Provide information at City offices and through electronic media about programs operated by the Woodland Tree Foundation or other organizations that provide free trees to Woodland residents.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

There are no State-designated scenic highways in the County.

The Yolo County 2030 General Plan includes policies that require the County to preserve the scenic quality of and particular scenic resources along the County's rural roadway system. In addition, the Yolo County 2030 General Plan designates several local scenic roadways.

The 2035 General Plan includes policies and implementation programs that are relevant to potential impacts on scenic highways including Policy 2.E.5, which requires the City to create attractive view corridors. In addition, Policies 7.B.9, 7.B.10, and 7.B.11 and Implementation Programs 7.3 and 7.4 protect trees from new development resulting from implementation of the Proposed Project. Policies 7.B.9 and 7.B.11 require that the tree canopy in the City is managed and improved and that new development is sited in such a way that maximizes preservation of native trees. In addition, two implementation programs support the health of Woodland's tree canopy. The 2035 General Plan includes several policies that protect Woodland's historical resources, as discussed in Section 4.6 of this EIR, "Cultural Resources."

There are no rock outcroppings in the Planning Area.

a. East Alternative–The East Alternative would result in no additional or different impacts than disclosed in the general analysis above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impacts than disclosed in the general analysis above. The impact is **less than significant.**

Mitigation Measure

No mitigation is required.

IMPACT 4.1-3 *Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings. The Proposed Project facilitates new development that will change the existing visual character of the Planning Area. However, impacts on visual character and quality of the site are subjective and variable between different individuals. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

For most neighborhoods within the existing urbanized area of Woodland, the Proposed Project calls for few substantive changes to land use or development standards, and thus will create minimal contrasts with the scale, form, color, or overall visual character of these existing neighborhoods.

However, the Proposed Project anticipates more housing units and non-residential development than the existing conditions. Some of this growth is expected to occur in infill areas, including Downtown and along the Kentucky Avenue, Main Street, East Street, and CR 102 corridors, and some is expected to occur in new growth areas. The location of new growth depends on the Project Alternative, as discussed below and shown in Tables 4.1-1 and 4.1-2.

Generally, much of the new development that could occur through implementation of the 2035 General Plan would be of a similar type and mass and of an equal or higher quality design than the development that already exists in the Planning Area. However, the 2035 General Plan does permit higher densities and intensities, particularly in infill areas such as Downtown and key corridors designated Corridor Mixed Use. In addition, the 2035 CAP includes an action to increase allowable residential density and building height standards, generally, which is consistent with the 2035 General Plan. New development following these standards may result in some buildings that are taller or of a greater scale than the current development in the local neighborhood. However, there are existing buildings in Woodland that are already built at the highest proposed densities and intensities described in the 2035 General Plan, and allowing for more buildings to meet this density and intensity is intended to improve the character of neighborhood centers and corridors with greater activity in the public realm, an increase in commercial activity, and improved design standards for new buildings and public spaces. Taller or larger buildings do not necessarily constitute a visual impact, and policies in the 2035 General Plan establish standards for design and compatibility with a project's surroundings.

In addition to adding uses and density, new investment in urban infill areas typically improves visual quality by developing vacant or underutilized properties and improving maintenance of existing structures and yards. New development of high quality design can enhance the built environment with new architecture that is in character with or complements existing structures. However, investment in development that is inconsistent with established neighborhoods or that lacks high quality design may be a detriment to existing neighborhoods.

While the 2035 General Plan and this EIR make assumptions about the amount and type of infill development that may occur through the planning horizon year (2035), it cannot be precisely quantified nor its location precisely described, nor can the precise impacts of a project's design on the physical character of a site be predetermined.

Historical buildings, landmarks, and districts contribute to Woodland's visual character and could be affected by new infill development and investment. Refer to Section 4.6 of this EIR, "Cultural Resources" for further analysis of impacts of the Proposed Project on historical resources in Woodland.

In addition to infill development potentially affecting areas within urbanized Woodland, development in new growth areas will affect visual character, as well as views from development at the existing perimeter of the urban environment, as discussed in Impact 4.1-1 above. Both the East and South Alternatives anticipate new development in the northern portion of the Planning Area in SP-3. Neither alternative plans for a new growth area in the western portion of the ULL. The East and South Alternatives anticipate different amounts of development in new growth areas in the southern and eastern portions of the Planning Area, as described below.

The 2035 CAP aims to increase production of energy through solar photovoltaic (PV), wind, and geothermal systems. Objective 2 of the 2035 CAP is to "Obtain 40 MW of electricity from renewable sources." Rooftop PV systems and PV parking shade structures have the potential to affect the visual character of whatever site they are installed on. In addition, the 2035 CAP proposes an action to encourage the conversion of turf to low-water plantings in order to increase water conservation, which might appear different, but cannot be objectively said to be better or worse, aesthetically. Like the aesthetics of new development, the aesthetics of renewable energy systems and water-efficient landscaping is subjective.

a. East Alternative–The East Alternative anticipates an increase of 7,000 new housing units and 17,386,000 square feet of non-residential development, as explained in Chapter 3.0 of this EIR, "Project Description." Table 4.1-4 shows the expected location of new development in the East Alternative. Approximately 50 percent of new housing units are expected to occur in infill areas and 50 percent in new growth areas, whereas about 75 percent of new non-residential growth is expected to occur in infill areas and 25 percent in new growth areas.

   The general location and nature of infill development and development in SP-3 is described in the general discussion of potential impacts, above. In the East Alternative, development in new growth areas is concentrated in SP-1A (in the south of the ULL, adjacent to the existing Spring Lake Specific Plan area and SR 113) and in SP-2 (east of the water quality control facility and south of I-5). The SP-1A area is currently agricultural land, visible from the adjacent neighborhoods and the SR 113 highway. The SP-2 area is currently used as sprayfields for Pacific Coast Producers and also has some agricultural activity. While its separation from other developed areas makes it less visible than some other areas within the ULL, the SP-2 area can be seen from I-5 (looking south) and currently presents an open vista.

Table 4.1-4. Percentage of Anticipated Growth by Development Area		
Development Area	East Alternative	
	New Housing Units	New Non-Residential Square Footage
Infill		
Downtown	7.9%	1.5%
Corridors/Other Infill	6.3%	22.3%
Spring Lake Specific Plan	37.1%	3.0%
Industrial Area	0.0%	49.2%
Infill Total	**51.3%**	**76.1%**
New Growth Areas		
SP-1	22.9%	13.6%
SP-1A	22.9%	12.4%
SP-1B	0.0%	1.1%
SP-1C	0.0%	0.0%
SP-2	22.9%	5.0%
SP-3	3.0%	5.4%
SP-3A	2.9%	0.7%
SP-3B	0.1%	4.7%
New Growth Areas Total	**48.7%**	**23.9%**
TOTAL	**100.0%**	**100.0%**
Source: Dyett & Bhatia 2016		

b. South Alternative–The South Alternative anticipates an increase of 7,000 new housing units and 16,685,000 square feet of non-residential development, as explained in Chapter 3.0 of this EIR, "Project Description." Table 4.1-5 shows the expected location of new development in the East Alternative. Approximately 65 percent of new housing units are expected to occur in infill areas and 35 percent in new growth areas, whereas about 80 percent of new non-residential growth is expected to occur in infill areas and 20 percent in new growth areas.

The general location and nature of infill development and development in SP-3 is described in the general discussion of potential impacts, above. In the South Alternative, development in new growth areas is concentrated in SP-1 (in the south of the ULL in areas both to the east and west of SR 113). There are three primary areas of growth in SP-1. SP-1A and SP-1B are currently agricultural land, visible from the adjacent neighborhoods and the SR 113 highway. SP-1C is primarily agricultural land, with some residential uses along the northern edge, and is visible from adjacent neighborhoods.

Table 4.1-5. Percentage of Anticipated Growth by Development Area		
Development Area	South Alternative	
	New Housing Units	New Non-Residential Square Footage
Infill		
Downtown	14.3%	2.9%
Corridors/Other Infill	13.6%	22.2%
Spring Lake Specific Plan	37.1%	3.2%
Industrial Area	0.0%	51.3%
Infill Total	**65.0%**	**79.5%**
New Growth Areas		
SP-1	31.4%	14.2%
SP-1A	22.9%	12.9%
SP-1B	7.4%	1.3%
SP-1C	1.1%	0.0%
SP-2	0.0%	0.0%
SP-3	3.6%	6.3%
SP-3A	2.9%	1.3%
SP-3B	0.7%	4.9%
New Growth Areas Total	**35.0%**	**20.5%**
TOTAL	**100.0%**	**100.0%**
Source: Dyett & Bhatia 2016		

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The City of Woodland Community Design Standards reduce impacts on the visual character and quality of the city by establishing site planning and architectural design standards for new development and modifications to existing buildings.

Proposed Project

The following 2035 General Plan goals, policies, and implementation programs limit the impact on visual character and quality of the area from the Proposed Project. There are no CAP objectives or strategies that relate to this impact.

- **Goal 2.A Growth and Change.** Support sustainable growth through orderly, well planned development that provides for economic growth, strong social ties, protection of the environment, an enhanced quality of life, and preservation of Woodland's community character and agricultural heritage.

- **Policy 2.A.5 Complete and Well Designed Neighborhoods.** Promote the development of complete neighborhoods whose physical layout and land use mixes that put residents in close proximity to services and amenities and layouts that promote walking, biking and transit use, foster community pride, enhanced

- **Policy 2.E.2** Responsiveness to Context. Encourage high-quality new development that enhances and blends with the established fabric of the natural, social and built environment, while allowing for innovative architectural styles.

- **Policy 2.F.1** Development Regulations. Promote design excellence by ensuring development regulations clearly express intended rather than prohibited outcomes.

- **Policy 2.F.2** Zoning. Prepare performance and/or form based zoning regulations that clearly articulate the goals and policies of the General Plan.

- **Policy 2.F.2** Design Review. Require design review as appropriate that focuses on achieving form and function for new, reuse and reinvestment projects to promote creativity, innovation and design quality.

- **Goal 2.G** Traditional Neighborhoods. Recognize, maintain and celebrate the unique qualities of Woodland's traditional residential neighborhoods.

- **Policy 2.G.1** Distinctive Characteristics. Maintain the distinctive characteristics of neighborhoods developed in different eras, including those developed prior to WWII, post war, and in more recent decades.

- **Policy 2.G.2** Sensitive New Development. Require new construction, additions, renovations, and infill to be sensitive to neighborhood context, historic development patterns, and building form and scale.

- **Goal 2.H Historic Downtown Center.** Promote Downtown Woodland as a premier urban location in the region with a dynamic mix of uses including shopping, dining, entertainment, living, and employment ranging from innovative businesses to traditional government functions. Encourage architecturally interesting buildings and inviting pedestrian streetscapes that complement the city's historic character while celebrating the ingenuity of the present.

- **Policy 2.I.1Building and Site Design.** Require buildings located along corridors be designed to define the public realm and promote multimodal mobility and sidewalk activity that provides eyes on the street. Key components of good design should include:

    - Mix of building patterns

    - Building frontages located directly adjacent to the sidewalk where appropriate, especially on West Main Street; minimal setbacks on other corridors

    - Ground floor transparency to encourage activity

    - Minimize driveways, curb cuts, and parking visibility

    - Pedestrian-oriented elements, including public outdoor spaces

- **Goal 2.J Commercial Centers.** Promote the development of distinct, well-designed commercial centers that serve neighborhood residents, community members, and/or the region at large.

- **Policy 2.J.1 Enhanced Design Character of Existing Centers.** Encourage renovation, infill, and reuse of existing commercial centers to utilize unused space in parking lots, make the centers more pedestrian-friendly, and enhance the definition and character of the street frontage and associated streetscape.

- **Policy 2.J.2 Design of New Neighborhood and Community Commercial Centers.** Facilitate the development of new neighborhood and community commercial centers that feature elements such as monumental entryways, articulated building facades and rooflines, attractive landscaping, shaded walkways, plazas and public art.

- **Policy 2.K.1 Quality Design.** Require new and renovated business parks, public buildings, and industrial properties to feature elements such as monumental entrances, articulated building facades and rooflines, attractive landscaping, and shaded walkways.

- **Policy 2.M.7 Characteristics of Older Neighborhoods.** Incorporate the best characteristics of older neighborhoods, such as an orthogonal street grid with smaller blocks, front porches, shallower front setbacks, historic style lighting and monument features to create a sense of place.

- **Goal 2.O Preservation and Adaptive Reuse.** Preserve community character and historic buildings while attracting new infill development and investment in existing neighborhoods.

- **Policy 2.O.1 Neighborhood Preservation Overlay District.** Preserve the Neighborhood Preservation Overlay zoning district to ensure that new development in historic neighborhoods is well designed and appropriately scaled.

- **Policy 2.P.3 Historic Neighborhood Design Criteria.** Ensure that new residential construction, additions, repairs, and remodels in historic neighborhoods preserve the historic nature of the structure and neighborhood.

- **Implementation Program 2.13** Update the Community Design Standards to identify the City's expectations for planning, designing, and reviewing development proposals which reflect the goals, policies, and urban form characteristics described in the General Plan. The Design Standards may take the form of citywide guidelines or may be developed for identified neighborhoods, centers, gateways, and corridors.

- **Implementation Program 2.23** Develop historic design guidelines that provide context sensitivity in historic districts and neighborhoods.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

While the character of existing communities will be affected by new development, the Proposed Project would ensure that new development is sensitive to Woodland's existing character, scale, and visual quality. Attractive visual character would be ensured by requiring high-quality design for new development, corridors, commercial centers, industrial properties, and business parks; and by requiring design review that focuses on creativity, innovation, and design quality. Goals 2.A, 2.G, 2.H, 2.O; Policies 2.E.2, 2.G.1, 2.G.2, 2.M.7, 2.O.1, and 2.P.3; and Implementation Program 2.23 require the City to support growth that is sensitive to Woodland existing character and environment. Goal 2.J; Policies 2.A.5, 2.F.1, 2.F.2, 2.I.1, 2.J.1, 2.J.2, 2.K.1; and Implementation Program 2.13 ensure high quality design of new neighborhoods and buildings.

However, development of the 2035 General Plan will result in new development in infill and new growth areas that will change the visual character of the Planning Area. In addition, new renewable energy systems and water-efficient landscaping resulting from implementation of the 2035 CAP has the potential to change the visual character.

a. East Alternative–The impact is **significant.**

b. South Alternative–The impact is **significant.**

Mitigation Measure

None available.

Summary of Impact after Mitigation

Policies cited above from the 2035 General Plan provide guidance for development and conservation that relate to aesthetics and visual resources. Implementation Program 2.13 requires the City to update the Community Design Standards to identify the City's expectations for planning, designing, and reviewing development proposals, consistent with balance of the 2035 General Plan. Implementation Program 2.23 requires the City to develop historic design guidelines that provide context sensitivity in historic districts and neighborhoods. Mitigation Measure 4.1.3 clarifies the City's intent for development planned under the Proposed Project and how development that is consistent with the 2035 General Plan will be addressed in environmental impact analysis of individual projects. Despite proposed policies and implementation programs, implementation of the 2035 General Plan is still expected to result in development in infill and new growth areas that will inherently change Woodland's visual character. The City has presented all feasible mitigation in the form of policies and programs in the Proposed Project. There is no additional feasible mitigation available.

a. East Alternative–The impact is considered **significant and unavoidable.**

b. South Alternative– The impact is considered **significant and unavoidable.**

IMPACT 4.1-4 Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area. *Implementation of the Proposed Project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Developed areas in Woodland generate sources of light and glare. Infill development in Downtown and along major corridors in which the Proposed Project allows for greater density and intensity of development will add to the amount of light already generated. In addition, development in new growth areas will produce light and glare in areas that currently have relatively little or no light and glare.

Particular uses, such as parking lots, commercial buildings, and signs, often emit light twenty-four hours per day. In contrast, most residential buildings produce limited light during the night. In addition, new buildings with reflective surfaces, such as office buildings with glazed windows, will add daytime glare in these areas.

In addition to new light and glare from development resulting from implementation of the 2035 General Plan, the 2035 CAP includes a strategy to upgrade lighting efficiency. The 2035 CAP includes goals for a certain number of homes and businesses to switch from incandescent bulbs to compact fluorescent lamps (CFL) and light-emitting diode bulbs (LED). In addition, the 2035 CAP includes actions that both require and encourage the use of new light sources. The change in technology from incandescent bulbs to CFLs and light-emitting diode bulbs LEDs will affect the emission of light and may result in new impacts to nighttime views.

The 2035 CAP also establishes the goal of installing 500 reflective residential roofs to reduce the need for cooling equipment. Reflective roofs will increase glare; however, the roofs will primarily reflect light upwards rather than horizontally. Therefore, the increase in reflective roofs is not expected to significantly influence daytime glare.

a. East Alternative–Anticipated development in SP-1A and SP-3 are adjacent to existing development, therefore the impact of new sources of light and glare in these areas may contribute to existing light effects. The anticipated development in SP-2 is mostly adjacent to agricultural and vacant land, as well as the water quality control facility. Development in SP-2 will introduce light and glare in an area that currently has few artificial light sources.

b. South Alternative–SP-1A and SP-3 are adjacent to existing development on at least two sides, therefore the impact of new sources of light and glare in these areas may contribute to existing light effects. SP-1C is adjacent to development on two sides. SP-1B is expected to be adjacent to new development in SP-1A, however it is currently adjacent to very little development, and therefore will introduce light and glare in an area that currently has few artificial light sources.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The City of Woodland Municipal Code includes regulations on illumination of digital freeway signs limits the impact of digital signs on nighttime views in the area (Chapter 25, Article 24, Section 25-24-30).

Proposed Project

There are no goals, policies, or implementation programs in the 2035 General Plan nor 2035 CAP objectives or strategies that relate to this impact.

Summary of Impact Analysis

The construction of new buildings in the Planning Area may result in nighttime light pollution or daytime glare. 2035 General Plan Policies 2.E.2 and 2.G.2 require that new development is sensitive to neighborhood context and blends with the established built environment. Although new development must be consistent with existing development, it will add to the overall amount of light being generated.

In addition, the 2035 CAP establishes goals and actions to switch residential and non-residential use of incandescent bulbs in Woodland to CFLs and LEDs. These goals and actions will impact sources of light in the Planning Area.

a. East Alternative–The impact is **significant.**

b. South Alternative–The impact is **significant.**

Mitigation Measure

Mitigation Measure 4.1-4 – The 2035 General Plan should be amended to include the following new policies:

- **Policy 2.F.4 Light Pollution.** Control artificial lighting to avoid spill-over lighting and preserve the night sky.

Policy 2.F.5 Glare. Control artificial lighting to prevent glare.The mitigation measures limit the impact from light and glare, but it is not feasible to mitigate the impacts completely without prohibiting the use of light in new development.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable.**

b. South Alternative– The impact is considered **significant and unavoidable.**

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4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 INTRODUCTION

This section of the EIR discusses and evaluates the potential environmental impacts on agricultural resources in the Planning Area that may result from the Proposed Project.

Data sources used in this section to analyze historical and existing characteristics of agricultural lands and anticipated impacts on those lands include the California Department of Conservation Division of Land Resource Protection from Fiscal Year 2010/2011; California Department of Conservation Farmland Mapping and Monitoring Program from 2014; correspondence with the Yolo County Assessor's Office in June 2016; U.S. Department of Agriculture Census of Agriculture from 2012; Yolo County Agricultural Crop Reports from 2014; and Yolo County 2030 Countywide General Plan EIR from 2009.

The Yolo County LAFCo commented on the NOP that the Yolo LAFCo has an agricultural conservation policy that includes policies and mitigation for the loss of agricultural land. This is addressed herein.

4.2.2 ENVIRONMENTAL SETTING

The first European settlement in Woodland (then called Yolo City) was established in 1853, and the favorable soil attracted settlers. Since then, Woodland has benefited greatly from the success of the agricultural industry by serving as a center for banking, commerce, education, and in some instances, by housing farmers and their workers serving the outlying farms. A variety of crops were grown in the region, including tobacco, peanuts, grapes, rice, sugar beets, various grains, and row crops. Several wineries were located in the county, producing wine, vinegar, and brandy. The livestock industry also had an important role in the region.

Another important impact of agriculture on the community and industry has been the invention and manufacturing of farming equipment. Local inventions included the centrifugal pump in the late 1800s and the Marvin Landplane in 1936 (Knights Landing) (City of Woodland 1996). Today, several farm equipment dealers are located within Woodland and provide employment and tax revenues for the City, while serving the outlying farms.

4.2.2.1 FARMLAND CLASSIFICATION

The California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) uses the Important Farmlands Inventory to classify farmland into five different categories based on soil type and current land use: Prime Farmland (Prime), Farmland of Statewide Importance (Important), Unique Farmland (Unique), Farmland of Local Importance, and Grazing Land. Two additional categories, (1) Urban and Built-up Land and (2) Other Land, are used for mapping purposes. In Yolo County, there is an additional categorization of farmland—Farmland of Local Potential—which is identified as a subcategory under Farmland of Local Importance and refers to land that contains prime or statewide soils that are not presently irrigated or cultivated.

- *Prime Farmland* is land that has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when managed (including water management) according to current farming methods. Prime Farmland must have been in active agricultural use for the production of crops within the last three years.

- *Farmland of Statewide Importance* is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops. It must have been used for crop production within the last three years.

- *Unique Farmland* is that which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, but which is currently used for the production of specific high economic value crops, as listed in the last three years of *California Agriculture*, produced by the California Department of Food and Agriculture. It has the special combination of location, soil quality, growing season, and moisture supply to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming practices.

- *Farmland of Local Importance* is either currently producing crops or has the capability to do so. It is land other than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, but it may be important to the local economy due to its productivity.

- *Grazing Land* is that on which the existing vegetation, whether grown naturally or through management, is suitable for livestock grazing. The minimum mapping unit for Grazing Land is 40 acres. This category does not include land previously designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance, or other lands where the terrain restricts the access and movement of livestock.

- *Urban and Built-up Land* is occupied by structures with a building density of at least one unit per 1.5 acres, which is equal to approximately six structures on a 10-acre parcel.

- *Other Land* includes low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry or aquaculture facilities; strip mines; borrow pits; water bodies smaller than forty acres; and vacant and non-agricultural land larger than 40 acres and surrounded on all sides by urban development.

4.2.2.2 EXISTING FARMLAND

Based on the State's FMMP data, farmland comprises about 33 percent of the land (4,215 acres) within the Planning Area. The majority of this farmland, 86 percent, is located outside the Woodland city limits along the northwestern, northeastern, and southern boundaries of the city, as shown in Exhibit 4.2-1. State mapped farmland located inside the city limits is primarily located in the western portion of the Spring Lake Specific Plan area and in the eastern-most portion of the city. As shown in Table 4.2-1, the Planning Area currently contains all five types of agricultural land classified by the FMMP, as well as Yolo County's Farmland of Local Potential. There are 1,545 acres of Prime Farmland, the majority of which is located within the SP-1 boundary in the south of the Planning Area and the SP-3 boundary and Flood Study Area in the northwest.

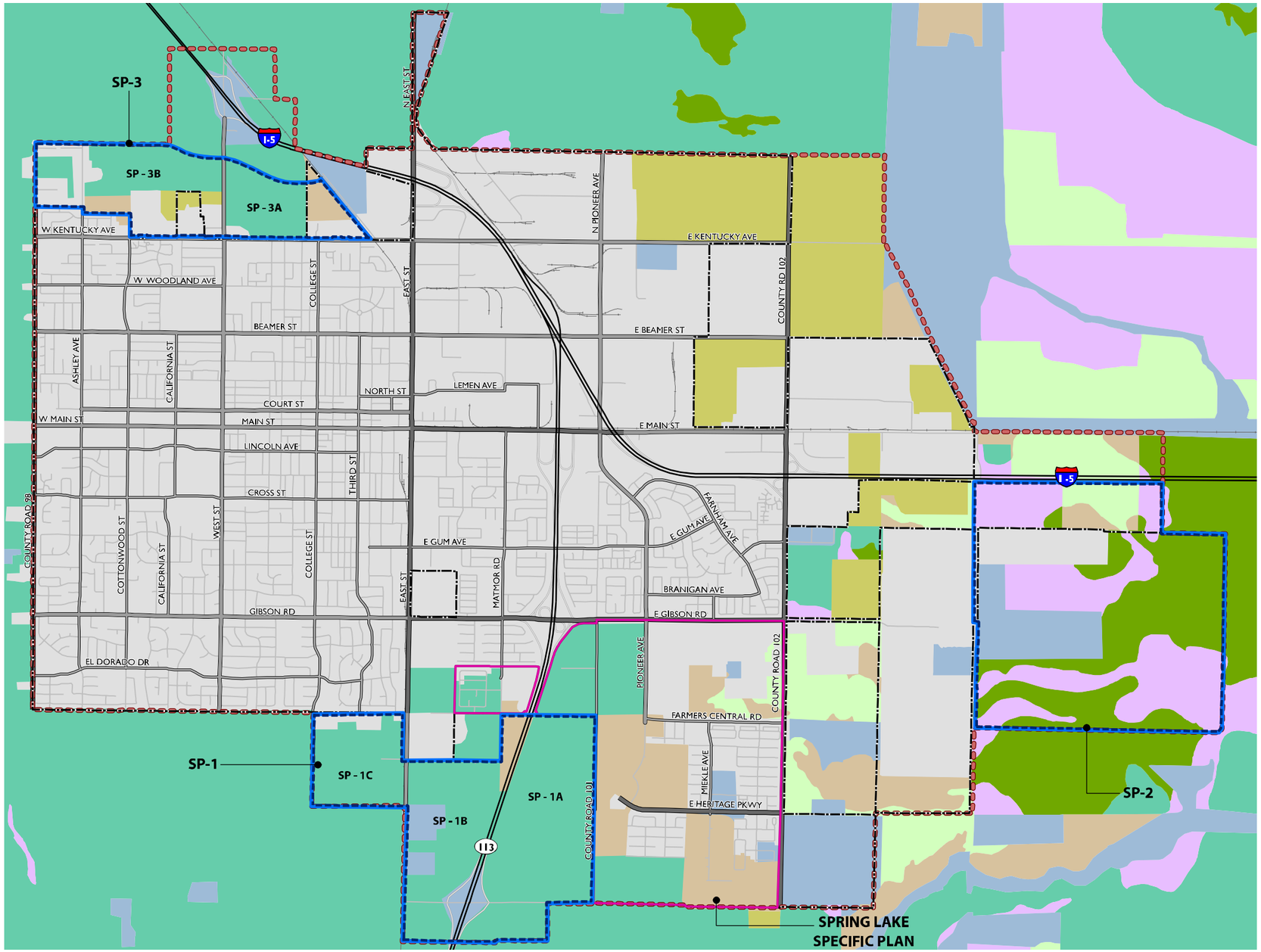

Exhibit 4.2-1. **FMMP Farmland in the Planning Area**

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Table 4.2-1. Farmland Classification in the Planning Area			
Category	Percent of Total Land in Planning Area	Percent of Total Farmland in Planning Area	Acres
Prime Farmland	12%	37%	1,544.6
Farmland of Statewide Importance	3%	10%	401.1
Unique Farmland	3%	10%	434.9
Farmland of Local Importance	7%	21%	865.9
Grazing Land	3%	8%	354.7
Subtotal Farmland Classified by FMMP	*28%*	*85%*	3,601.2
Farmland of Local Potential[1]	5%	15%	614.2
Total Farmland	*33%*	*100%*	*4,215.4*
Urban and Built Up Land	62%		7,912.6
Other Land	5%		652.5
Total Land	*100%*		*12,780.7*
Source: Farmland Mapping and Monitoring Program 2012			

Note:

[1] In Yolo County, there is an additional categorization of farmland—Farmland of Local Potential—which is identified as a subcategory under Farmland of Local Importance and refers to land that contains prime or statewide soils that are not presently irrigated or cultivated.

The Planning Area is surrounded by farmland, the dominant land use in Yolo County. Table 4.2-2 shows the amount of each type of farmland in the whole of Yolo County between 1984 to 2014, in 4-year increments. Over the 30-year time period, 82,382 acres of Prime, Important, Unique, or Locally Important Farmland were converted to non-agricultural uses, averaged 2,746 acres per year. During this same period, the amount of grazing land increased by 44,491 acres, resulting in a net change in all combined farmland categories between 1984 and 2014 of 37,891 acres converted to non-agricultural uses in Yolo County, including urban development and federal and State projects and programs that restored land to natural habitat. During this same period, the net increase in urban land within the County was approximately 10,194 acres. According to the Department of Conservation, the federal Conservation Reserve Program resulted in a significant amount of Farmland of Local Importance converting to grazing land in 1988 (Yolo County 2016).[1]

Table 4.2-3 shows the acreage of farmland in Yolo County from a more limited and recent period, between 2008 and 2014. The amount of Prime, Important and Unique Farmland in Yolo County decreased between 2008 and 2010 and between 2010 and 2012. In contrast, between 2012 and 2014, there was an increase in the recorded amount of these types of farmland. There was a change in FMMP farmland data collection in 2014 which likely contributed to this change. However, the annual average amount of converted Prime, Important, and Unique

[1] The Conservation Reserve Program is administered by the U.S. Department of Agriculture and compensates farmers to remove environmentally sensitive land from agricultural production. Please refer to the Conservation Reserve Program website for more information: http://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/index.

Farmland between 2010 and 2012 was 864 acres, which is less than the annual average amount converted between 1984 and 2014.

Table 4.2-2. Yolo County Farmland Acreage by Type, 1984-2014

	Acreage by Category[1]									1984-2014 Net Acreage Changed	Average Annual Acreage Change
Land Use Category	1984	1988[2]	1992	1996	2000[3]	2004	2008	2010	2014[4]		
Prime Farmland	272,952	274,876	271,963	269,149	261,461	259,637	255,193	252,081	250,345	-22,607	-754
Farmland of Statewide Importance	23,758	24,638	19,158	18,805	18,031	18,123	16,793	16,412	18,861	-4,897	-163
Unique Farmland	56,883	59,595	60,494	59,699	54,533	53,157	45,750	43,629	44,604	-12,279	-409
Farmland of Local Importance	94,324	74,782	76,420	73,118	75,771	66,619	60,345	62,413	51,725	-42,599	-1,420
Grazing Land	121,876	135,655	138,047	143,261	143,365	145,228	157,963	160,449	166,367	44,491	1,483
Total Farmland	*569,793*	*569,546*	*566,082*	*564,032*	*553,161*	*542,764*	*536,044*	*534,984*	*531,902*	*-37,891*	*-1,263*

Notes:

[1] Figures are generated from the most current version of the GIS data. Files dating from 1984 through 1992 were reprocessed with a standardized county line in the Albers Equal Area projection, and other boundary improvements.

[2] Due to signups for the federal Conservation Reserve Program, a significant number of acres converted from Farmland of Local Importance to Grazing Land in 1988.

[3] Due to the incorporation of digital soil survey data (SSURGO) in 2000, acreages for farmland, grazing and other land categories may differ from those published in the 1998-2000 California Farmland Conversion Report.

[4] Conversion of geospatial data to North American Datum 1983 (NAD 83) led to minor changes in total FMMP acreage beginning in 2014.

Source: California Department of Conservation Farmland Mapping and Monitoring Program.

Table 4.2-3. Yolo County Farmland Acreage by Type, 2008-2014

	Acreage by Category[2]			
Land Use Category	2008	2010	2012	2014[2]
Prime Farmland	255,193	252,081	250,693	250,345
Farmland of Statewide Importance	16,793	16,412	17,298	18,861
Unique Farmland	45,750	43,629	42,403	44,604
Farmland of Local Importance	60,345	62,413	58,137	51,725
Total Farmland	378,081	374,535	368,531	365,535

Notes:

[1] Figures are generated from the most current version of the GIS data.

[2] Conversion of geospatial data to North American Datum 1983 (NAD 83) led to minor changes in total FMMP acreage beginning in 2014.

Source: California Department of Conservation Farmland Mapping and Monitoring Program.

According to the most recent U.S. Department of Agriculture Agricultural Census in 2012, there were 1,011 farms in Yolo County and 460,824 acres of agricultural land, as shown in Table 4.2-4. Twenty years prior in

1992, there were 912 farms on 518,907 acres of land. The number of farms increased over the past two decades, while the amount of land increased in the late 1990s and decreased in the 2000s.

Table 4.2-4. Agricultural Land in Yolo County, 1992-2012

	1992	1997	2002	2007	2012
Number of farms	912	923	1,060	983	1,011
Land in farms (acres)	518,907	563,595	550,407	479,858	460,824
Median size of farm (acres)	Unavailable	60	70	60	54

Source: US Department of Agriculture Census of Agriculture1992, 1997, 2002, 2007, and 2012

According to the 2014 Yolo County Agricultural Report, the market value of products sold in Yolo County was approximately $801 million. As shown in Table 4.2-5, the agricultural production value adjusted to 2016 dollar value has increased since 1994, with approximately a 60 percent increase in value between 2009 and 2014 (Department of Agriculture and Weights and Means 2014). The County's top grossing commodity is processing tomatoes. As of the 2012 Census of Agriculture, Yolo County was ranked second in the country for acres of "tomatoes in the open." (USDA 2012) In 2014, more than 39,000 acres of processing tomatoes were harvested in Yolo County with a value of over $150 million. In addition to tomatoes, almonds, walnuts, rice, and wine grapes account for the top five commodities according to gross value in Yolo County. Alfalfa, organic production, sunflower seeds, cattle and calves, and wheat were all in the top 10 commodities in 2014 (Department of Agriculture and Weights and Means 2014).

Table 4.2-5. Agricultural Gross Receipts in Yolo County, 1994-2014

	1994	1999	2004	2009	2014
Total value of agricultural commodities produced	$478	$486	$426	$513	$809
Total value of processing tomatoes produced	$190	$190	$108	$142	$153

Source: 1994, 1999, 2004, 2009 and 2014 Yolo County Agricultural Crop Reports; Bureau of Labor Statistics CPI Inflation Calculator)
Note: Adjusted to 2016 dollars and rounded to the nearest million.

4.2.2.3 SOILS

A full discussion of soil types and characteristics is found in Section 4.7 of this EIR, "Geology, Soils, Minerals, and Paleontological Resources."

4.2.2.4 FOREST AND TIMBER RESOURCES

The City of Woodland has a significant tree canopy comprised of various species located on a combination of private property (typically as part of residential or commercial landscaping) or public property (typically as shade trees and landscaping on roadway rights of way or similar). While this urban tree canopy provides numerous beneficial uses, including aesthetics, shade, carbon sequestration, and community identity, it does not constitute a natural forest as defined by California Public Resources Code Section 12220(g): "'Forest land' is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that

allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

A small area in the Woodland Regional Park is mapped as Riparian Forest habitat. This resource is addressed in Section 4.4 of this EIR, "Biological Resources."

Similarly, the Planning Area contains no timberland, which is defined by California Public Resources Code Section 4526 as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees."

4.2.2.5 WILLIAMSON ACT LAND IN THE PLANNING AREA

The Williamson Act, explained further in Section 4.2.2, Regulatory Framework, enables the County to enter into contracts with private landowners for the purpose of restricting land to agricultural or related open space use in return for lower property tax assessments. As of 2009, 67 percent of the unincorporated area in Yolo County was protected under the Williamson Act (Yolo County 2009). In 2010, the State defunded the Williamson Act program, ending its payments to participating counties. In Yolo County, this amounted to a loss of $1.3 million annually. However, subsequent legislation (SB 863, followed by AB 1265) provided a partial solution for the cessation of State funding, wherein counties can voluntarily implement new contracts that are 10 percent shorter (typically 9 years instead of 10, or 18 years instead of 20) in return for a 10 percent reduction in the landowner's property tax relief. Yolo County has chosen to implement this new program.

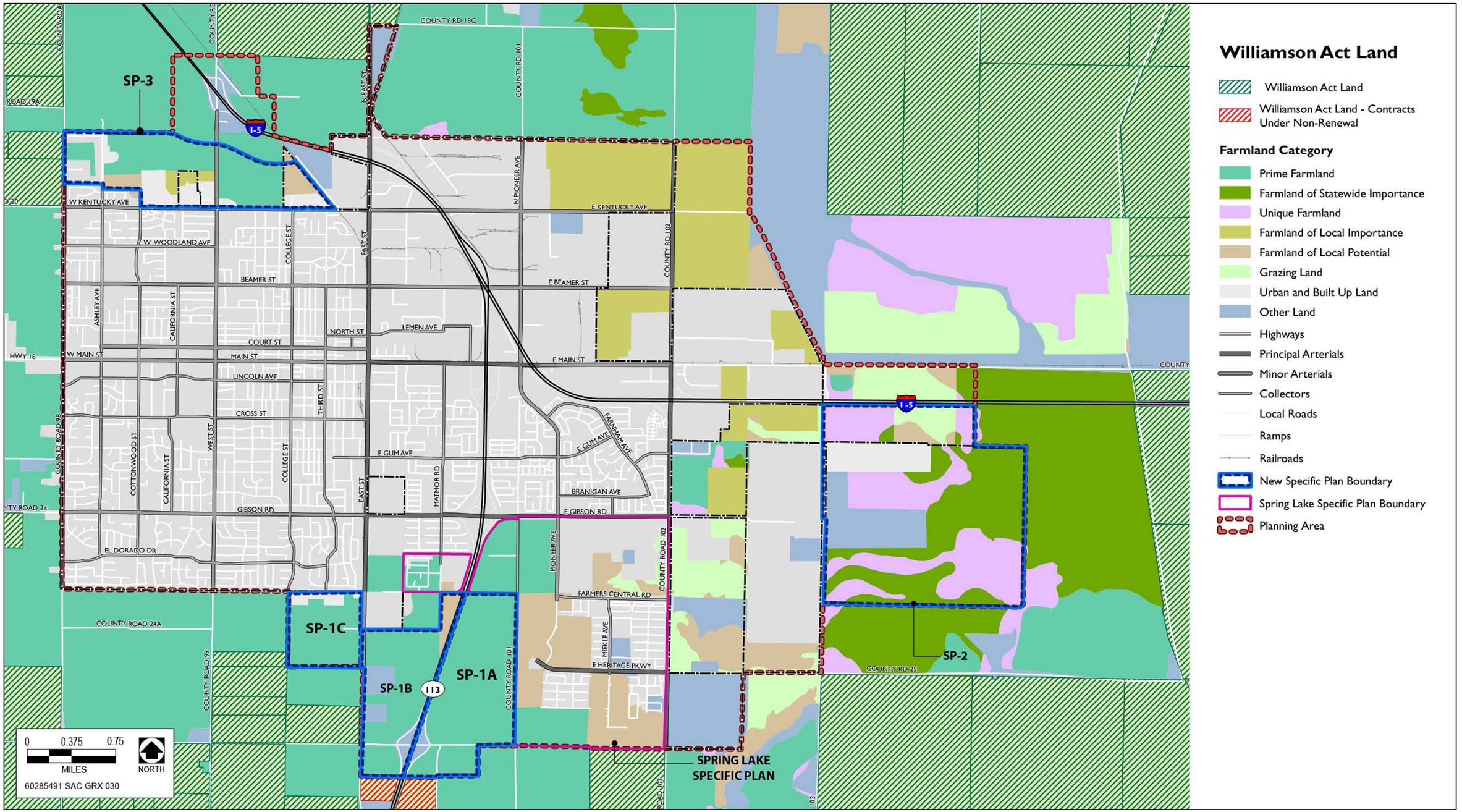
There are no Williamson Act properties within the Planning Area. As of Fiscal Year (FY) 2010/2011, there were Williamson Act contracts on two properties within SP-1A. As shown in Table 4.2-6, they totaled just under 16 acres. However, on January 1, 2016, both of the Williamson Act contracts expired and were not renewed.

As shown in Exhibit 4.2-2, as of FY 2010/2011 there are Williamson Act properties adjacent to the Planning Area. Based on communication with the Yolo County Assessor's Office, there have been no new Williamson Act contracts added in Yolo County since FY 2010/2011 (Yolo County Assessor's Office 2016). As of FY 2010/2011, there are eleven Williamson Act contracts adjacent to the Planning Area and several near the Planning Area. Two properties under Williamson Act contract are located along the northern edge of the Planning Area; two are west of SP-3; two are adjacent to SP-1C; three are adjacent to SP-1B; and one is adjacent to the Spring Lake Specific Plan area.

Table 4.2-6. Williamson Act Land in the Planning Area in FY 2010/2011

APN	Acres	Expiration Date
041 020 031	5.17	January 2016
041 020 030	10.43	January 2016
TOTAL	15.60	

Source: Land Conservation Act Maps, Department of Conservation 2011; County of Yolo GIS Public Viewer 2016; SACOG Mapping Center 2013.



Source: Department of Conservation 2011

Exhibit 4.2-2. **Williamson Act Contracts Within and Near the Planning Area**

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4.2.3 REGULATORY SETTING

4.2.3.1 FEDERAL

Federal Farmland Protection Policy Act, 7 U.S. Code Section 4201 and 7 Code of Federal Regulations 658

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) oversees the Farmland Protection Policy Act (FPPA) (7 U.S. Code [USC] Section 4201 et seq.; see also 7 Code of Federal Regulations [CFR] 658). The FPPA (a subtitle of the 1981 Farm Bill) is national legislation with the following stated purpose: "to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The FPPA applies to projects and programs that are sponsored or financed in whole or in part by the federal government and does not apply to private construction projects subject to federal permitting and licensing, projects planned and completed without assistance from a federal agency, federal projects related to national defense during a national emergency, or projects proposed on land already committed to urban development. The FPPA spells out requirements to ensure federal programs to the extent practical are compatible with state, local, and private programs and policies to protect farmland and calls for the use of the Land Evaluation and Site Assessment (LESA) system to aid in analysis. Because the City of Woodland may ultimately seek some federal funding for transportation or other capital improvements, the FPPA is considered in this document.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)

The USDA NRCS maps soils and farmland uses to provide comprehensive information necessary for understanding, managing, conserving, and sustaining the nation's limited soil resources. Working through existing programs, USDA joins with state, tribal, or local governments to acquire conservation easements or other interests from landowners.

The NRCS also classifies soils according to their suitability for agricultural use. The categories of the NRCS Soil Capability Classification System are as follows:

Class I	Soils have few limitations that restrict their use.
Class II	Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.
Class III	Soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.
Class IV	Soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.
Class V	Soils are not likely to erode but have other limitations, impractical to remove, that limit their use.
Class VI	Soils have severe limitations that make them generally unsuitable for cultivation.
Class VII	Soils have very severe limitations that make them unsuitable for cultivation.

Soil classifications in the city of Woodland are shown in Exhibit 4.2-3 (irrigated) and Exhibit 4.2-4 (non-irrigated).

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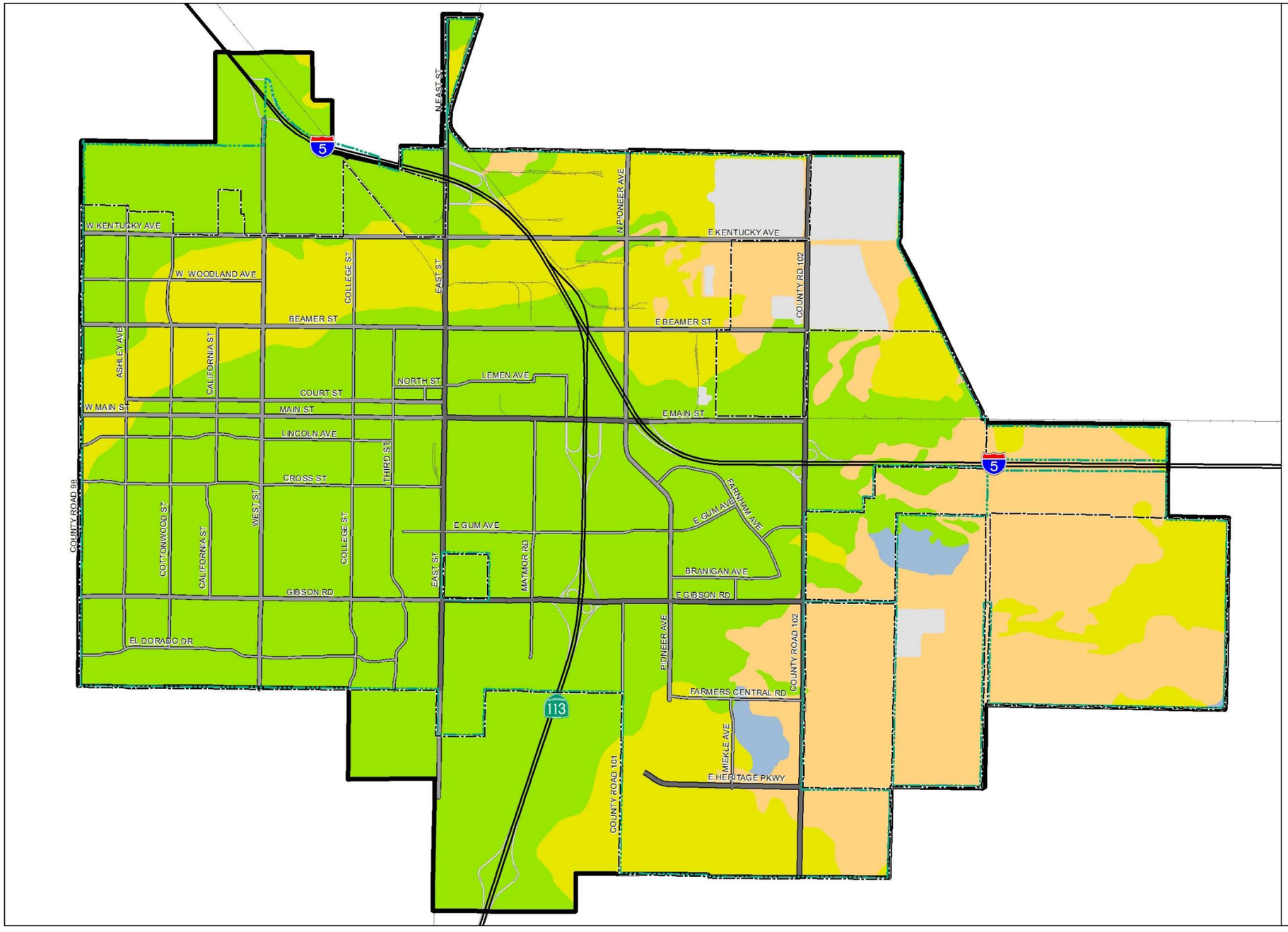

Source: USGS NRCS 2016

Exhibit 4.2.3. **Soil Capability Classification (Irrigated)**

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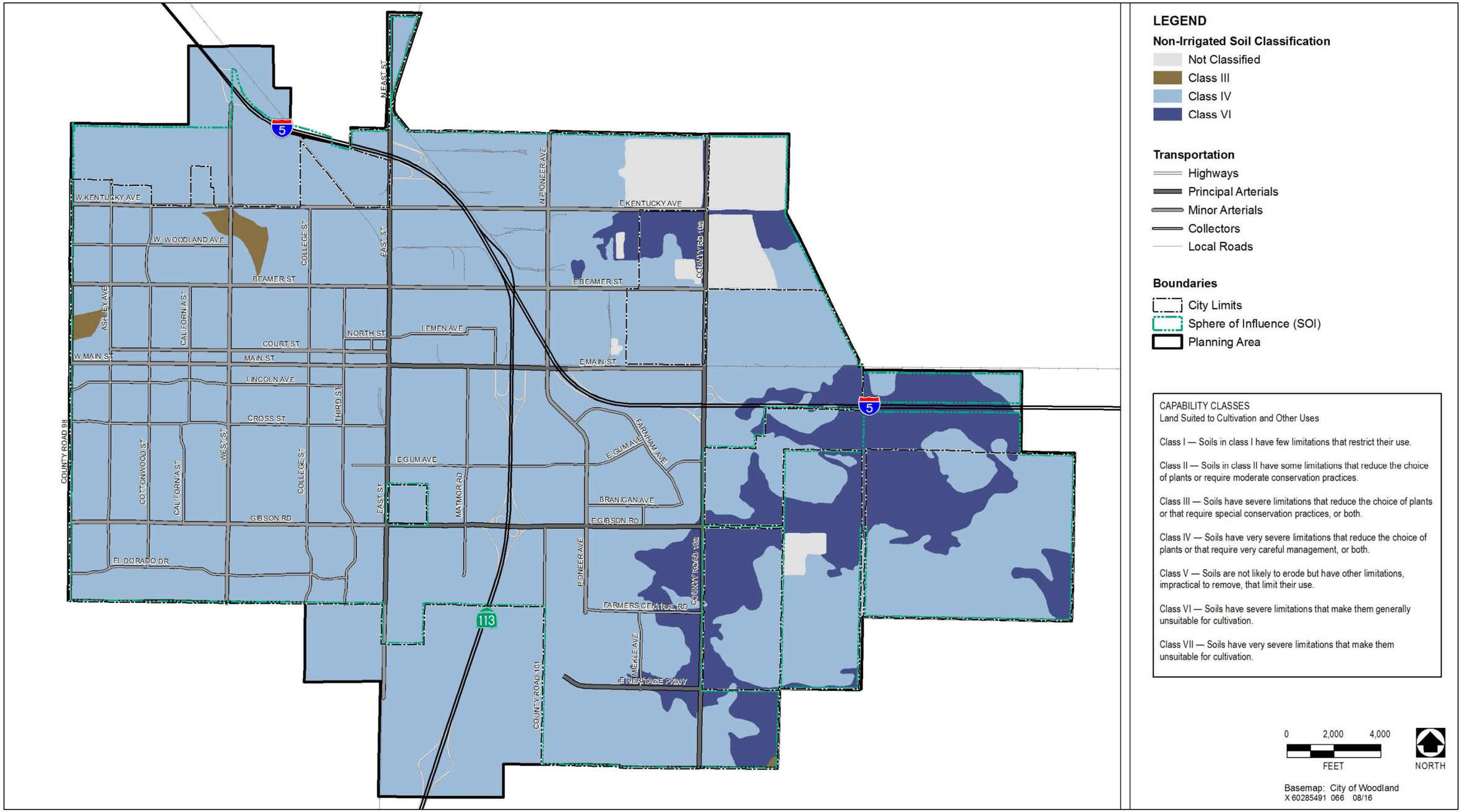

Source: USGS NRCS 2016

Exhibit 4.2.4. **Soil Capability Classification (Non-Irrigated)**

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4.2.3.2 STATE

California Farmland Conservancy Program, Public Resources Code Section 10200

The California Farmland Conservancy Program supports the voluntary granting of agricultural conservation easements from landowners to qualified nonprofit organizations, such as land trusts, as well as local governments. Conservation easements are voluntarily established restrictions that are permanently attached to the property, with the general purpose of retaining land in its natural, open-space, agricultural, or other condition while preventing uses that are deemed inconsistent with the specific conservation purposes set forth in the easements. Agricultural conservation easements define conservation purposes that are tied to keeping land available for continued use as farmland. Such farmlands remain in private ownership and the landowner retains all farmland use authority, but the farmland is restricted in its ability to be subdivided or used for nonagricultural purposes, such as urban uses..

Farmland Mapping and Monitoring Program

The California Department of Conservation administers the FMMP, under which it maintains an automated map and database system to record changes in the use of agricultural lands. Farmland under the FMMP is listed by category—Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. The farmland categories listed under the FMMP are described above in the Environmental Setting section.

Williamson Act and Farmland Security Zone Contracts, CA Government Code Section 51200

The California Land Conservation Act of 1965, commonly known as the Williamson Act, provides a tax incentive for the voluntary enrollment of agricultural and open space lands in contracts between local government and landowners. The contract restricts the land to agricultural and open space uses and compatible uses defined in State law and local ordinances. An agricultural preserve, which is established by a local agency, defines the boundary of an area within which a city or county will enter into contracts with landowners. Local agencies calculate the property tax assessment for lands under contract based on the actual use of the land rather than the potential land value assuming full development.

Williamson Act contracts are effective for periods of 10 years and longer, unless amended to nine years per AB 1265 (Chapter 90, Statutes of 2011). The contract is automatically renewed each year, maintaining a constant, 10-year contract, unless the landowner or local agency files to initiate non-renewal. Should that occur, the Williamson Act would terminate 10 years after the filing of a notice of non-renewal. Only a landowner can petition for a contract cancellation. Tentative contract cancellations can be approved only after a local government makes specific findings that the cancellation is consistent with the purposes of the Williamson Act and in the public interest and determines the cancellation fee to be paid by the landowner.

The State of California has the following policies regarding locating public improvements on lands in agricultural preserves and on lands under Williamson Act contracts (Government Code Section 51290–51295):

- Avoid locating federal, State, or local public improvements and improvements of public utilities, and the acquisition of land, in agricultural preserves.

- Locate public improvements that are in agricultural preserves on land other than land under Williamson Act contract.

- In considering the relative costs of parcels of land and the development of improvements, give consideration to the value to the public of land, particularly prime agricultural land, in an agricultural preserve.

In 1998, another option in the Williamson Act Program was established with the creation of Farmland Security Zone contracts. A Farmland Security Zone is an area created within an agricultural preserve by a board of supervisors upon the request of a landowner or group of landowners. Farmland Security Zone contracts offer landowners greater property tax reduction and have a minimum initial term of 20 years. Like Williamson Act contracts, Farmland Security Zone contracts renew annually unless a notice of non-renewal is filed. Potential cancellation of Williamson Act and Farmland Security Zone contracts would be addressed in subsequent project-level documents.

Under the Open Space Subvention Act of 1971, the State has provided annual subvention payments to counties for foregone property tax revenue due to Williamson Act contracts. Since 2010, pursuant to AB 1729 (Government Code Section 16148), the subvention payments were effectively eliminated (California Department of Conservation 2015).

In 2011, California passed Senate Bill (SB) 618 (Chapter 596, Statutes of 2011) authorizing property owners under Williamson Act or Farmland Security Zone contracts to rescind the contract and simultaneously enter into a solar-use easement. Properties must be determined eligible and have an approved management plan to participate. Solar-use easements require the land to be used for solar photovoltaic facilities for a term of 20 years.

4.2.3.3 REGIONAL

SACOG Rural-Urban Connections Strategy

SACOG's Rural–Urban Connections Strategy (RUCS) was launched in 2008 in response to criticism that SACOG was not sufficiently incorporating the region's rural areas into its planning. The focus of RUCS is to provide tools to support the economic vitality of rural areas, through sustainable transportation, land use, agriculture, and natural resources (SACOG 2016). For example, through RUCS, SACOG staff provides technical analysis capacity and data for local rural decision makers, including compiled crop reports, mapping of traffic volume, and loss of farmland projections.

4.2.3.4 YOLO COUNTY AGRICULTURAL COMMISSIONER

According to the California Food and Agriculture Code, the regulation of pesticide use in California occurs at the County level, thus the Yolo County Agricultural Commissioner regulates and enforces use of pesticides. Pesticide use is enforced through permitting the use of restricted and non-restricted pesticides; enforcing worker safety laws; inspecting pesticide equipment and applications; auditing records of growers, pest control operators, dealers and pest control advisors; and additional strategies (Yolo County Pesticide Use Enforcement Program Elements).

The Yolo County Agricultural Commissioner releases conditions covering the use of restricted materials, annually. The 2016 use conditions prohibit any restricted materials, except for registered pesticides that are least toxic to humans, fish and wildlife, from being used in close proximity to environmentally sensitive areas such as

residential areas and parks. The County Agricultural Commissioner has established minimum distances that must be maintained between environmentally sensitive areas and areas where restricted pesticides are applied. The minimum distances are 500 feet for aerial applications, 300 feet for air blast orchard applications, and 100 feet for ground applications (Yolo County Agricultural Commissioner 2016).

Yolo County Code

Agricultural Conservation Easement Program, Section 8-2.404 of Yolo County Code

Section 8-2.404 of the Yolo County Code establishes an Agricultural Conservation and Mitigation Program with the following purpose: "to implement the agricultural land conservation policies contained in the Yolo County General Plan with a program designed to permanently protect agricultural land located within the unincorporated area." To facilitate reliable conservation, the Code provides standards for conservation easements in the County.

The mitigation program established in this section of the Code requires projects that convert land from agricultural use to non-agricultural use to mitigate their impacts by conserving land. The mitigation ratio for projects that convert Prime Farmland is three acres of conserved farmland to one acre of converted land. The ratio for projects that convert other types of farmland is two acres to one. There are some exceptions to the mitigation program requirements, including for affordable housing projects and public uses. In addition, this section allows for Yolo County or other entities to establish a local farmland mitigation bank by which small projects of less than 20 acres must pay an in lieu fee rather than conserve farmland directly.

Pursuant to Section 8-2.404, Section 8-2.405 of the Yolo County Code establishes an In-Lieu Agricultural Mitigation Fee. The fees are collected by Yolo County and must be used for acquiring and maintaining agricultural conservation easements. Table 4.2-7 shows the cost of the in-lieu agricultural mitigation fee as of May 2016.

Table 4.2-7. In-Lieu Agricultural Mitigation Fee

Cost Component	Per Acre Fee
Easement Acquisition Cost	$8,400
Transaction Cost	$420
Monitoring Endowment	$880
Administrative Costs	$280
Contingency	$115
Total (rounded)	**$10,100**

Source: Yolo County Municipal Code Section 8-2.405.

Right to Farm, Chapter 6 Title 10 of Yolo County Code

Title 10, Environment, Chapter 6, Agriculture, of the Yolo County Code contains the County's Agricultural Policies, including regulations on the "Right to Farm," agricultural nuisances, organic certification, and nut theft. The Code establishes the "Right to Farm" as follows:

"No agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained on agricultural lands for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations in the same locality, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after the same has been in operation for more than three (3) years if it was not a nuisance at the time it began." (Section 10-6.102)

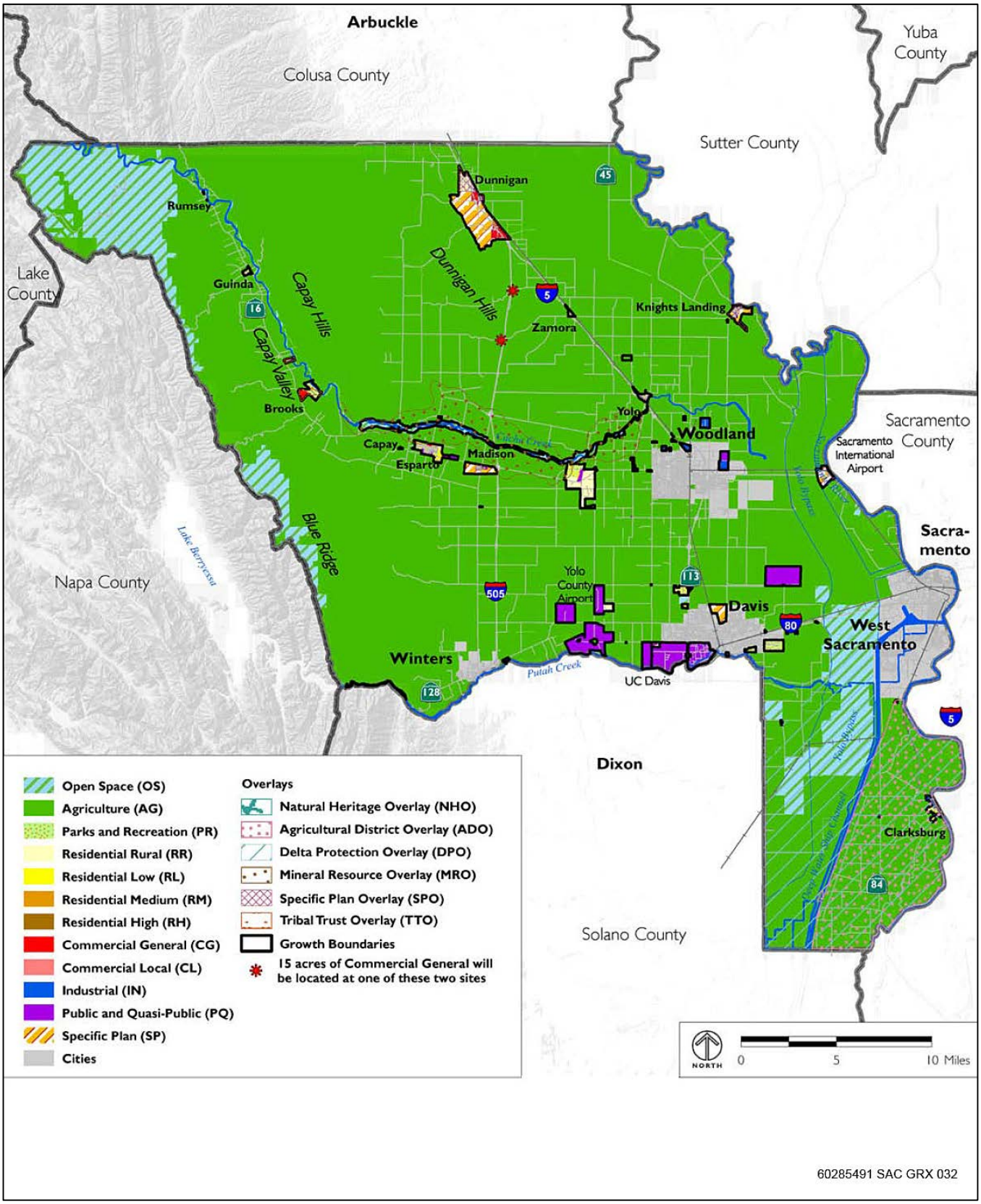
Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The Yolo County General Plan Agriculture and Economic Development Element is focused on maintaining and strengthening the agricultural industry in the county, as shown in the goals and policies listed below. It prohibits the division of farmland for non-agricultural reasons and adds to the existing farmland mitigation program (Action AG-A1). It also includes an Agricultural Transfer of Development Rights program by which property rights specific to agriculture may be transferred (Action AG-A25).

In addition, the Land Use and Community Character Element prioritizes agricultural preservation. The Yolo County Land Use Map designates most unincorporated land in the Woodland Planning Area as Agriculture, in addition to Industrial and Public and Quasi-Public, as shown in Exhibits 4.2-2 and 4.2-3. Unincorporated county land, whether within the Woodland ULL or not, is under the jurisdiction of Yolo County. Until the land is annexed to the City of Woodland, the Yolo County 2030 General Plan land use designations apply.

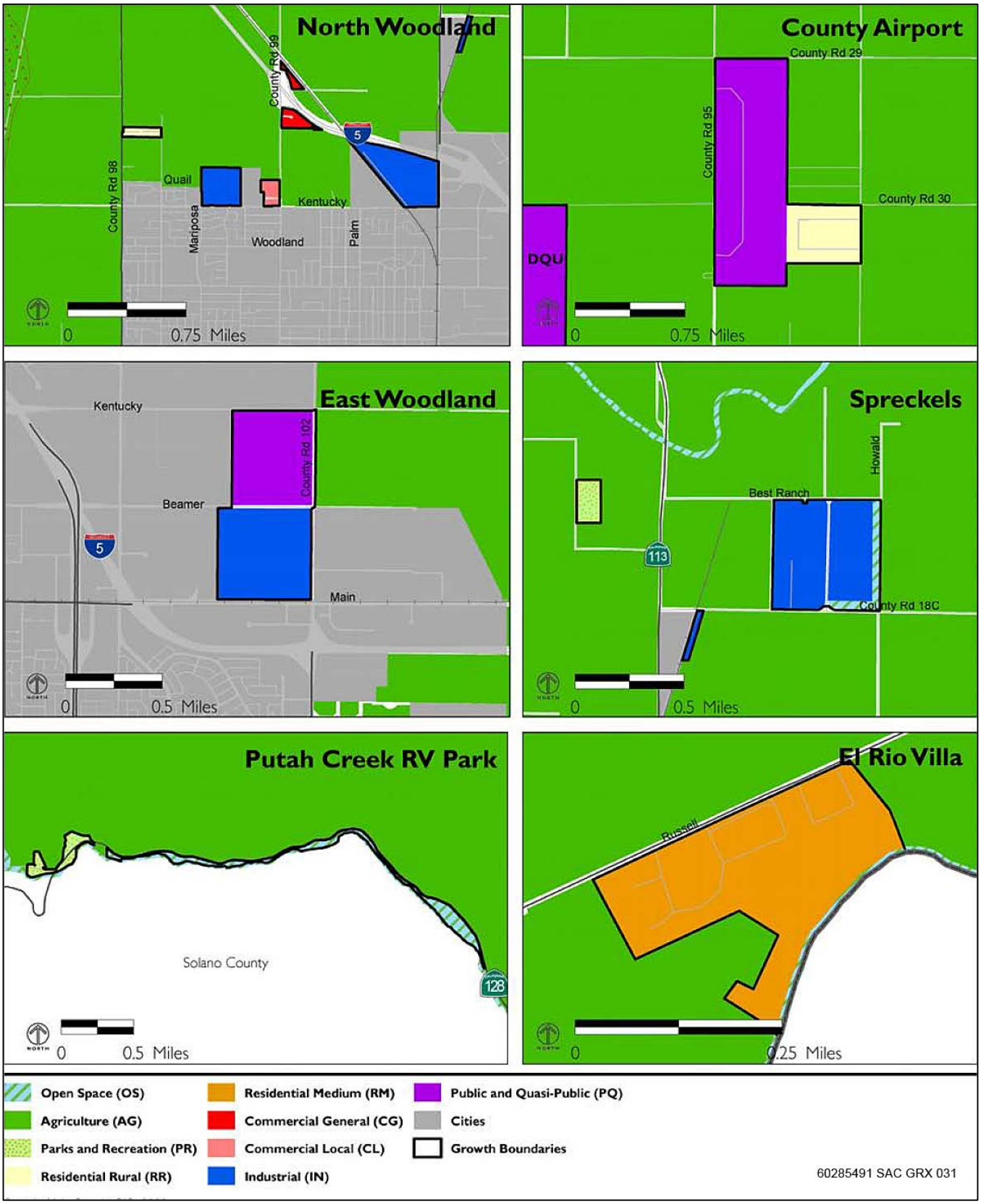
Policy LU-2.1 of the Yolo County 2030 General Plan requires development to have a setback of at least 300 feet from agricultural land where possible, to provide a buffer between agriculture and development.

- **Goal AG-1 Preservation of Agriculture.** Preserve and defend the agriculture as fundamental to the identity of Yolo County.
- **Policy AG-1.3** Prohibit the division of agricultural land for non-agricultural uses.
    - **Implementation Program AG-A1** Amend the Agricultural Mitigation Ordinance to direct agricultural mitigation to areas that promote open space connectivity and are in close proximity to existing growth boundaries for the communities and cities within the County. Responsibility: Planning and Public Works Department Timeframe: Ongoing
- **Goal LU-2 Agricultural Preservation.** Preserve farm land and expand opportunities for related business and infrastructure to ensure a strong local agricultural economy.
- **Policy LU-2.1** The intent of this policy is to protect existing farm operations from impacts related to the encroachment of urban uses. The expertise of the County Agricultural Commissioner shall be used in applying this policy. Urban development shall bear the primary burden of this policy. Ensure that



Source: Yolo County 2009

Exhibit 4.2-5. **Yolo County 2030 General Plan Land Use Map**



Source: Yolo County 2009

Exhibit 4.2-6. **Yolo County 2030 Land Use Map Inserts**

development will not have a significant adverse effect on the economic viability or constrain the lawful practices of adjoining or nearby agricultural operations, except for land within the Sphere of Influence (SOI) around a city of within the growth boundary of an unincorporated community. New urban (non-agricultural) development should be setback a minimum of 300 feet from adjoining agricultural land where possible, but special circumstances can be considered by the decision-making body. Except as noted below where no buffer is required, in no case shall the buffer be reduced to less than 100 feet. The buffer area shall generally be designated Open Space (OS), but may also be designated Public and Quasi Public (PQ) or Parks and Recreation (PR) based on applicable circumstances. Agricultural buffers are not required for planned urban growth elsewhere within a growth boundary because the agricultural urban interface will be temporary until full build-out occurs. (DEIR MM AG-4)

- **Policy LU-2.4** Vigorously conserve, preserve, and enhance the productivity of the agricultural lands in areas outside of adopted community growth boundaries and outside of city SOIs.

Yolo County LAFCO

Agricultural Conservation Policy

The Yolo County Local Agency Formation Commission (LAFCO) adopted in 2007 an Agricultural Conservation Policy defining six aspects of project proposals that should be considered by the LAFCO during the proposal review. The six considerations are:

1. Existing developed areas should be maintained and renewed.
2. Vacant land within developed areas should be developed before agricultural land is annexed for non-agricultural purposes.
3. Land substantially surrounded by existing agency boundaries should be annexed before other lands.
4. Urban development should be restricted in agricultural areas. For example, agricultural land should not be annexed for nonagricultural purposes when feasible alternatives exist.
5. The continued productivity and viability of agricultural land surrounding existing communities should be promoted, by preventing the premature conversion of agricultural land to other uses and, to the extent feasible, minimizing conflicts between agricultural and other land uses.
6. Development near agricultural land should not adversely affect the economic viability or constrain the lawful, responsible practices of the agricultural operations.

In addition, the policy encourages the protection of Prime Farmland during annexations and the adoption of local policies that result in "efficient, coterminous and logical growth patterns within their general plan and sphere of influence areas," and it establishes an agricultural mitigation program required for annexation of prime agricultural lands (Yolo County LAFCO Agricultural Conservation Policy). Relevant policy guidelines and standards from the Agricultural Conservation Policy are given below:

- "Where feasible, non-prime land should be annexed before prime land.
- "The Commission encourages local agencies to identify the loss of prime agricultural land as early in their processes as possible, and to work with applicants to initiate and execute plans to mitigate for that loss, in a

manner that is consistent with this Policy, as soon as feasible. Local agencies may also adopt their own agricultural conservation policies, consistent with this Policy, in order to better meet their own circumstances and processes.

- "Annexation of prime agricultural lands shall not be approved unless the following factors have been considered:

  - "There is insufficient marketable, viable, less prime land available in the subject jurisdiction for the proposed land use.

  - "The adoption and implementation of effective measures to mitigate the loss of agricultural lands, and to preserve adjoining lands for agricultural use to prevent their premature conversion to other uses. Such measures may include, but need not be limited to: the acquisition and dedication of farmland, development rights, open space and conservation easement to permanently protect adjacent and other agricultural lands within the county; participation in other development programs (such as transfer or purchase of development rights); payments to responsible, recognized government and non-profit organizations for such purposes; the establishment of open space and similar buffers to shield agricultural operations from the effects of development.

- "Less prime agricultural land generally should be annexed and developed before prime land is considered for boundary changes. The relative importance of different parcels of prime agricultural land shall be evaluated based upon the following (in a descending order of importance):

  - "Soil classification shall be given the utmost consideration, with Class I or II soil receiving the most significance, followed by the Storie Index Rating.

  - "Consideration shall also be given to the land's economic viability for continued agricultural use.

- "LAFCO will approve a change of organization which will result in the conversion of prime agricultural land in open space use to other uses only if the LAFCO finds that the proposal will lead to planned, orderly, and efficient development. The following factors shall be considered:

  - "Contiguity of the subject land to developed urban areas.

  - "Receipt of all other discretionary approvals for changes of boundary, such as prezoning, environmental review, and service plans as required by the Executive Officer before action by LAFCO. If not feasible before LAFCO acts, the proposal can be made contingent upon receipt of such discretionary approvals within not more than one (1) year following LAFCO action.

  - "Consistency with existing planning documents of the affected local agencies, including a service plan of the annexing agency or affected agencies.

  - "Likelihood that all or a substantial portion of the subject land will develop within a reasonable period of time for the project's size and complexity.

- "The availability of less prime land within the sphere of influence of the annexing agency that can be developed, and is planned and accessible, for the same or a substantially similar use.

- "The proposal's effect on the physical and economic viability of other agricultural operations. In making this determination, LAFCO will consider the following factors:

  – The agricultural significance of the subject and adjacent areas relative to other agricultural lands in the region.

  – The existing use of the subject and adjacent areas.

  – Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of adjacent or nearby agricultural land, or will be extended through or adjacent to, any other agricultural lands which lie between the project site and existing facilities.

  – Whether natural or man-made barriers serve to buffer adjacent or nearby agricultural land from the effects of the proposed development.

  – Provisions of the General Plan's open space and land use elements, applicable growth management policies, or other statutory provisions designed to protect agriculture. Such provisions may include, but not be limited to, designating land for agriculture or other open space uses on that jurisdiction's general plan, adopted growth management plan, or applicable specific plan; adopting an agricultural element to its general plan; and acquiring conservation easements on prime agricultural land to permanently protect the agricultural uses of the property.

  – The establishment of measures to ensure that the new property owners shall recognize the rights of adjacent property owners conducting agricultural operations and practices in compliance with the agricultural zone in accordance with the Right to Farm Ordinance adopted by the Yolo County Board of Supervisors."

► Agricultural Mitigation

- "Except as expressly noted [in subsection 8 and 9] below, annexation of prime agricultural lands shall not be approved unless one of the following mitigations has been instituted, at not less than a 1:1 replacement ratio:

  – The acquisition and dedication of farmland, development rights, and agricultural conservation easements to permanently protect adjacent and other agricultural lands within the County.

  – "The payment of fees that are sufficient to fully fund the acquisition and maintenance of such farmland, development rights or easements. The per acre fees shall be specified by a Fee Schedule or Methodology, which may be periodically updated at the discretion of the Commission (Refer to the Yolo County LAFCO 'Payment In Lieu Fee Methodology').

- "Any such measures must preserve prime agricultural property of reasonably equivalent quality and character that would otherwise be threatened, in the reasonably foreseeable future, by development and/or other urban uses.

- "The loss of fewer than twenty (20) acres of prime agricultural land generally shall be mitigated by the payment of in lieu fees as mitigation rather than the dedication of agricultural conservation easements. The loss of twenty (20) acres or more of prime agricultural land generally may be mitigated either with the payment of in lieu fees or the dedication of agricultural conservation easements. In all cases, the Commission reserves the right to review such mitigation on a case-by-case basis." (Yolo County LAFCO 2007).

Land Evaluation and Site Assessment

The Yolo County Land Evaluation and Site Assessment (LESA) Model is a planning tool to assist in considering the relative significance of agricultural land resources in land use decisions. In 1981, the federal Resources Conservation Service (NRCS) released LESA as a rating system of agricultural suitability of land. Yolo County's LESA is tailored to the conditions of the county, with factors including the U.S. Department of Agriculture (USDA) Land Capability Classification and Storie Index Rations for soils mapped within the Yolo County Soil Survey; a measure of irrigation availability based on the Department of Conservation's Important Farmland Map for Yolo County; parcel size; proximity to developed land; and zoning districts. LESA is used for analyzing the location of development projects, zoning, SOI determinations, and farmland protection programs.

Sphere of Influence (SOI)

The Yolo LAFCO establishes Woodland's SOI, defining the probable ultimate boundaries of the city and indicating what property the LAFCO will permit the city to annex. Woodland's SOI is shown in Exhibit 3.2-2 in Chapter 3 of this EIR, "Project Description."

4.2.3.5 LOCAL

City of Woodland 2002 General Plan

The City's general plans have long included the concept of an urban limit line as the outer constraint on growth. The 2002 General Plan contained two policies (1.A.2 and 1.A.12) directing Woodland to contain its growth within a specified boundary and to establish a permanent ULL. Program 1.1 accompanied these policies, providing further direction for implementation. The 2002 General Plan defined the ULL as a boundary "encompassing all land to be considered for urban development within the time frame of the General Plan (by 2020.)"

In June 2006, the voters adopted an initiative establishing the permanent ULL and amending the General Plan to reflect the change. Specifically, the initiative amended Policy 1.A.12 listed below.

In addition, the 2002 General Plan includes an Agriculture land use designation, however only land outside of the Planning Area is designated Agriculture. There is no land within the Planning Area designated Agriculture. Policy 1.I.2 of the 2002 General Plan requires the City to retain agricultural zoning in the City, unless the land is needed for urban development.

- **Policy 1.A.2** The City shall contain its urban growth within the Urban Limit Line as designated on the Planning Area Land Use Diagram.

- **Policy 1.A.12** The City establishes a permanent urban limit line around Woodland to permanently circumscribe development and preserve surrounding agricultural lands. The western and northern boundaries are the Urban Limit Line boundaries depicted on Figure 1-4. The boundaries to the south and east will be determined after further study.

- **Policy 1.I.2** The City shall retain agricultural zoning and shall encourage continued agricultural production on properties within the Urban Limit Line until the land is needed for urban development.

City of Woodland Municipal Code

Right to Farm, Chapter 14D of Woodland Municipal Code

The City's Right to Farm ordinance requires a right to farm deed restriction on any transfer of property within 500 feet of agricultural land or agricultural operations. The deed restriction provides notification to land owners in proximity of farmland that agricultural operations will not be considered a nuisance, unless the operations are conducted in a way inconsistent with accepted standards, per California Civil Codes Sections 3482.5 and 3482.6. The Right to Farm ordinance also establishes a procedure for settling disputes regarding agricultural operations.

Zoning Ordinance, Chapter 25 of Woodland Municipal Code

Woodland's Zoning Map includes two parcels zoned Agriculture (A-1). According to the Zoning Code, the purpose of this zone is "to preserve in agricultural use, land suited to eventual development in other uses until such time as streets, utilities and other community facilities may be provided or programmed so as to ensure the orderly and beneficial conversion of these lands to nonagricultural use, and to provide appropriate areas for certain predominately open uses of land which are not injurious to agricultural uses." (Sec. 25-5-01) One parcel is in the northwest portion of the city limits adjacent to land zoned Industrial and surrounded by county land on three sides. The other parcel borders the island of county land near the center of the Planning Area.

4.2.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.2.4.1 METHODOLOGY

Farmland resource acreages were assessed based on the California Department of Conservation's FMMP, a biennial report and mapping resource on the conversion of farmland and grazing land. Williamson Act contract lands were identified by the Department of Conservation Division of Land Resource Protection Conservation Program Support and correspondence with Yolo County Assessor's Office. Using these sources, all aspects of the Proposed Project, including changes to land use from the 2035 General Plan as well as goals, policies, actions, and implementation programs of both the 2035 General Plan and the 2035 CAP, were analyzed for impacts to agriculture. As noted throughout this EIR, this section examines potential effects associated with two General Plan Alternatives – the East Alternative and South Alternative – at an equal level of detail.

4.2.4.2 THRESHOLDS OF SIGNIFICANCE

Implementation of the Proposed Project would have a potentially significant adverse impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use.

4.2.4.3 ISSUES NOT DISCUSSED FURTHER

Conflict with Existing Zoning for Timberland, Loss or Conversion of Timberland, and other Changes that Could Result in Conversion of Forest Land to Non-Forest Use—As described in Section 4.2.2.4, there are no areas of timberland within the Planning Area. Therefore, implementation of the land use changes consistent with the Proposed Project would have no impact related to conflicts with existing zoning for timberland, and this impact is not addressed further in this EIR. The only potential forested area is one mapped as Riparian Forest habitat in the Woodland Regional Park, which is addressed in Section 4.4 of this EIR, "Biological Resources."

4.2.4.4 IMPACT ANALYSIS

IMPACT 4.2-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use. *Implementation of the Proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project anticipates development on farmland in new growth areas. The amount and type of farmland conversion is dependent on which new growth areas are anticipated for development. Exhibit 4.1-2 shows the location of different types of farmland in the Planning Area, and Table 4.2-8 shows the amount of each type of farmland in each new growth area. SP-1 and SP-3 consist primarily of land designated "prime" farmland. SP-2 includes a mix of land designated Farmland of Statewide Importance and Unique Farmland..

Table 4.2-8. Acres of Each Type of Farmland in SP-1, SP-2, and SP-3			
Type	SP-1	SP-2	SP-3
Prime Farmland	134.5	0.0	213.29
Farmland of Statewide Importance	0.0	374.9	0.0
Unique Farmland	0.0	393.5	0.0
Total Important Farmland	*134.5*	*768.4*	*213.29*
Other Farmland	0.0	66.43	59.13
Sources: Farmland Mapping and Monitoring Program 2012; City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2014; Dyett & Bhatia 2013			

Table 4.2-9 shows the amount of each type of farmland within the Flood Study Area (FSA). Tables 4.2-9 and 4.2-10 assume that FSA farmland will be converted to non-agricultural uses. Although residential and commercial development is not allowed in the FSA, the City's eventual comprehensive flood solution may include flood infrastructure that converts the farmland and reduces agricultural use in this area. However, some of the land in the FSA may ultimately be required for flood-related infrastructure and may remain as farmland in perpetuity. Therefore, this analysis conservatively assumes that all of the farmland in the FSA would eventually be lost to flood infrastructure uses.

Table 4.2-9. Farmland by Type within Flood Study Area	
Type	Acres
Prime Farmland	189.1
Farmland of Statewide Importance	15.1
Unique Farmland	8.6
Total Important Farmland	*212.9*
Sources: Farmland Mapping and Monitoring Program 2012; City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2014; Dyett & Bhatia 2013	

The 2035 CAP plans for an increase in renewable energy systems, such as solar arrays and wind energy systems. These energy systems could be located on farmland, thus resulting in the conversion of farmland; however, the 2035 CAP includes actions that protect farmland from development of solar energy systems.

a. East Alternative–In the East Alternative, 48.7 percent of new housing units and 23.9 percent of new non-residential square footage will occur in new growth areas, including SP-1A, portions of SP-1B, portions of SP-2 (as shown in Exhibit 4.2-7), and SP-3, as explained in Chapter 3 of this EIR, "Project Description."

   Table 4.2-10 shows the Planning Area's existing inventory of Prime, Important, and Unique Farmland, the projected losses resulting from buildout of the East Alternative, and the percentage change by type of farmland. Overall, implementation of the East Alternative would result in the conversion to urban uses of 1,561 acres (or 66 percent) of the existing Prime, Important, or Unique Farmland within the Planning Area comprised of 1,339 acres classified as Prime Farmland38 acres classified asFarmland of Statewide Importance , and 184 acres classified as Unique Farmland. The remaining farmland in the Planning Area would be in portions of SP-1B (north of the highway

interchange), SP-1C, and portions of SP-2 (approximately 75 percent of the Specific Plan area, which would not be developed in the planning horizon).

Table 4.2-10. Important Farmland Change in the Planning Area – East Alternative

Type	Existing Acres	Change (Acres Converted)	Remaining Farmland Acres at General Plan Horizon Year (2035)	Percent Change By Type
Prime Farmland	1,544.6	1,338.7	205.9	87%
Farmland of Statewide Importance	401.1	37.7	363.4	9%
Unique Farmland	434.9	184.3	250.6	42%
Total Important Farmland	*2,380.6*	*1,560.8*	*819.8*	*66%*

Sources: Farmland Mapping and Monitoring Program 2012; City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2014; Dyett & Bhatia 2013

Table 4.2-10 is based on the assumption that for the East Alternative, all farmland within the Planning Areas except for farmland in SP-1B (north of the highway interchange), SP-1C, and portions of SP-2 (approximately 75 percent) would be converted, including land designated FSA.

b. South Alternative–In the South Alternative, 35 percent of new housing units and 20.5 percent of new non-residential square footage will occur in new growth areas, including in SP-1A, SP-1B, SP-1C, and SP-3, as described in Chapter 3 of this EIR, "Project Description."

Table 4.2-11 shows the Planning Area's existing inventory of Prime, Important, and Unique Farmland, the projected losses resulting from buildout of the South Alternative, and the percentage change by type of farmland. Overall, implementation of the South Alternative would result in the conversion to urban uses of 1,612 acres (or 68 percent) of the existing Prime, Important, or Unique Farmland within the Planning Area comprised of 1,545 acres classified as Prime Farmland, 26 acres classified as Farmland of Statewide Importance, and 41 acres classified as Unique Farmland. The remaining farmland in the Planning Area would be in SP-2.

Table 4.2-11. Important Farmland Change in the Planning Area – South Alternative

Type	Existing Acres	Change from Farmland	Remaining Farmland Acres at General Plan Horizon Year (2035)	Percent Change By Type
Prime Farmland	1,544.6	1,544.6	0.0	100%
Farmland of Statewide Importance	401.1	26.2	374.9	7%
Unique Farmland	434.9	41.4	393.5	10%
Total Important Farmland	*2,380.6*	*1,612.3*	*768.4*	*68%*

Sources: Farmland Mapping and Monitoring Program 2012; City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2014; Dyett & Bhatia 2013

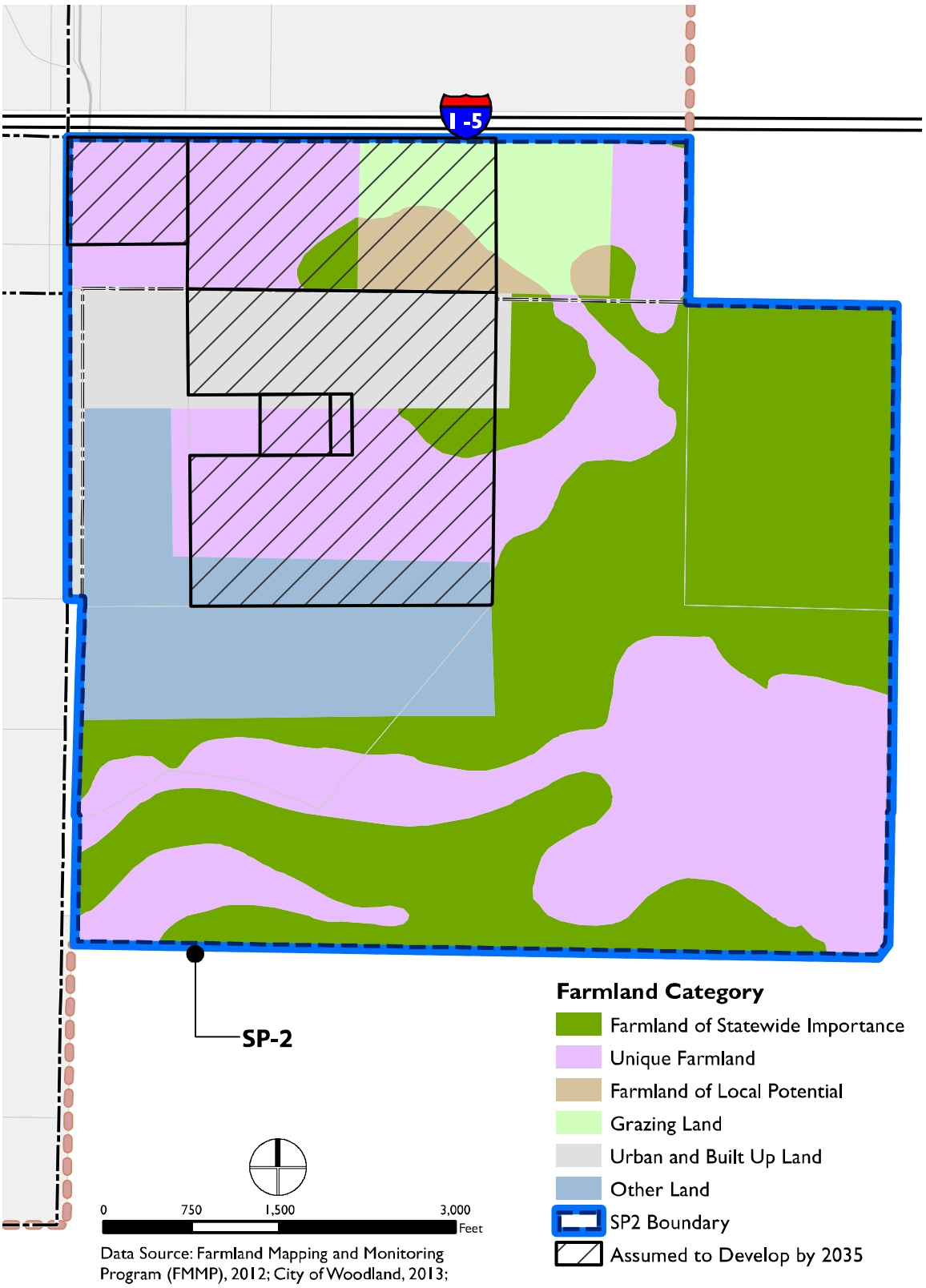


Exhibit 4.2-7 **Farmland in SP-2 that is Expected to Develop**

Table 4.2-11 assumes that for the South Alternative, all farmland within the Planning Area except for farmland in SP-2 would be converted to non-agricultural uses, including land designated FSA

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County LAFCO Agricultural Conservation Policy requires LAFCO to consider the impacts on agricultural land when analyzing project proposals, including annexations of land. In addition, the Policy prioritizes the protection of Prime Farmland and requires mitigation of prime farmland conversion at a 1:1 ratio.

Proposed Project

The following goals, policies, and actions from the 2035 General Plan and 2035 CAP reduce the impact of farmland conversion.

2035 General Plan

- **Policy 2.A.1 Urban Limit Line.** A permanent urban limit line (ULL) is established around Woodland to permanently circumscribe urban development and comply with provisions for agricultural lands. Public services and facilities shall not extend beyond the permanent ULL. The City shall take such administrative steps as may be required to implement Policy 2.A.1. The City shall also identify funding for implementing a permanent ULL, including mitigation for developing on agricultural land. The City shall continually reevaluate residential land use densities, housing policies, and zoning to determine the potential for increased residential densities for both infill sites and undeveloped land within the ULL. The City shall continually review existing non-residential zoning to determine the potential for conversion to higher density residential uses within the permanent ULL. The City will encourage and support appropriately located agricultural and wildlife conservation easements to support implementation of the permanent ULL.

This policy enacts Woodland Measure A (Ballot of June 2006), Urban Limit Line, and can only be modified by the voters.

- **Policy 2.A.3 Agricultural Mitigation.** For impacts to agriculture within the ULL, require one acre to be permanently conserved for every acre converted to urban development.

- **Goal 7.C Preserve Farmland.** Promote preservation and economic viability of agricultural land surrounding the ULL.

- **Policy 7.C.1 Annexation.** Annex land to the City only as it is needed for development of designated growth areas. Annexation of agricultural land will not be permitted unless urban development consistent with the General Plan has been approved.

In addition, a number of policies are intended to encourage infill development and to slow, if not prevent, the conversion of agricultural land, as follows:

- **Policy 2.A.6 Infill Development.** Encourage infill development, adaptive reuse, and the restoration of buildings in existing urbanized areas to enhance community character, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, optimize city investment in infrastructure, support increased transit use, and enhance economic vitality.

- **Policy 2.B.1 Priority to Existing Specific Plan Areas.** Amenities, services, and infrastructure in all existing Specific Plan areas must be substantially complete before approving a new Specific Plan.

- **Policy 2.C.1 Compact Form.** Promote compact development patterns, mixed use and higher-development intensities that conserve land resources, reduce vehicle trips, improve air quality, and facilitate walking, bicycling, and transit use. However, urban development and increased density, as supported by the City in this General Plan, may result in some less desirable impacts, such as increased traffic, greater noise, reduced private residential open space, and reduced privacy than in lower density areas. Where growth and increased density is allowed pursuant to this General Plan, these issues are acknowledged and accepted.

    - **Policy 4.C.2 Infill Development**. Incentivize infill development, particularly in areas that provide the City with higher proportions of tax revenue (see Figure 4-3), that makes use of existing infrastructure and services.

        a. East Alternative-Policy 2.L.1 as it is written specifically for the East Alternative is provided below.

    - **Policy 2.L.1 Phasing.** Ensure that development of new Specific Plan areas occurs in an orderly sequence according to the phasing and triggers in [2035 General Plan] Table 4.2-12 below:

Table 4.2-12. Phasing by New Growth Area (East Alternative)

Development Area	Approximate Phasing	Restrictions
SP-1A	2016–2025	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
SP-1B	2036 or beyond	Not permitted prior to 2035 without a comprehensive General Plan Update and accompanying new EIR
SP-1C	2036 or beyond	Not permitted prior to 2035 without a comprehensive General Plan Update and accompanying new EIR
Southern Gateway *(located within SP-1A and SP-1B)*	Ongoing	None
SP-2	Unknown	Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.
SP-3A	Unknown	Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.
SP-3B	Ongoing	None

b. South Alternative- Policy 2.L.1 as it is written specifically for the South Alternative is provided below.

- **Policy 2.L.1 Phasing.** Ensure that development of new Specific Plan areas occurs in an orderly sequence according to the phasing in Table 4.2-13 below:

Table 4.2-13. Phasing by New Growth Area (South Alternative)

Development Area	Approximate Phasing	Restrictions
SP-1A	2016 - 2025	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
SP-1B	2026-2035	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
SP-1C	2026-2035	Should not compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing
Southern Gateway *(located within SP-1 A and SP-1B)*	Ongoing	
SP-2	2036 or beyond	Not permitted prior to 2035 without a comprehensive General Plan Update and accompanying new EIR
SP-3A	Unknown	Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.
SP-3B	Ongoing	None

2035 CAP

- **Objective 2 Strategy E-6, Action.** Balance open-space maintenance with solar opportunities by promoting the installation of solar systems on existing development or in dual-use applications, such as parking lots, building roofs, and stormwater detention basins.

- **Objective 2 Strategy UF-5, Action.** Prevent the loss of agricultural land and other open space to development by maintaining Woodland's Urban Limit Line.

- **Objective 2 Strategy UF-5, Action.** Preserve open space from development of solar farms by focusing the installation of solar arrays on rooftops, developed land, and where solar would be compatible with an existing or intended use (e.g., stormwater detention basins).

- **Objective 2 Strategy UF-5, Action.** Support legislative efforts to provide credit and incentives for agricultural land preservation.

Summary of Impact Analysis

Implementation of the 2035 General Plan and 2035 CAP policies, as well as the Yolo County Agricultural Conservation Policy, will reduce the impacts on farmland conversion.

The ULL was adopted for the purpose of permanently circumscribing development and preserving surrounding agricultural lands. This action of the voters identified those lands intended to be converted to urban uses over time in the form of an urban limit line and permanently protected lands outside of that boundary. Ballot initiatives are not subject to environmental impact review under CEQA and therefore the 2006 action by the voters did not include an assessment of the impacts resulting from the urban limit line. As enacted by the voters Policy 2.A.1 prohibits public services and facilities beyond Woodland's ULL. In addition, Policy 2.A.3 requires agricultural mitigation of farmland within the ULL at a rate of one acre of permanently conserved farmland for every acre converted to urban development or non-agricultural uses. The policy does not specify conservation of the same type of farmland, therefore loss of Prime Farmland could be mitigated with the conservation of Farmland of Local Importance. Goal 7.6 prioritizes the preservation of agricultural land, and Policy 7.C.1 requires the City to minimize the amount of annexed land.

In addition, several policies prioritize infill and compact development. The focus of the Proposed Project on infill and compact development in strategic new growth areas within the ULL aims to minimize the magnitude of farmland conversion and to help protect large tracts of farmland in agricultural areas.

Actions under Objective 2 Strategy E-6 and Objective 2 Strategy UF-5 in the 2035 CAP require the City to promote the installation of solar systems on existing development, rather than on agricultural land or open space. Additional policies require the maintenance of the ULL and support for legislative efforts that incentivize agricultural land preservation.

a. The East Alternative anticipates growth that will result in the loss of 1,560.8 acres of Prime, Important, or Unique Farmland. The impact is **significant**.

b. The South Alternative anticipates growth that will result in the loss of 1,612.3 acres of Prime, Important, or Unique Farmland. The impact is **significant**.

Mitigation Measures

Mitigation Measure 4.2-1 – The 2035 General Plan should be amended to include the following modified policy:

- **Policy 2.A.3 Agricultural Mitigation.** For impacts to agriculture within the ULL, require one acre to be permanently conserved for every acre converted to urban development. <u>The farmland being conserved must be of the same Farmland Mapping and Monitoring Program type (Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance) as the farmland that is being converted, or of a type of higher quality, and the conserved farmland should be located as close to the Woodland ULL as possible.</u>

Mitigation Measure 4.2-1 ensures that for every acre of a certain type of farmland that is converted as a result of the Proposed Project, an acre of that same type (or better) of farmland will be conserved. However, the loss of farmland cannot be completely mitigated.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative– The impact is considered **significant and unavoidable**.

IMPACT 4.2-2 Conflict with Existing Zoning for Agricultural Use, or a Williamson Act Contract. *There are parcels currently zoned for agricultural use in the Planning Area; however, the 2002 General Plan specifies that the City may allow development on land zoned Agriculture when it is needed for urban development. There are properties adjacent to new growth areas under Williamson Act contracts, but policies in the 2035 General Plan reduce potential impacts on these properties. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 General Plan does not include a land use designation for Agriculture. Similarly, the 2002 Woodland General Plan does not designate any land within the Planning Area for Agriculture. However, there are two parcels in the Planning Area that are zoned Agriculture in the Woodland Zoning Code.

In addition, there is land within the Planning Area designated by the Yolo County 2030 General Plan for Agriculture, as shown in Exhibits 4.2-1 and 4.2-2.

There is no land within the Planning Area under active Williamson Act contracts. However, as of FY 2010/2011, there are eleven properties under Williamson Act contracts adjacent to the Planning Area and several properties near the Planning Area. As shown in Exhibit 4.2-2, two properties are located north of the Planning Area adjacent to land that is designated Flood Study Area; two are located west of SP-3 and adjacent to land that is already developed; and one is south of the Spring Lake Specific Plan. None of these properties are expected to be adversely affected by the Proposed Project. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–There are three properties under Williamson Act contracts that are adjacent to SP-1B that may be affected by anticipated development.

b. South Alternative–There are five properties under Williamson Act contracts that are adjacent to SP-1 that may be affected by anticipated development.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The 2002 General Plan Policy 1.I.2 requires the City to retain agricultural zoning and encourage continued agricultural production on properties within the ULL until the land is needed for urban development. The Proposed Project has similar policies.

Proposed Project

The following goals and policies from the 2035 General Plan reduce the impact of farmland conversion and conflicts with existing plans. There are no CAP objectives or strategies that relate to this impact.

- **Policy 2.B.6 Other Development in Unincorporated Areas within the ULL.** Prior to the provision of City services to unincorporated areas within the ULL, require those unincorporated properties to be annexed into

the City, or that a conditional service agreement be executed agreeing to annex when deemed appropriate by the City.

- **Policy 7.C.3 Surrounding Agricultural Land.** Encourage Yolo County to conserve agricultural soils, preserve agricultural land surrounding the ULL, and promote the continuation of existing agricultural operations.

- **Policy 7.C.4 Compatibility.** Ensure that urban development within the ULL does not affect the economic viability of adjacent agricultural practices located outside the ULL.

- **Policy 8.G.10 Right-to-Farm Ordinance**. Support the City and County's right-to-farm ordinances, especially as they relate to noise emanating from agricultural operations adjacent to urban uses, by requiring notification of the potential impacts to adjacent property owners, purchasers, residents, and users.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The proposed 2035 General Plan does not designate land as Agricultural in the Planning Area, and there are no active Williamson Act contracts in the Planning Area. There are properties adjacent to and near the Planning Area under Williamson Act contracts. 2035 General Plan Policies 7.C.3, 7.C.4, and 8.G.10 reduce the impact of development within the ULL on surrounding farmland.

The 2035 General Plan proposes land use designations for land currently within the unincorporated area of the county that would conflict with the land use designations in the Yolo County 2030 General Plan. However, the City's proposed land use changes would have no effect unless annexation occurred in which case the City would then have jurisdiction. As development occurs and annexations are approved , there is the potential for conflict to occur at the expanding urban edge. Both the City and the County have "Right to Farm" ordinances that address this concern, and moreover, the ULL establishes a permanent urban boundary beyond which City development cannot occur without a subsequent vote of City residents.

a. East Alternative—The impact is considered less than **significant**.

b. South Alternative—The impact is considered less than **significant**.

Mitigation Measures

No mitigation is required.

The 2035 General Plan is an expression of the City of Woodland's vision for future physical growth within the Planning Area and consists of a series of policies and implementation programs necessary for achieving that vision. The City's plan for land uses within the unincorporated portion of the Planning Area differs from that of Yolo County, which could result in temporary impacts at the urban edge over time.. However, the 2035 General

Plan includes policies regarding annexation to Woodland for properties located outside city limits, which would ultimately result in rectifying the discrepancy between County and City land use plans.

IMPACT 4.2-3 Involve Other Changes in the Existing Environment that, Due to Their Location or Nature, Could Result in Conversion of Farmland, to Non-Agricultural Use. *Policies in the 2035 General Plan emphasize the importance of agriculture to Woodland and support the viability of farming operations; however, implementation of the Proposed Project would result in the conversion of farmland to non-agricultural use. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Urban development can result in direct and indirect impacts on agricultural. This impact focuses on the indirect effects. Urban development has the potential to divide large tracts of agricultural land leaving smaller, less viable tracts of land for farming. Urban development can result in conflicts at the urban edge with adjacent agricultural practices, and lead to restrictions on the use of agricultural chemicals, complaints regarding noise, dust and odors, trespassing, and vandalism. The Yolo County Agricultural Commissioner requires a buffer between pesticide application and environmentally sensitive areas, including residential developments, as explained in the Regulatory Settings. The farmer has responsibility for providing this buffer, and therefore the buffer potentially limits the amount of land that can be used for agriculture.

These conflicts may increase costs of agricultural operations and, together with other factors, encourage the conversion of additional farmland to urban uses. In addition, urban growth may increasingly compete with agriculture for the use of water resources, and may conflict with farm-to-market use and/or operational use of area roadways.

According to the Specific Plan land use designation, capital-intensive agricultural uses are discouraged so as not to preclude later planned urban uses. Therefore, agricultural land in Specific Plan areas that is not identified for growth by 2035 may experience an adverse effect if annexed to the City. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is discussed herein.

a. East Alternative–The East Alternative does not anticipate development in the northern portion of SP-1B, in SP-1C, or in 75 percent of SP-2. However, even if these areas are not annexed to the City by 2035, agriculture in these areas may be affected, because capital-intensive agriculture is discouraged in all Specific Plan areas.

b. South Alternative–The South Alternative not anticipate development in SP-2. However, even if SP-2 is not annexed to the City before 2035, agriculture in this area may be affected, because capital-intensive agriculture is discouraged in all Specific Plan areas.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County and City of Woodland Right to Farm ordinances, in addition to the Yolo County agricultural buffer area (Yolo County 2030 General Plan Policy LU-2.1) help reduce conflict at the urban edge where development is adjacent or in the proximity of agriculture.

Proposed Project

The 2035 General Plan and 2035 CAP includes the following policies and goals to reduce indirect impact on agricultural land.

2035 General Plan

See Policies 2.A.1, 2.A.3, 2.A.6, 2.B.1, 2.C.1, 2.M.3, 4.C.2, and 7.C.1and Goal 7.C listed above in the discussion of Impact 4.2-1.

In addition, the following policies are relevant:

- **Policy 2.D.2 Food and Agriculture Industry Cluster.** Develop Woodland into a premier food and agriculture industry cluster by providing appropriate infrastructure and supporting research and innovation.
- **Policy 4.C.9. Importance of Agriculture.** Recognize the importance of agriculture-related business and industries to the City and region, and support the continuation and development of agriculture and agriculture-related enterprises in and around Woodland by:
    - Accommodating agriculture-related industries in Industrial and Business Park districts;
    - Promoting locally-grown and produced agricultural goods and value-added foods and beverages, and the image of Woodland and Yolo County as an agricultural region; and coordinating with the County on agriculture-supporting policies and programs, including ag-technology accelerators, agricultural processing facilities, and flood control and water management.

    Note: See also goals and policies in the Public Facilities and Services Element.
- **Policy 4.G.2 Strategic Partnerships for Biotech and Seed Industry.** Foster partnerships with educational institutions, private sector entities, and public agencies—such as UC Davis and Next Economy—to support biotech, agricultural, and seed industries in Woodland; ensure that adequate land, infrastructure, and amenities are available in Woodland to attract potential businesses associated with these industries.
- **Policy 6.C.1 Farmers Markets.** Support farmers markets in Woodland, and promote a comprehensive listing of all farmers markets in Woodland. Support local agencies and community groups in working with farmers markets to accept WIC and EBT by providing technical assistance, such as providing an exchange or voucher system.

- **Policy 7.C.2 Agricultural Uses Within the ULL.** Where agriculture exists within the ULL, allow uses to continue until urban development (consistent with the General Plan) occurs on these properties.

- **Policy 7.C.3 Surrounding Agricultural Land.** Encourage Yolo County to conserve agricultural soils, preserve agricultural land surrounding the ULL, and promote the continuation of existing agricultural operations.

- **Policy 7.C.4 Compatibility.** Ensure that urban development within the ULL does not affect the economic viability of adjacent agricultural practices located outside the ULL.

- **Policy 8.G.10 Right-to-Farm Ordinance.** Support the City's and County's right-to-farm ordinances, especially as they relate to noise emanating from agricultural operations adjacent to urban uses, by requiring notification of the potential impacts to adjacent property owners, purchasers, residents, and users.

2035 CAP

- **Objective 2 Strategy T/LU-4** Partner with Yolo Farm to Fork, farmers markets, and other local agencies and organizations to promote connections with local agricultural producers and the sale and consumption of locally produced foods.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

In addition to the policies that lessen direct impacts on farmland discussed in Impact 4.2-1, the Proposed Project includes policies and goals to support agriculture in Woodland and minimize conflicts between urban and agricultural uses. 2035 General Plan Policy 7.C.4 requires the City to ensure that urban development within the ULL does not affect the economic viability of adjacent farms outside of the ULL. 2035 General Plan Policies 2.D.2, 6.C.1, and 4.G.2 help strengthen specific segments of the agricultural industry, similar to the 2035 CAP policy listed above. Policy 4.C.9 explicitly supports the continuation and development of the agricultural industry in Woodland, and Policy 8.G.10 requires the City's support for both the City's and the County's right to farm ordinances. Policy 7.C.2 helps protect existing agriculture within the ULL, and Policy 7.C.3 requires Woodland to support Yolo County's agricultural conservation efforts.

Although policies in the Proposed Project will reduce the impact that development and other changes to the existing environment would have on existing agricultural uses and support the continued viability of the agricultural industry in Woodland, it cannot be guaranteed that farmland would not be indirectly impacted by development envisioned in the Plan.

    a. East Alternative–The impact is **significant.**

    b. South Alternative–The impact is **significant.**

Mitigation Measures

The following mitigation measure is added to establish an agricultural buffer required by the City, similar to the buffer required by Yolo County.

Mitigation Measure 4.2-3 – The 2035 General Plan should be amended to include the following new policy:

- **Policy 7.C.5 Agricultural Buffer.** Require new development that occurs at the edge of the ULL to be set back a minimum of 300 feet from adjacent agricultural land where possible. Exceptions and alternative means of providing agricultural buffers may be considered by the Planning Commission on a case by case basis for parcels where development potential would be precluded or severely limited as a result of the required buffer size. The buffer shall be landscaped/vegetated and may include public right of way.

With the addition of Mitigation Measure 4.2-3, the City has presented all feasible mitigation in the form of policies and programs in the Proposed Project. There is no additional feasible mitigation available.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative–The impact is considered **significant and unavoidable**.

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4.3 AIR QUALITY

4.3.1 INTRODUCTION

This section describes the existing local and regional air quality conditions, summarizes applicable regulations, and analyzes the potential air quality impacts attributable to implementation of the Proposed Project. Existing air quality conditions were obtained from various sources include the Yolo-Solano Air Quality Management District (YSAQMD), California Air Resources Board (ARB), and other specific studies evaluating air quality emission sources within the Planning Area. These sources have been updated since the NOP was published and are the most current and applicable sources to establish baseline conditions for the Proposed Project. Specific dates for the data are provided below.

Two NOP comment letters were received that raise issues related to air quality. One response to the City's NOP recommended that this EIR address air quality concerns, which is the focus of this section. In addition, YSAQMD commented that the EIR should evaluate potential air quality impacts and consistency with the most recently adopted Air Quality State Implementation Plan for ozone, including consistency with the population and vehicle use projections in the air quality plan, and the extent to which the General Plan implements transportation control measures included in the air quality plan. The YSAQMD also indicated that growth forecasts are generated by the Sacramento Council of Governments (SACOG) and the General Plan Update should be evaluated to determine whether it would consistent with SACOG's Metropolitan Transportation Plan. The YSAQMD recommends using the CalEEMod emission modeling software for most individual development projects, but does not believe the program is appropriate for evaluating impacts associated with a General Plan. Instead, YSAQMD expects that the air quality analysis would be more qualitative in nature, although the District CEQA thresholds of significance should be taken into account. YSAQMD also indicated that a discussion of mobile sources, toxic air contaminants, and odors should be included in the EIR. YSAQMD's comments have been incorporated throughout this EIR.

4.3.1 ENVIRONMENTAL SETTING

This section provides a discussion of the scientific background of air quality in the region, including natural factors that influence air quality along with air quality pollutants of concern.

4.3.1.1 CLIMATE, TOPOGRAPHY, AND METEOROLOGY

The City of Woodland is located in Yolo County, which is part of the Sacramento Valley Air Basin (SVAB). The SVAB is comprised of Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, the northeast portion of Solano, and western portion of Placer counties. California's air basins have been created to group together regions that have similar natural factors that affect air quality. Ambient concentrations of air pollutants are determined by the level of emissions released by pollutant sources (i.e., anthropogenic factors) and the atmosphere's ability to transport and dilute such emissions (i.e., natural factors). Natural factors that affect transport, dilution, and generation of air pollutants include terrain, wind, atmospheric stability, and the presence of sunlight. These natural and environmental factors and pollutants and pollutant sources are discussed separately below.

The Mediterranean climate of the Sacramento Valley is characterized by hot dry summers and mild rainy winters. Temperatures throughout the year could range from 20 to 115 degrees Fahrenheit (° F). In the summer, average

highs are approximately 94° F. Average lows in the winter are approximately 40° F (WRCC 2013). Average annual rainfall is about 19 inches, and snowfall is very rare (WRCC 2013). Prevailing winds are moderate in strength and vary from dry land flows from the north to moist clean breezes from the south.

The mountains surrounding the Sacramento Valley create a barrier to air flow, which can trap air pollutants in the Valley, particularly in the autumn and early winter when large pressure cells lie over the Valley and temperatures are lower. The lack of surface wind during these periods and reduced vertical flow caused by less surface heating, reduces the influx of outside air and allows air pollutants generated within the Valley to become concentrated in a stable volume of air. Ground concentrations are the highest when these conditions are combined with smoke from agricultural burning or temperature inversions that trap cool air, fog, and pollutants near the ground.

The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds, with the Delta sea breeze arriving in the afternoon and evening out of the southwest. Usually, this evening breeze transports the airborne pollutants generated within the Valley to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the Valley, the Schultz Eddy causes the wind pattern to circle back south. Essentially, this phenomenon causes air pollutants that would otherwise be transported out of the Valley to be blown southward back into the Valley. This has the effect of exacerbating the pollution levels and increasing the likelihood of violating federal or state standards. This eddy will normally dissipate around noon if the Delta sea breeze arrives.

4.3.1.2 CRITERIA AIR POLLUTANTS

California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with aerodynamic diameter less than 10 microns (PM_{10}), particulate matter with aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and lead. These pollutants, which are most linked with human health, are commonly called "criteria air pollutants."

Health-based air quality standards have been established for these pollutants by ARB at the state level and by EPA at the national level. These standards, which include a margin of safety, were established to protect the public from adverse health impacts resulting from exposure to air pollution. California also has established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. A brief description of each criteria air pollutant, including its source types and health effects, is provided below, along with the most current monitoring station data and attainment designations for the Woodland area. Table 4.3-1 presents the California ambient air quality standards (CAAQS) and national ambient air quality standards (NAAQS).

Ozone

Ozone is a photochemical oxidant—that is, a substance whose oxygen combines chemically with another substance in the presence of sunlight—and the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_X) in the presence of sunlight. ROG emissions result primarily from incomplete fuel combustion and the evaporation of chemical solvents and fuels. NO_X refers to a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist

only while high ROG and NO_X levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels decline rapidly. Because these reactions occur on a regional scale, ozone is a regional pollutant.[1]

Table 4.3-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
Ozone	1 hour	0.09 ppm (180 µg/m^3)	–	Same as primary standard
	8 hours	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Respirable particulate matter (PM_{10})	24 hours	50 µg/m^3	150 µg/m^3	Same as primary standard
	Annual arithmetic mean	20 µg/m^3	–	
Fine particulate matter ($PM_{2.5}$)	24 hours	–	35 µg/m^3	Same as primary standard
	Annual arithmetic mean	12 µg/m^3	12.0 µg/m^3 [f]	15 µg/m^3
Carbon monoxide	8 hours	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
	8 hours (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
Nitrogen dioxide[g]	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary standard
	1 hour	0.18 ppm (339 µg/m^3)	0.100 ppb (188 µg/m^3)	None
Sulfur dioxide[h]	Annual Arithmetic Mean	–	0.030 ppm (for certain areas) [h]	–
	24 hours	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas) [h]	–
	3 hours	–	–	0.5 ppm (1,300 µg/m^3)
	1 hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead[i,j]	30-day average	1.5 µg/m^3	–	–
	Calendar quarter	–	1.5 µg/m^3 (for certain areas) [j]	Same as primary standard
	Rolling 3-month average	–	0.15 µg/m^3	
Visibility-reducing particles[k]	8 hours	See footnote [k]	No national standards	
Sulfates	24 hours	25 µg/m^3		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m^3)		
Vinyl chloride[k]	24 hours	0.01 ppm (26 µg/m^3)		

[1] Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern.

Table 4.3-1. Continued

Notes: mg/m^3 = milligrams per cubic meter; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppb = parts per billion; ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standards. Contact EPA for further clarification and current national policies.

[c] Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; parts per million (ppm) in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On January 15, 2013, EPA announced it would revise the national annual $PM_{2.5}$ standard to 12.0 $\mu g/m^3$ to provide increased protection against health risks.

[g] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.

[i] The California Air Resources Board (ARB) has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[j] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[k] In 1989, ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and the “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: ARB 2015

Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and clear skies provide the optimum conditions for ozone formation.[2] Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. In general, ozone concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry. The number of ozone exceedances in the Sacramento Valley region is not steadily trending downwards, but the exceedance concentrations are becoming less severe and non-exceedance concentrations are becoming cleaner (YSAQMD 2013). Although YSAQMD's rules and regulations have been able to control area and stationary source emissions and keep those emissions levels fairly constant, mobile source emissions, which are the major source of ozone precursors within the YSAQMD's jurisdiction (see Table 4.3-4), continue to grow along with population. From 2009 to 2011, the region (i.e., YSAQMD's jurisdiction) grew approximately 3 percent in population; however, vehicle miles traveled grew at an even greater rate of 6.6 percent in the same time period (YSAQMD 2013). Thus, YSAQMD will rely heavily on statewide vehicle emission standards and incentive programs to control the growth of mobile source emissions. In addition, land use development patterns within the region will play a critical role in reducing vehicle miles traveled and mobile source emissions.

Ozone exposure causes adverse health effects primarily in the respiratory system. Ozone affects not only sensitive receptors, such as asthmatics and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 part per million (ppm) for 1–2 hours has been found to substantially alter lung function by increasing respiratory rates and pulmonary resistance, decreasing "tidal" volumes (the amount of air inhaled and exhaled), and impairing respiratory mechanics. Ambient levels of ozone exceeding 0.12 ppm are linked to symptomatic responses, such as throat dryness, chest tightness, headache, and nausea.

Carbon Monoxide

CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Higher CO levels generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months when inversion conditions become more frequent, trapping the air pollution near the ground beneath a layer of warm air.

Because exceedances of CO concentrations have become less of a problem in the project region in recent years, CO is no longer monitored in Yolo County.

[2] Although stagnant conditions typically occur in autumn and early winter, the cumulative effects of warm temperatures, sunlight, and clear skies in the summertime are more conducive to ozone generation and thus summertime is generally the peak ozone season.

Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2016).[3]

Particulate Matter

Respirable Particulate Matter (PM_{10}) consists of particulate matter emitted directly into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust. It also includes particulate matter formed in the atmosphere by condensation and/or transformation of Sulfur dioxide (SO_2) and ROG (EPA 2016). $PM_{2.5}$ is a subgroup of PM_{10}, consisting of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less (ARB 2009). As presented in Table 4.3-4, areawide sources are the largest source of PM_{10} and $PM_{2.5}$ emissions in the region. Farming operations, construction and demolition, and road/fugitive dust are the main contributors to particulate matter emissions in the region. Exceedances of the PM_{10} and $PM_{2.5}$ standards still do occur occasionally (see Table 4.3-2) and Yolo-Solano Air Quality Management District (YSAQMD) continues to develop rules and regulations that control and minimize PM_{10} and $PM_{2.5}$ from the construction industry and agricultural burning (YSAQMD 2013).

The adverse health effects associated with PM_{10} depend on the specific composition of the particulate matter. For example, health effects may result from adsorption of metals, polycyclic aromatic hydrocarbons, and other toxic substances onto fine particulate matter (referred to as the "piggybacking effect"), or from the presence of fine dust particles of silica or asbestos. Generally, both short-term and long-term exposure to elevated concentrations of PM_{10} may result in adverse effects. These effects may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, carcinogenesis, and premature death (EPA 2016). $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and may contain substances that are particularly harmful to human health.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 (EPA 2016). The combined emissions of NO and NO_2 are referred to as NO_X and reported as equivalent NO_2.[4]

Inhalation is the most common route of exposure to NO_2. The severity of the adverse health effects depends primarily on the concentration inhaled, rather than the length of exposure. An individual may experience a variety of acute symptoms such as coughing, difficulty in breathing, vomiting, headache, and eye irritation during or shortly after exposure. Severe, symptomatic NO_2 intoxication after acute exposure has been linked on occasion with prolonged respiratory impairment, with such symptoms as chronic bronchitis and decreased lung function (EPA 2016).

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[3] CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, drastically reducing the amount of oxygen available to the cells.

[4] Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a particular geographic area may not be representative of the local NO_X emission sources.

Sulfur Dioxide

SO_2 is produced by such stationary sources as coal and oil combustion, steel mills, refineries, and pulp and paper mills. SO_2 comprises approximately 97percent of sulfur oxide (SO_X) emissions in California. SO_2 exposure causes adverse health effects primarily in the upper respiratory tract. SO_2 is a respiratory irritant; the bronchioles constrict with inhalation of SO_2 at five parts per million (ppm) or more. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, which is a direct irritant. The concentration, rather than the duration of exposure, is an important determinant of respiratory effects.

Statewide emissions of SO_X have decreased by approximately 45 percent since 1990, primarily due to increased emissions controls in industrial stationary sources and switching from fuel oil to natural gas for electric generation and industrial boilers (ARB 2011). In addition, in 2006, ARB required the use of ultra-low-sulfur diesel fuel (15 ppm sulfur) for on-road vehicles, which further reduced SO_X emissions throughout the state. SO_2 emissions are fairly low in the region and primarily occur from stationary sources. As a result of SO_X emissions becoming less of a problem, SO_X is no longer monitored in Yolo County and has not been exceeded in the last 10 years at nearby monitoring stations (ARB 2016).

Lead

Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metal processing is currently the primary source of lead emissions. The highest levels of lead in the air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Until about 20 years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December of 1995 (EPA 2016).

EPA's regulatory efforts to remove lead from gasoline caused emissions of lead from the transportation sector to decline dramatically (95percent between 1980 and 1999), and levels of lead in the air decreased by 94 percent between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13 percent of lead emissions. A National Health and Nutrition Examination Survey reported a 78 percent decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (EPA2016).

4.3.1.3 TOXIC AIR CONTAMINANTS

Concentrations of toxic air contaminants (TACs), or in federal terminology, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health.[5]

[5] TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to the *California Almanac of Emissions and Air Quality* (ARB 2009), the majority of the estimated health risk from TACs is attributed to relatively few compounds, the most dominant being PM exhaust from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

Unlike the other TACs, no ambient monitoring data (i.e., monitored concentrations) are available for diesel PM because a standardized method for measuring diesel PM has not been established. However, ARB has made preliminary concentration estimates based on a PM exposure method. This method uses ARB's emissions inventory PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene (ARB 2009). However, diesel PM poses the greatest health risk among these 10 TACs.

ARB estimated that approximately 237 tons of diesel PM are generated in Yolo County per year (ARB 2009). A majority of these health risks from diesel PM can be attributed to the heavy-duty diesel truck traffic passing through Yolo County along Interstate 5 (I-5) and State Route 113 (SR 113).

Based on receptor modeling techniques, ARB estimated the diesel PM health risk in the SVAB in 2000 to be 360 excess cancer cases per million people. This represents a decrease in diesel PM health risks by 52 percent from 1990 to 2000. Overall, ambient levels of most TACs (including diesel PM), except for para-dichlorobenzene, have decreased since 1990 (ARB 2009). However, measurements of para-dichlorobenzene are often unreliable and therefore analysis of para-dichlorobenzene was discontinued in March 2007 as result of many samples being below the limit of detection.

4.3.1.4 ODORS

Manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population. In addition, people may have different reactions to the same odor – an odor that is offensive to one person may be perfectly acceptable to another. An unfamiliar odor is more easily detected and is more likely to result in complaints than a familiar one.[6]

Quality and intensity are two properties present in any odor.[7] Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs,

[6] This is due to a phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

[7] The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as "flowery" or "sweet," then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor.

the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult.[8]

YSAQMD provided odor complaints within Woodland from 2011 to August 2016 (pers. comm. YSAQMD 2016). There were a total of 18 complaints over that period. Specific complaints (and the number of reports) included smells of burnt coffee (three complaints), sewage (two complaints), melted plastic (one complaint), tar (one complaint), rotten eggs (four complaints), horse manure (two complaints), general foul smell (two complaints), general burning odor (two complaints), and fumes from diesel trucks running (one complaint). There were no violations noted by the YSAQMD.

4.3.1.5 EXISTING AIR QUALITY

Air Quality Monitoring Data

Criteria air pollutants are monitored at multiple monitoring stations throughout the SVAB. The 41929 Gibson Road monitoring station in Woodland, which is located at the southeastern portion of the City's incorporated limits, measures ozone, $PM_{2.5}$, and PM_{10}. The 41929 Gibson Road monitoring station does not monitor for CO, NO_2, or SO_2; therefore ambient monitoring data for these pollutants were obtained from the next closest monitoring station (see Table 4.3-2 for additional detail on monitoring stations). Table 4.3-2 summarizes the air quality data from the three most recent years for which data are available (2012–2014) and lists the registered concentrations and exceedances of the CAAQS and NAAQS that occurred at this monitoring station from 2012 through 2014.

Table 4.3-2. Ambient Air Quality Data (2012–2014)[1]

	2012	2013	2014
Ozone			
Maximum concentration (1-hour/8-hour, ppm)	0.101/0.080	0.080/0.067	0.082/0.072
Number of days state standard exceeded (1-hour/8-hour)	1/9	0/0	0/1
Number of days national standard exceeded (1-hour/8-hour)2	0/2	0/0	0/0
Carbon Monoxide (CO)[3]			
Maximum concentration (8-hour, ppm)	1.55	–	–
Number of days 8-hour standard exceeded (national/California)	0/0	0/0	0/0
Nitrogen Dioxide (NO_2)[4]			
Maximum concentration (1-hour, ppb)	47.0	41.1	41.8
Number of days state standard exceeded	0	0	0
Annual average (ppm)	7	6	5
Sulfur Dioxide (SO_2) [5]			
Maximum concentration (24-hour, ppm)	0.002	0.002	–
Number of days standard exceeded (national/California)	0	0	–
Annual Average (ppm)	–	–	–

[8] At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Table 4.3-2. Ambient Air Quality Data (2012–2014)[1]			
	2012	2013	2014
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration (µg/m^3) (national/California) [6]	14.6/14.6	22.0/22.0	14.6/14.6
Number of days national standard exceeded (measured/estimated)[7]	0/0.0	0/0.0	0/0.0
State annual average (µg/m^3) (national/California)	6.4/6.4	7.4/–	5.9/–
Respirable Particulate Matter (PM_{10})			
Maximum concentration (µg/m^3) (national/California) [6]	56.4/56.8	60.3/61.5	45.0/47.5
Number of days state standard exceeded (measured/estimated) [7]	1/6.1	4/23.3	0/0.0
Number of days national standard exceeded (measured/estimated) [7]	0/0.0	0/0.0	0/0.0
Annual average (µg/m^3) (national/California)	17.6/18.1	22.4/22.9	17.2/17.4

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million; – = data not available or insufficient data to determine value

[1] Measurements were recorded at the Gibson Road monitoring station unless noted otherwise.

[2] The 8-hour national ozone standard was revised to 0.075 ppm in March 2008. Statistics shown are based on the previous 0.08 ppm standard. The 1-hour national ozone standard was revoked on June 15, 2005. Statistics for the 1-hour national ozone standard are shown for informational purposes.

[3] Measurements were recorded at the Goldenland Court monitoring station located at 68 Goldenland Court in Sacramento, which is approximately 15 miles southeast of the Planning Area.

[4] Measurements were recorded at the Davis-UCD Campus monitoring station located on Campbell Road in Davis, which is approximately 10 miles south of the Planning Area.

[5] Measurements were recorded at the Del Paso Manor monitoring station located at 2701 Avalon Drive in Sacramento, which is approximately 22 miles southeast of the Planning Area.

[6] State and national statistics may differ for the following reasons: State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. State statistics are based on local conditions while national statistics are based on standard conditions. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[7] Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. Measurements are typically collected every 6 days. Estimated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Source: ARB 2016

The region's major air quality problem is ozone generation, followed by PM_{10} and $PM_{2.5}$ concentrations. Between 2012 and 2014, the Woodland monitoring station registered multiple days above the state and federal eight-hour ozone standards and one exceedance of the state one-hour standard. The state CO, NO_2, and SO_2 standards were not exceeded in any of the last three years at the nearest monitoring stations. The state 24-hour PM_{10} standard was exceeded at least once in both 2012 and 2013, but was not exceeded in 2014. The national 24-hour PM_{10} and $PM_{2.5}$ standards were not exceeded in any of that past three years.

Attainment Status

To determine whether a region's air quality is healthful or unhealthful, contaminant levels in ambient air samples are compared to the CAAQS and NAAQS. Both ARB and EPA use the type of monitoring data presented in Table 4.3-2 to designate an area's attainment status relative to the CAAQS and NAAQS, respectively, for criteria air pollutants. The purpose of these designations is to identify areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." The "unclassified" designation is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards.

With respect to the CAAQS, the YSAQMD is currently designated as a nonattainment area for ozone and PM_{10}, and as an attainment or unclassified area for all other pollutants. With respect to the NAAQS, the YSAQMD is designated as a nonattainment area for ozone and $PM_{2.5}$ and as an attainment or unclassified area for all other pollutants. Table 4.3-3 shows the YSAQMD's most recent attainment designations, which includes Woodland.

Table 4.3-3. California and National Attainment Status for the YSAQMD

	Designation/Classification	
Pollutant	California	National
Ozone (1-hour)	Nonattainment	–
Ozone (8-hour)	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen dioxide (NO_2)	Attainment	Attainment
Sulfur dioxide (SO_2)	Attainment	Attainment
Respirable particulate matter (PM_{10})	Nonattainment	Unclassified
Fine particulate matter ($PM_{2.5}$)	Unclassified	Nonattainment
Lead	Attainment	Attainment
Sulfates	Attainment	No national standards
Hydrogen sulfide	Attainment	
Vinyl chloride	Attainment	
Visibility-reducing particles	Attainment	

Source: ARB 2015

Existing Emissions – Yolo-Solano Air Quality Management District

Criteria Air Pollutants

Table 4.3-4 summarizes the emissions inventory for criteria air pollutants in YSAQMD. Mobile sources are the largest contributor to the estimated annual average air pollutant levels of ROG, CO, and NO_X, accounting for approximately 42 percent, 82 percent, and 85 percent, respectively, of the total inventory. As discussed above, ROG and NO_X are ozone precursors and therefore, mobile sources are a key target for reducing ozone concentrations in the region. Stationary sources in YSAQMD are responsible for the majority (approximately 71 percent) of the SO_X emissions. Areawide sources (e.g., solvent evaporation, on-site fuel combustion for space and water heating, landscape maintenance equipment) account for approximately 88 percent and 67 percent of YSAQMD's PM_{10} and $PM_{2.5}$ emissions, respectively.

Table 4.3-4. 2012 Emissions Inventory for Criteria Air Pollutants and Precursors (YSAQMD)						
	Estimated Annual Average Emissions (Tons per Day)					
Source Type/Category	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
Stationary Sources						
Fuel Combustion	0.39	3.26	3.16	0.26	0.38	0.37
Waste Disposal	0.17	0.15	0.03	0.05	0.00	0.00
Cleaning and Surface Coating	1.71	0.02	0.03	0.00	0.03	0.03
Petroleum Production and Marketing	1.85	0.14	0.03	-	-	-
Industrial Processes	1.20	0.50	0.23	0.05	1.45	0.74
Subtotal (Stationary Sources)	5.32	4.06	3.48	0.37	1.85	1.14
Area-wide Sources						
Solvent Evaporation	3.66	–	–	–	–	–
Miscellaneous Processes	2.38	11.24	0.91	0.06	24.16	4.33
Subtotal (Areawide Sources)	6.03	11.24	0.91	0.06	24.16	4.33
Mobile Sources						
On-Road Motor Vehicles	4.49	49.02	15.50	0.07	1.01	0.58
Other Mobile Sources	3.67	20.01	8.69	0.02	0.50	0.46
Subtotal (Mobile Sources)	8.17	69.03	24.19	0.09	1.52	1.04
Total for YSAQMD	**19.53**	**84.33**	**28.58**	**0.52**	**27.53**	**6.51**

Notes:

YSAQMD = Yolo-Solano Air Quality Management District; ROG = reactive organic gases; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_X = oxides of sulfur; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases

Totals in table may not add exactly due to rounding.

Source: ARB 2013

Toxic Air Contaminants

As discussed above, the current overall background cancer risk from diesel PM in the SVAB is 360 cases in a million compared with the statewide average of 540 cancer risks in a million (ARB 2009).

Existing TAC sources in the Woodland area include mobile sources, stationary sources, and areawide sources, which all cumulatively contribute to the existing TAC concentrations and the associated health risk. Mobile sources are dispersed on roadways throughout the Planning Area. SR 113 and I-5 both handle heavy-duty diesel trucks with emissions that can expose residents and other adjacent sensitive receptors to TAC emissions. Stationary sources that would generate TACs are permitted by YSAQMD. A list of the YSAQMD-permitted stationary sources within the city limits is provided Appendix D.

Areawide TAC sources are dependent on consumer behavior, which makes tracking data difficult to gather. However, ARB has developed TAC emissions inventories that provide a baseline level of TAC emissions and how those emissions compare with the region. Table 4.3-5 presents the TAC emissions occurring within Yolo County compared with the overall TAC emissions occurring within the SVAB.

Table 4.3-5. TAC Emissions in Yolo County and SVAB			
Toxic Air Contaminant	Yolo County Emissions (tons/year)	SVAB Emissions (tons/year)	Percent of Yolo County Contribution
Acetaldehyde	63	986	6.4%
Benzene	57	957	6.0%
1,3-Butadiene	20	437	4.6%
Carbon Tetrachloride	0	0	0.0%
Chromium (Hexavalent)	<0.01	<1	0.0%
para-DiChlorobenzene	8	107	7.4%
Formaldehyde	132	2,045	6.5%
Methylene Chloride	25	352	7.0%
Perchloroethylene	26	355	7.3%
Diesel PM	237	2,590	9.2%

Notes: TAC = toxic air contaminants; SVAB = Sacramento Valley Air Basin; PM = particulate matter.

Source: ARB 2009.

Odors

The Planning Area has several facilities and land uses that are potential odor sources. The Yolo County Central Landfill is located approximately seven miles southeast of Downtown. In addition, the City operates the municipal wastewater treatment plant, known as the "Water Pollution Control Facility" (WPCF). The WPCF is located approximately 3.5 miles east of Downtown. The WPCF headwork facility and pond system are also both odor sources within the Planning Area. The pond system west and south of the WPCF can receive raw sewage influent and effluent during times of maintenance or peak flows at the WPCF, which, during warmer weather, can generate odor emissions. Currently, the City receives infrequent odor complaints regarding the WPCF and it has been determined that existing residents to the west of County Road 102 could detect odors approximately 40 hours per year, or 0.4 percent of the time (City of Woodland 2015).

The Planning Area also has industrial uses (e.g., food production facilities, manufacturing facilities, biomass storage for biomass power generation) that could produce potential odor sources. The Planning Area is also surrounded by agricultural uses in each direction that can generate odors from a variety of processes, such as agricultural burning, livestock pens, fertilization, and composting, among others. The City of Woodland and YSAQMD work in cooperation with industrial facilities and agricultural producers to limit the odor emissions associated with manufacturing processes and agricultural burning.

Other smaller and dispersed odor sources include residential and commercial dumpsters, which can be located in proximity of sensitive receptors. However, with proper disposal containers and regular trash collection services, odors from residential and commercial dumpsters are generally minimized.

4.3.2 REGULATORY FRAMEWORK

4.3.2.1 FEDERAL

Clean Air Act, 42 U.S.C. §7401 *et seq*.

At the federal level, EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the Clean Air Act (CAA), which was enacted in 1970. The CAA required EPA to establish primary and secondary NAAQS (Table 4.3-1). The CAA also required each state to prepare an air quality control plan, referred to as a State Implementation Plan (SIP). The SIP is a legal agreement between each state and the EPA stating how the state will achieve ambient air quality standards. The SIP is not a single document, but a compilation of new and previously submitted attainment plans, emission reduction programs, district rules, state regulations, and federal controls. The Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. EPA has responsibility for reviewing all state SIPs to determine conformity with the mandates of the CAAA and determine whether implementation of the SIP will achieve air quality goals.

4.3.2.2 STATE

California Clean Air Act, H&S § 39600 *et seq*.

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, requires ARB to establish CAAQS (Table 4.3-1). The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources and provides districts with the authority to regulate indirect sources.

Other ARB responsibilities include overseeing compliance with California and federal laws by local air districts, approving local air quality plans, submitting SIPs to EPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

The California CAA requires that each area exceeding the CAAQS for ozone, CO, SO_2, and NO_2 must develop a plan aimed at achieving those standards. The California Health and Safety Code Section 40914, requires air districts to design a plan that achieves an annual reduction in district-wide emissions of 5 percent or more, averaged every consecutive three-year period. To satisfy this requirement, the local air districts have to develop and implement air pollution reduction measures, which are described in their AQMPs, and outline strategies for achieving the CAAQS for any criteria pollutants for which the region is classified as nonattainment.

ARB and local air pollution control districts are currently developing plans for meeting new national air quality standards for ozone and $PM_{2.5}$. California's adopted 2007 State Strategy for California's SIP for federal $PM_{2.5}$ and 8-Hour Ozone Standards (2007 SIP) was submitted to EPA as a revision to the SIP in November 2007 (ARB 2008). In July 2011, ARB approved revisions to the 2007 SIP that updated the ARB rulemaking calendar, made adjustments to transportation conformity budgets, and revised reasonable further progress tables and associated

reductions for contingency purposes (ARB 2012). These actions affect the State's actions and ability to attain the 2008 8-hour ozone and 2006 $PM_{2.5}$ standards.

California Exhaust Emission Standards and Test Procedures

ARB has established emission standards for vehicles sold in California and for various types of equipment. California gasoline specifications are governed by both state and federal agencies. During the past decade, federal and State agencies have imposed numerous requirements on the production and sale of gasoline in California. In January 2001, EPA promulgated a final rule to reduce emissions standards for heavy-duty diesel engines in 2007 and subsequent model years. These emissions standards represent a 90 percent reduction in NO_X emissions, 72% reduction of nonmethane hydrocarbon emissions, and 90 percent reduction of PM emissions, in comparison to the emissions standards for the 2004 model year. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA on May 11, 2004. As such, engine manufacturers are now required to meet after-treatment-based exhaust standards for NO_X and PM starting in 2011 that are more than 90 percent lower than previous levels, putting emissions from off-road engines virtually on par with those from on-road heavy-duty diesel engines. ARB has also adopted control measures for diesel PM and more stringent emissions standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators).

In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA on May 11, 2004. Tier 4 emission standards requires engine manufacturers to meet after-treatment-based exhaust standards for NO_X and PM starting in 2011 that are more than 90 percent lower than current levels, putting emissions from off-road engines virtually on par with those from on-road heavy-duty diesel engines.

Tanner Air Toxics Act, Chapter 1047, Statutes of 1983 and Air Toxics Hot Spots Information and Assessment Act, Chapter 1252, Statutes of 1987

TACs in California are regulated primarily through the Tanner Air Toxics Act (Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act (Chapter 1252, Statutes of 1987). Assembly Bill 1807 sets forth a formal procedure for ARB to designate substances as TACs. Research, public participation, and scientific peer review must occur before ARB can designate a substance as a TAC. The Air Toxics Hot Spots Information and Assessment Act requires that TAC emissions from stationary sources be quantified and compiled into an inventory according to criteria and guidelines developed by ARB, and if directed to do so by the local air district, a health risk assessment (HRA) must be prepared to determine the potential health impacts of such emissions.

Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations

In 1991, the ARB identified Perchloroethylene as a TAC under California's Toxic Air Contaminant Identification and Control Program (Health and Safety Code section 39650 et. seq.). The Board adopted the Airborne Toxic Control Measure for Emissions of Perchloroethylene from Dry Cleaning Operations (Dry Cleaning ATCM) and the Environmental Training Program for Perchloroethylene Dry Cleaning Operations in 1993. In 2007, the State of California adoption amendments to the Dry Cleaning ATCM which requires for Perchloroethylene manufacturers and distributors to phase out the use of Perchloroethylene dry cleaning machines and related

equipment by January 1, 2023. Additionally, new Perchloroethylene dry cleaning machines are prohibited from being installed anywhere in the State beginning January 1, 2008.

4.3.2.3 REGIONAL

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. Policies from the Yolo County General Plan related to air quality include providing a fully-connected circulation system that supports a variety of forms of transportation. The County's General Plan also supports compact development and complete streets, which would reduce potential air pollutant emissions associated with vehicular transportation. County policies also commit the County to ensuring public transit and other alternatives to automobile travel are provided, and ensuring the comfort, convenience, and safety of bicyclists and pedestrians. Other policies promote alternative fuel vehicles, traffic calming, ride sharing and car sharing, conversion to LED traffic lights, and a multi-purpose bikeway between Woodland and Davis.

Yolo-Solano Air Quality Management District

The YSAQMD is the agency primarily responsible for assuring that national and state ambient air quality standards are attained and maintained in Yolo County and the northeastern Solano County portion of the SVAB. In 2007, YSAQMD adopted its Handbook for Assessing and Mitigating Air Quality Impacts (Air Quality Handbook), which contains guidance for projects to evaluate their air quality impacts (YSAQMD 2007). YSAQMD's Air Quality Handbook was used to evaluate the air quality impacts of the Proposed Project.

Air Quality Plans

In compliance with CCAA requirements, the Sacramento Metropolitan Air Quality Management District (SMAQMD) in coordination with the YSAQMD, as well as the air quality management districts and air pollution control districts of El Dorado, Placer, and Sutter Counties prepared and submitted the 1991 Air Quality Attainment Plan (AQAP). The CCAA requires that these AQAPs are updated every three years to describe the progress made by the applicable air districts to achieve ambient air quality standards. The most current AQAP update was adopted in April 2013; however, YSAQMD is currently in the process of finalizing the 2015 Triennial Assessment and Plan Update (YSAQMD 2016).

The AQAP specifically addresses the area's nonattainment status for ozone and, to a lesser extent, CO and PM_{10}. The AQAP stresses attainment of ozone standards and focuses on strategies to reduce emissions of ozone precursors (ROG and NO_X). The AQAP promotes active public involvement, enforcement of compliance with district rules and regulations, and public education in both the public and private sectors. It also urges development and promotion of transportation and land use programs designed to reduce vehicle miles traveled within the region and implementation of stationary- and mobile-source control measures.

The air districts in the Sacramento Federal Nonattainment Area (SFNA) adopted the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan in February 2009. In June 2010, EPA approved reclassification of the SFNA from "serious" to "severe" for the 8-hour ozone nonattainment area with an associated attainment deadline of June 15, 2019.

Rules and Regulations

YSAQMD adopts rules and regulations to control air quality emissions from a variety of sources within its jurisdiction. All construction and operational activities occurring within YSAQMD's jurisdiction are subject to YSAQMD rules and regulations. Rules and regulations that may apply to projects under the Proposed Project include, but are not limited to the following (ARB 2015):

- **Rule 2.3 (Ringelmann Chart)**: This rule prohibits stationary diesel-powered equipment from generating visible emissions that would exceed the rule's visibility threshold.

- **Rule 2.5 (Nuisance)**: This rule prohibits any source from generating air contaminants or other materials that would cause injury, detriment, nuisance, or annoyance to the public; endanger the comfort, repose, health, or safety of the public; or damage businesses or property.

- **Rule 2.11 (Particulate Matter Concentration)**: This rule prohibits any source that would emit dust, fumes, or total suspended particulate matter from generated emissions that would exceed the rule's established emission concentration limit.

- **Rule 2.14 (Architectural Coatings)**: This rule establishes volatile organic compound (VOC) content limits for all architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured within YSAQMD's jurisdiction.

- **Rule 2.28 (Cutback and Emulsified Asphalts)**: This rule establishes organic compound limits for cutback and emulsified asphalts manufactured, sold, mixed, stored, used, and applied within YSAQMD's jurisdiction.

- **Rule 2.37 (Natural Gas-Fired Water Heaters and Small Boilers)**: This rule establishes NO_X emission limits for natural gas-fired water heaters with a rated heat input capacity less than 1,000,000 British Thermal Units per hour (Btu/hr) manufactured, offered for sale, sold, or installed within YSAQMD's jurisdiction.

- **Rule 3.1 (General Permit Requirements)**: This rules establishes permitting processes (i.e., Authority to Construct and Permit to Operate) to review new and modified sources of air pollution.

- **Rule 3.4 (New Source Review)**: This rule would require any new or modified stationary source that generates emissions that exceed established emissions limits for each pollutant (i.e., ROG, NO_X, sulfur oxides [SO_X], PM_{10}, CO, and lead) to comply with Best Available Control Technology and emissions offset requirements.

- **Rule 3.13 (Toxics New Source Review)**: This rule would require any constructed or reconstructed major source of HAPs to install best available control technology for toxics (T-BACT). The T-BACT should be no less stringent than new source maximum achievable control technology (MACT).

- **Rule 9.9 (Asbestos)**: This rule requires all renovations and demolitions occurring within YSAQMD's jurisdiction to perform surveys to thoroughly check for the presence of asbestos-containing materials. If asbestos-containing materials are found to be present in the proposed renovated and/or demolished structure, the contractor shall comply with all handling, administrative, and monitoring requirements of the rule.

4.3.2.4 LOCAL

City of Woodland 2002 General Plan

The 2002 General Plan includes both general and transportation-related goals, policies, and implementation programs to improve regional air quality. City policies in the 2002 General Plan include cooperating with other agencies, requiring major new developments to submit an air quality analysis, encouraging woodstoves and fireplace inserts instead of wood burning fireplaces, and promoting the use of alternative modes of transportation, including alternative fuel vehicles. Key policies include:

- 7.E.4. The City shall require major new development projects to submit an air quality analysis for review and approval. Based on this analysis, the City shall require appropriate mitigation measures.
- 7.E.7. The City shall require project-level environmental review to include identification of potential air quality impacts and to include design and other appropriate mitigation measures or offset fees to reduce impacts. The City shall dedicate staff to work with project proponents and other agencies in identifying, ensuring the implementation of, and monitoring the success of mitigation measures.
- 7.E.8. The City shall require development where feasible to be located and designed to minimize direct and indirect air pollutants.
- 7.E.9. In reviewing project applications, the City shall require consideration of alternatives or amendments that reduce emissions of air pollutants.

4.3.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.3.2.5 METHODOLOGY

The Proposed Project plans for development in the Planning Area that would generate air quality emissions as a result of short-term construction and long-term operational activities. In addition, the analysis assumes improvements as described in the 2035 CAP Strategies E-1, E-2, E-3, and E-4 have been implemented and that the 2035 CAP's transportation strategies, including T/LU-1, T/LU-4, T/LU-7, MO-3, MO-4, and MO-5 have been implemented. Construction-related emissions would be generated throughout the buildout of the Proposed Project and would vary based on market conditions.

For plan-level construction emissions, YSAQMD does not prescribe specific methods for emission modeling; however, some air districts, such as the neighboring Sacramento Metropolitan Air Quality Management District (SMAQMD), recommend an assumption that 25 percent of the total land uses could be constructed in a single year when project-specific information is unknown (SMAQMD 2015). For the purposes of this analysis, and to ensure conservative results, 25 percent of the land uses that would be constructed as part of East Alternative and South Alternative were assumed to be constructed in the earliest possible construction year (2017). This provides a conservative estimate of the proposed project's construction-related emissions because emission factors for construction equipment and vehicles decrease over time due to turnover in vehicle and equipment fleets, advancements in emission technology, and increasingly stringent emissions standards. Therefore, the earliest possible buildout year would use the maximum emission factors and result in conservative estimates.

Construction emissions were modeled using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2, which is the most current version of the YSAQMD-recommended model for estimating construction and operational emissions from land use development projects. CalEEMod includes default assumptions for construction parameters such as construction equipment, haul trucks, and worker trips, which were used to model the proposed project's construction-related emission in the absence of project-specific information. It should be noted that CalEEMod default assumptions are typically conservative to avoid underestimating emissions when project-specific information is unknown. The Proposed Project's construction-related emissions for both the East and South Alternatives are compared with the applicable YSAQMD thresholds of significance to determine significance.

Operational emission following construction of the Proposed Project's land uses would be generated by area-, energy-, and mobile-sources. Area sources would include those such as hearth (fireplace) and consumer products for residential uses and periodic architectural coatings and landscape equipment for residential and non-residential land uses. Energy sources would include natural gas combustion for space and water heating in residential and non-residential buildings. CalEEMod was used to model area- and energy-source operational emissions.

Mobile sources would involve vehicle trips associated with residential (e.g., work, shopping, and other trips) and non-residential (e.g., customers, employees, and material delivery trips) activities. For mobile sources, a traffic analysis was prepared to support the Proposed Project and this EIR. This analysis estimates annual vehicle miles traveled (VMT) associated with Planning Area land uses under the East and South Alternatives using the origin-destination method (Fehr & Peers 2016).[9] Mobile-source emissions were modeled using the most current version of ARB's on-road emissions inventory model, EMFAC2014. The current version of CalEEMod uses emission factors from the previous EMFAC2011 model and has not yet been updated with the most recent EMFAC2014 model. At the time of this analysis, EMFAC2014 is the most current version of ARB's on-road emissions inventory model. The Proposed Project's operational emissions under the East and South Alternatives are compared with YSAQMD thresholds of significance to determine significance.

4.3.2.6 THRESHOLDS OF SIGNIFICANCE

Significance criteria are based on Appendix G of the State CEQA Guidelines. The Proposed Project would have a significant impact on air quality if it would:

- conflict with or obstruct implementation of the applicable air quality plan;
- violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);

[9] The origin-destination method considers the origin and destination of each vehicle trip as being "internal" (i.e., within City boundaries) or "external" (i.e., outside of City boundaries). All VMT associated with internal-internal trips are allocated to the City, while half of the VMT for all external-internal and internal-external trips are allocated to the City. External-external trips are not included in the estimate because these VMT are not in the jurisdictional control of the City.

- expose sensitive receptors to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

Pursuant to the YSAQMD-recommended thresholds for evaluating project-related air quality impacts, implementation of the Proposed Project would be considered significant if it would (YSAQMD 2007):

- generate construction-related criteria air pollutant or precursor emissions that exceed the YSAQMD-recommended thresholds of 10 tons per year (tpy) of ROG, 10 tpy of NO_X, and 80 pounds per day (lbs/day) of PM_{10}, or result in a violation of the CO CAAQS;
- generate long-term regional criteria air pollutant or precursor emissions that exceed the YSAQMD-recommended thresholds of 10 tpy of ROG, 10 tpy of NO_X, and 80 lbs/day of PM_{10}, or result in a violation of the CO CAAQS;
- expose the maximally exposed individual (MEI) to TAC emissions that exceed an incremental increase in cancer risk of more than 10 in one million and/or a ground-level concentration of non-carcinogenic TAC emissions that would result in a Hazard Index equal to 1 or greater; or
- generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.

Since there is considerable overlap between the above mentioned threshold questions, this section has been reorganized to improve clarity and readability into four impact statements addressing:

- Short-term, construction-related emissions
- Long-term, operational emissions
- Exposure of sensitive receptors to substantial pollutant concentrations; and
- Exposure to objectionable odors.

For cumulative impacts, YSAQMD states that if a project would be significant on the project-level (i.e., exceed any of the thresholds listed above), it would also be considered significant on a cumulative level (YSAQMD 2007). Please see Chapter 6 of this EIR, "Other CEQA Considerations," which addresses cumulative impacts in detail.

4.3.2.7 ISSUES NOT DISCUSSED FURTHER

All issues related to air quality are discussed in detail below.

4.3.2.8 IMPACT ANALYSIS

IMPACT 4.3-1 Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors. *Emissions of criteria air pollutants and precursors could exceed an ambient air quality standard or contribute substantially to an existing or predicted air quality exceedance. The level of construction emissions could conflict with or obstruct implementation of the applicable air quality plan. YSAQMD recommends that lead agencies incorporate construction mitigation measures, and the Proposed Project has policies that would reduce this impact. However, given the scale of the Proposed Project, the City cannot determine that potential construction impacts would be below relevant significance thresholds throughout the planning horizon. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Construction emissions are described as "short-term" or temporary in duration but have the potential to adversely affect air quality. Construction-related activities associated with the Proposed Project, such as site preparation (e.g., excavation, grading, and clearing), demolition and renovation, building construction, and grading among others would require the use of off-road equipment, material delivery trucks, and construction worker vehicles that would result in temporary exhaust emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. This includes construction emissions associated with development anticipated under the 2035 General Plan in addition to short-term emissions associated with equipment upgrades, renewable energy facility installations, energy efficiency building upgrades, tree planting, and other measures included in the City's 2035 CAP.

Emissions of ROG and NO_X are associated primarily with exhaust from construction equipment. Given that exhaust emission rates of the construction equipment fleet in the state are expected to decrease over time as stricter standards take effect and older equipment is retired, construction emissions were estimated using the earliest calendar year when construction could begin (2017) to generate conservative estimates. In later years, advancements in engine technology, retrofits, and turnover in the equipment fleet will result in lower levels of emissions.

Other sources of ROG emissions include off-gassing from architectural coatings for buildings and asphalt used for asphalt paving.

Fugitive dust emissions are associated primarily with site preparation and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance, VMT, and other factors. During typical construction projects, the majority of PM emissions are generated in the form of fugitive dust during demolition and/or ground disturbance activities. Most fugitive dust is generated during the grading phase. PM emissions are also generated by equipment exhaust and road dust from vehicle travel on paved and unpaved surfaces.

Table 4.3-6 summarizes the modeled emissions of ROG, NO_X, PM_{10} and $PM_{2.5}$ associated with construction under the East Alternative and the South Alternative. Refer to Appendix D of the Draft EIR for a detailed summary of the CalEEMod modeling assumptions, inputs, and outputs.

a. East Alternative–As shown in Table 4.3-6, based on the conservative assumptions made for the purposes of this analysis, annual ROG and NO_X emissions and daily PM_{10} emissions associated with construction of the East Alternative would exceed YSAQMD thresholds of significance. Thus, construction of the East Alternative could exceed or contribute substantially to an existing or

projected air quality violation. The YSAQMD thresholds of significance are considered the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans, which are developed to maintain and attain ambient air quality standards. Consequently, because the East Alternative could generate construction-related emissions that exceed the YSAQMD thresholds, it could also conflict with or obstruct implementation of the applicable air quality plan. As noted, since it is not possible to know with certainty what the pace of development would be under the Proposed Project, the analysis assumes 25 percent of the new development that could occur under the East Alternative is under development in a single year. If instead a linear assumption was used for new development under the 2035 General Plan, this could involve 1/18th or approximately 6 percent of the total (2017 to 2015 is 18 years). If this were to occur, construction emissions would still exceed the annual threshold for ROG (12 tons/year), but not for NO_x (4 tons per year).

b. South Alternative–As shown in Table 4.3-6, based on the conservative assumptions made for the purposes of this analysis, annual ROG and NO_X emissions and daily PM_{10} emissions associated with construction of the South Alternative would exceed YSAQMD thresholds of significance. Thus, construction of the South Alternative could exceed or contribute substantially to an existing or projected air quality violation. The YSAQMD thresholds of significance are considered the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans, which are developed to maintain and attain ambient air quality standards. Consequently, because the South Alternative could generate construction-related emissions that exceed the YSAQMD thresholds, it could also conflict with or obstruct implementation of the applicable air quality plan. As noted, since it is not possible to know with certainty what the pace of development would be under the Proposed Project, the analysis assumes 25 percent of the new development that could occur under the South Alternative is under development in a single year. If instead a linear assumption was used for new development under the 2035 General Plan, this could involve 1/18th or approximately 6 percent of the total (2017 to 2015 is 18 years). If this were to occur, construction emissions would still exceed the annual threshold for ROG (12 tons/year), but not for NO_x (4 tons per year).

Table 4.3-6. Maximum Annual Criteria Air Pollutant and Precursor Construction Emissions

	East Alternative				South Alternative			
	Emissions (tons/year)[1]		Emissions (lbs/day)[2]		Emissions (tons/year)[1]		Emissions (lbs/day)[2]	
Source	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
Year 2017 [3]	54.15	16.62	645.42	80.09	52.92	16.41	626.50	78.14
YSAQMD Threshold of Significance	10	10	80	–	10	10	80	–
Exceeds Threshold?	Yes	Yes	Yes	–				

Notes: lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; YSAQMD = Yolo-Solano Air Quality Management District

[1] YSAQMD's ROG and NO_X thresholds of significance are in units of tons per year.

[2] YSAQMD's PM_{10} threshold of significance is in units of pounds per day.

[3] Construction emissions assume that 25 percent of all land uses are developed in the earliest possible construction year (2017).

Source: AECOM 2016; See Appendix D for detailed construction assumptions and modeling outputs.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The following YSAQMD rules and regulations would help reduce the Proposed Project's construction-related air quality emissions:

- **Rule 2.3 (Ringelmann Chart)**: This rule prohibits stationary diesel-powered equipment from generating visible emissions that would exceed the rule's visibility threshold.
- **Rule 2.5 (Nuisance)**: This rule prohibits any source from generating air contaminants or other materials that would cause injury, detriment, nuisance, or annoyance to the public; endanger the comfort, repose, health, or safety of the public; or damage businesses or property.
- **Rule 2.11 (Particulate Matter Concentration)**: This rule prohibits any source that would emit dust, fumes, or total suspended particulate matter from generated emissions that would exceed the rule's established emission concentration limit.
- **Rule 2.14 (Architectural Coatings)**: This rule establishes volatile organic compound (VOC) content limits for all architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured within YSAQMD's jurisdiction.
- **Rule 2.28 (Cutback and Emulsified Asphalts)**: This rule establishes organic compound limits for cutback and emulsified asphalts manufactured, sold, mixed, stored, used, and applied within YSAQMD's jurisdiction.

Proposed Project

The following 2035 General Plan goals and policies would reduce construction-related emissions:

- **Goal 7.F Improve Air Quality and Reduce Greenhouse Gas Emissions.** Protect and improve air quality in the Woodland area with the goal of attaining State and Federal health-based air quality standards.
- **Policy 7.F.2 Best Management Practices.** Require projects to implement Best Management Practices (BMPs) for reducing air pollutant emissions associated with the construction and operation of development projects.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Policy 7.F.2 is designed to reduce emissions by encouraging implementation of best management practices during construction activities. This policy requires the application of air emission reduction BMPs relevant to the site-specific and project-specific aspects of any given project. For the dust control strategies identified in the

implementation program above, YSAQMD estimates that the effectiveness would range between four percent and 99 percent, depending on the details of the site and project at hand (YSAQMD 2007, page 27). When multiple measures are applied to the same source of particulates, the effectiveness of a second measure would be based on the amount of dust that remains after implementing the first measure. For the exhaust-related strategies identified in the implementation program above, the effectiveness would depend on the number and extent of strategies incorporated and the details of the subject project. Since the timing and level of construction activities each year is unknown, it is not possible to estimate the extent to which the reduction strategies would result in emission reductions.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

Mitigation Measures

Mitigation Measure 4.3-1a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Air Quality 1)

New developments that could generate a potentially significant short-term air quality impact shall incorporate feasible construction mitigation strategies, including those listed below, those included in an updated set of mitigation recommendations prepared by the Yolo-Solano Air Quality Management District, or those determined by the City to be as effective:

a. Water all active construction areas at least twice daily.

b. Haul trucks shall maintain at least two feet of freeboard.

c. Cover all trucks hauling soil, sand, and other loose materials.

d. Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut-and-fill operations and hydroseed area.

e. Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).

f. Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.

g. Plant vegetative ground cover in disturbed areas as soon as possible.

h. Cover inactive storage piles.

i. Sweep streets if visible soil material is carried out from the construction site.

j. Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips or mulch.

k. Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel.

l. Limit all idling of vehicles and equipment that use gasoline or diesel fuel to five minutes maximum.

m. Use alternative power source, such as electricity, for construction equipment or use reformulated and emulsified fuels, incorporate catalyst and filtration technologies, and generally modernize the equipment fleet with cleaner and newer engines.

Mitigation Measure 4.3-1b – Policy 7.F.2. will be amended as follows:

- **Policy 7.F.2 Best Management Practices.** Require <u>all</u> projects to implement Best Management Practices (BMPs) for reducing air pollutant emissions associated with the construction and operation of development projects <u>as a standard City condition of approval.</u>

The above policy and mitigation measures would reduce construction-related impacts. However, because the District estimates that these measures have a range of effectiveness that can be well below 100 percent, construction-related emissions of criteria air pollutants and precursors could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, these emissions could conflict with or obstruct implementation of the applicable air quality plan. There are no additional feasible mitigation measures available to address this significant impact.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative–The impact is considered **significant and unavoidable**.

IMPACT 4.3-2 Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors. *Long-term operational emissions would be generated from day-to-day activities associated with residential and non-residential land uses under the Proposed Project. Operational emissions associated with the Proposed Project would exceed applicable YSAQMD thresholds. The level of operational emissions could conflict with or obstruct implementation of the applicable air quality plan. Proposed Project policies would reduce potentially significant impacts, but not to a level that would be below relevant thresholds. The impact is considered significant*

Potential Impacts Associated with Implementation of the Proposed Project

Implementation of the Proposed Project would include new development in the Planning Area, including buildings, structures, paved areas, roadways, utilities, and other improvements. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below. Daily activities associated with the operation of these land uses would generate criteria air pollutant and precursor emissions from mobile, energy, and area sources. Mobile sources include vehicle trips coming to and leaving existing and planned land uses. Area sources include, but are not limited to, natural gas combustion for water and space heating, landscape maintenance equipment, hearth (fireplace) operation, and periodic architectural coatings. While construction emissions are considered short-term and temporary, operational emissions are considered long-term and occur beyond the duration of the project. Therefore,

operational emissions have greater potential to affect the attainment status of an air basin, particularly as a result of increased traffic from additional development.

As described above in the Methodology section, long-term operational emissions of the Proposed Project were modeled using CalEEMod Version 2013.2.2. Table 4.3-7 presents the long-term operational emissions under both the East Alternative and the South Alternative, which was assumed to occur in year 2035. Refer to Appendix D for a detailed summary of the modeling assumptions, inputs, and outputs.

a. East Alternative–As summarized in Table 4.3-7, the East Alternative would generate emissions of ROG, NO_X, and PM_{10} that exceed the applicable YSAQMD thresholds of significance. Thus, because long-term operational emissions of ROG, NO_X, and PM_{10} would exceed YSAQMD thresholds of significance, the East Alternative could exceed or contribute substantially to an existing or projected air quality violation. The YSAQMD thresholds of significance are considered the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans, which are developed to maintain and attain ambient air quality standards. Consequently, because the East Alternative could generate long-term operational emissions that exceed the YSAQMD thresholds, it could also conflict with or obstruct implementation of the applicable air quality plan.

b. South Alternative–As summarized in Table 4.3-7, the South Alternative would generate emissions of ROG, NO_X, and PM_{10} that exceed the applicable YSAQMD thresholds of significance. Thus, because long-term operational emissions of ROG, NO_X, and PM_{10} would exceed YSAQMD thresholds of significance, the South Alternative could exceed or contribute substantially to an existing or projected air quality violation. The YSAQMD thresholds of significance are considered the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans, which are developed to maintain and attain ambient air quality standards. Consequently, because the South Alternative could generate long-term operational emissions that exceed the YSAQMD thresholds, it could also conflict with or obstruct implementation of the applicable air quality plan.

Table 4.3-7. Long-Term Operational Emissions

Emissions Source	East Alternative				South Alternative			
	Annual Emissions (tons/year)		Daily Emissions (lbs/day)		Annual Emissions (tons/year)		Daily Emissions (lbs/day)	
	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	793.13	9.46	2,758.42	2,75.36	790.78	9.47	2,758.42	2,758.36
Energy	2.04	18.24	7.57	7.57	2.0	17.91	7.57	7.57
Mobile	5.64	37.03	2.03	1.90	5.49	35.99	1.97	1.84
Total Operational Emissions [1]	800.80	64.72	2,768.02	2,797.83	798.25	63.37	2,767.96	2,767.77
YSAQMD Thresholds of Significance	10	10	80	–	10	10	80	–
Exceeds Thresholds?	Yes	Yes	Yes	–	Yes	Yes	Yes	–

Notes: lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; YSAQMD = Yolo-Solano Air Quality Management District

See Appendix D for detailed modeling assumptions, outputs, and results.

[1] Operational emissions were modeled for year 2035 when the Proposed Project is anticipated to be built out.

Source: AECOM 2016

In addition to typical land use development emission sources (i.e., mobile, energy, area), implementation of the Proposed Project could involve new stationary sources that generate long-term operational emissions above the emissions shown in Table 4.3-7. These stationary sources would be required to obtain permits from YSAQMD. These sources could include, but are not limited to, diesel engine or gas turbine generators for emergency power generation; central heating boilers for commercial or large residential buildings; process equipment for light industrial uses; kitchen equipment at restaurants and schools; service station equipment; and dry cleaning equipment. Information on stationary sources that could operate within the Planning Area in the future is not available at this time, and there is no reliable methodology to estimate these emissions. The emissions from these sources would be an addition to the estimated operational emissions described above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

YSAQMD currently enforces several rules and regulations that would reduce the long-term operational impacts described above. Rules that establish emissions standards for various commercial and industrial emission sources (e.g., internal combustion engines, gasoline dispensing facilities, water heaters and boilers) and volatile organic compound (VOC) concentrations in architectural coatings would help reduce operational emissions. In addition, vehicle emission standards established by ARB, such as the Low Emissions Vehicle Program and On-Road Heavy-Duty Program would help reduce long-term mobile source emissions.

Proposed Project

The following 2035 General Plan goals and policies would reduce operational air pollutant emissions associated with implementation of the Proposed Project.

- **Goal 7.F Improve Air Quality and Reduce Greenhouse Gas Emissions.** Protect and improve air quality in the Woodland area with the goal of attaining State and Federal health-based air quality standards.

- **Policy 7.F.1 YSAQMD Thresholds.** Utilize air quality thresholds of significance set by the YSAQMD.

- **Policy 7.F.2 Best Management Practices.** Require projects to implement Best Management Practices (BMPs) for reducing air pollutant emissions associated with the construction and operation of development projects.

- **Policy 7.F.4 Landscaping to Improve Air Quality.** Promote the increase of community-wide tree canopy and the use of plants and trees that are efficient pollutant absorbers.

- **Policy 7.F.5 Electric and Natural Gas Powered Equipment.** Promote inclusion of exterior electrical outlets and natural gas hookups in new residential development to encourage the use of electric, rather than gas-powered, equipment.

- **Policy 7.F.8 Reduce Vehicle Miles Travelled.** Continue to work in conjunction with the YSAQMD and other agencies to establish and implement additional transportation control measures that will reduce vehicle travel and improve air quality.

- **Policy 7.F.9 Climate Action Plan.** Implement the Climate Action Plan to achieve the city's greenhouse gas reduction targets by 2020, 2035, and 2050.

- **Policy 2.A.5 Complete and Well-Designed Neighborhoods.** Promote the development of complete neighborhoods with a physical layout and land use mix that: put residents in close proximity to services and amenities; promotes walking, biking, and transit use; fosters community pride; enhances neighborhood identity; ensures public safety; and meets the needs of all ages and abilities.

- **Policy 2.A.6 Infill Development.** Encourage infill development, adaptive reuse, and the restoration of historic buildings in existing urbanized areas to enhance community character, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, optimize city investment in infrastructure, support increased transit use, and enhance economic vitality.

- **Policy 2.C.1 Compact Form.** Promote compact development patterns, mixed land use, and higher-development intensities that conserve land resources, reduce vehicle trips, improve air quality, and facilitate walking, bicycling, and transit use. However, urban development and increased density, as supported by the City in this General Plan, may result in some less desirable impacts, such as increased traffic, greater noise, reduced private residential open space, and reduced privacy than in lower density areas. Where growth and increased density is allowed pursuant to this General Plan, these issues are acknowledged and accepted.

- **Policy 2.C.3 Alternative Transportation.** Actively support and facilitate mixed-use retail, employment, schools, and residential development around existing and future transit stops, bike routes, and pedestrian paths.

- **Policy 2.C.4 Resource Efficiency.** Encourage and incentivize buildings to be constructed so that they consume less energy, water, and other resources; allow natural ventilation; use daylight effectively; reduce stormwater runoff; and facilitate the use of clean energy whenever possible.

- **Policy 2.I.2 Increase Density.** Within mixed-use corridors, encourage replacement of older, low-scale, auto-oriented development with well-designed, higher-density, new projects that offer pedestrian orientation, more efficient use of land, and continued, productive economic value.

- **Policy 2.I.3 Green Streets.** Provide continuous street trees along Woodland's key corridors to create a network of "green streets" and cultivate a distinctive sense of identity.

- **Policy 2.M.1 Compact Form.** Promote the development of compact, complete neighborhoods that locate services and amenities within walking and biking distance of neighborhood residents, reducing the need to travel by car.

- **Policy 2.M.2 Mixed Uses.** Require neighborhood design that incorporates a mix of residential and non-residential development that addresses the basic daily needs of residents and employees. Each new growth area must incorporate some new employment generating uses.

- **Policy 2.M.3 Housing.** Design neighborhoods to include a mix of housing types at a range of densities and affordability levels that accommodate residents at all stages of life. Residential uses must achieve an overall minimum average density of eight dwelling units per gross acre across the Specific Plan.

- **Policy 2.M.4 Pedestrian and Bike Mobility.** Design streets to facilitate pedestrian and bicycle mobility in order to reduce automobile dependence and vehicle miles travelled. Utilize a traditional street grid with walkable blocks. Integrate a seamless greenbelt/trail system that provides recreational and transportation benefits.

- **Policy 2.M.5 Efficiency.** Strive for net zero energy development by encouraging buildings to be constructed so that they consume less energy, water, and other resources; allow natural ventilation; use daylight effectively; and facilitate the use of clean energy whenever possible.

- **Policy 2.M.6 Green Building.** Encourage sustainable, "green" building practices and construction techniques so that structures are designed, built, and renovated in a sustainable and resource-efficient manner.

- **Policy 3.A.4 Reduce Vehicle Miles Traveled (VMT).** Apply a VMT transportation performance metric threshold of 30 VMT per capita when measuring transportation impacts for subsequent projects and making General Plan consistency findings.

- **Policy 3.A.5 Transportation Demand Management (TDM) Ordinance.** Develop a TDM ordinance that presents tools and programs (e.g., alternative work schedules, telecommuting, ridesharing, or parking pricing) to encourage and create incentives for the use of alternative travel modes.

- **Policy 3.E.1 Pedestrian Promotion.** Promote walking through appropriate facilities, programs, and information. Support neighborhood walk-to-school efforts.

- **Policy 3.E.2 Safe and Comfortable Sidewalk Design.** Develop safe and pleasant sidewalks in compliance with adopted design standards to accommodate all users, including persons with disabilities, and complement the form and function of the land uses adjacent to each street segment.

- **Policy 3.E.3 Off-Street Pedestrian Paths.** Continue to develop off-street pedestrian paths for access to schools, recreation facilities, and neighborhood services in existing and future neighborhoods in the city.

- **Policy 3.E.5 Walkable Downtown.** Continue to enhance the pedestrian experience in the Downtown and continue to make streetscape improvements in the Downtown such as street trees, street furniture, public art, and bulb-outs to encourage walking. Evaluate, and when appropriate implement, all-way stops on Main Street in the Downtown.

- **Policy 3.F.1 Bikeway Master Plan.** Maintain a Bikeway Master Plan (BMP) to reflect current best practices for bike facilities and programs as well as bikeway changes to accommodate the cycling public. Figure 3-3 represents the planned routes in the BMP at the time of this General Plan update, but any future update to the BMP is considered the City's official bikeway plan. In the future, transition the BMP to an Active Transportation Plan that considers all forms of active transportation.

- **Policy 3.F.2 Bikeway Network.** Promote the development of a comprehensive system of recreational and commuter bicycle routes that provide safe and convenient connections between the city's major employment and housing areas; existing and planned bikeways; and schools, parks, retail shopping, and residential neighborhoods.

- **Policy 3.F.3 Bicycle Parking.** Encourage the development of convenient and secure bicycle parking and establish minimum parking standards at employment centers, schools, recreational facilities, transit terminals, commercial businesses, the Downtown core area, and other locations where people congregate.

- **Policy 3.F.4 Bicycle Facilities.** Require residential, commercial, and industrial developments to include bicycle lanes or pathways in accordance with the Bikeway Master Plan or Specific Plans when constructing new roadways or upgrading existing streets.

- **Policy 3.F.6 Bicycle and Transit Integration.** Work with YCTD to integrate public transportation systems and facilities with bike networks and accommodations.

- **Policy 3.F.8 Woodland-Davis Bikeway.** Work with Davis and Yolo County to implement the Woodland-Davis Bikeway project and pursue grant funding.

- **Policy 3.K.3 Bicycle Facilities.** Utilize grant monies, license fees, development impact fees and fines, along with capital improvement monies to help fund the development and installation of bikeways and bicycle parking facilities.

- **Goal 3.G Effective Transit System.** Promote a transit system that serves as a viable alternative to the automobile for those without access to a vehicle and those that choose to live and work in areas where land use density and intensity are supportive of transit.

- **Policy 3.G.1 Transit Services.** Work with YCTD to plan and implement transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

- **Policy 3.G.2 Right-of-way Preservation.** Consider the need for future transit right-of-way in reviewing and approving plans for development. Rights-of-way may either be exclusive or shared with other vehicles.

- **Policy 3.G.3 Transit Accommodations for All Users.** Consider the transit needs of all residents, workers, students, and visitors including seniors, low-income, disabled, and transit-dependent persons in making decisions regarding transit services.

- **Policy 3.G.5 YCTD Service Planning.** Coordinate with YCTD in the bus service planning process to ensure that routes serve areas with greatest demand and that intercity and inter-regional bus service is responsive to local needs.

- **Policy 3.G.6 Express Bus Service.** Partner with UC Davis and YCTD to evaluate feasibility of establishing express bus service between Woodland and Davis - particularly to key transit hubs on the UC Davis Campus and the Amtrak Station.

- **Policy 3.G.7 Transit Shelters/Stops.** Work with YCTD to ensure all bus stops are well designed and maintained. Higher utilized stops shall incorporate special design features such as shelter structures, lighting, secure bike parking, enhanced pavement, landscaping, and artwork.

- **Policy 3.G.8 Transit in Downtown.** Continue to emphasize the central role of Downtown in transit planning including establishing a transit hub in or near Downtown, consistent with the 2016 YCTD Woodland Transit Study.

- **Policy 3.G.9 Bike and Pedestrian Connections.** Ensure transit stops are connected to an integral part of the city's pedestrian and bicycle network.

- **Policy 3.H.1 Parking Footprint.** Strive to reduce the amount of land devoted to parking through such measures as development of consolidated parking facilities/structures, the application of shared parking for mixed-use developments, car share programs, alternative investment in bike and pedestrian facilities, and the implementation of Transportation Demand Management plans to reduce parking needs.

- **Policy 3.H.5 Priority Parking Locations.** Promote priority parking in safe and convenient locations for employee car pools, park-and-ride lots, electric/clean vehicle, and cyclists.

- **Policy 3.H.6 Parking Standards.** Reduce minimum parking requirements and set maximums over time, particularly for mixed use and transit oriented developments, to promote walk and bike friendly environments throughout the city.

- **Policy 3.H.7 Electric/Alternative Fuel Vehicle Parking.** Require new large commercial and retail developments, large employment centers, high-use public buildings, and parking structures to provide parking for alternative fuel vehicles including charging stations for electric vehicles. Require electric vehicle charging outlets in garages of all new single family residential homes.

- **Policy 3.H.8 Parking Lot Placements.** Parking lots along street frontages shall be well designed to reduce their visual impact and maximize pedestrian and bicycle compatibility and safety.

- **Policy 3.K.3 Bicycle Facilities.** Utilize grant monies, license fees, development impact fees and fines, along with capital improvement monies to help fund the development and installation of bikeways and bicycle parking facilities.

- **Policy 3.K.4 Transit Infrastructure.** Require new development to pay a fair share of capital improvements related to transit service.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The Proposed Project policies and actions would reduce air quality emissions from various sources (e.g., energy, water, transportation). However, operational emissions from implementation of the Proposed Project would still result in a net increase of ROG, NO_X and PM_{10} emissions that could exceed or contribute substantially to an existing or projected air quality violation. In addition, these emissions could conflict with or obstruct implementation of the applicable air quality plan.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.3-2 – Implement Mitigation Measure 4.3-1b.

The Proposed Project contains several policies that would promote mixed-use and infill development. Policies have been developed to site residents, jobs, and retail amenities in proximity of each other to reduce the need for motor vehicle travel. The Proposed Project would encourage modes of transportation that can reduce or eliminate air pollutant emissions. Since transportation is a major source of criteria air pollutants, this is important for reducing the operational impacts of the Proposed Project. Policies would support development of pedestrian and bicycle facilities that would promote non-vehicular modes of travel. In order to eliminate or minimize transportation-related emissions, policies have also been designed to encourage pedestrian, bicycle, and transit access and mobility that would reduce transportation-related air quality impacts. In addition, the 2035 CAP's actions related to energy, transportation and land use, water and waste, and municipal operations would not only reduce greenhouse gas emissions, but also criteria air pollutants.

The above policies would reduce long-term operation air quality impacts. However, because the precise effectiveness of these measures cannot be determined at the time of this analysis, it is likely that operational emissions of criteria air pollutants and precursors could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, these emissions could conflict with or obstruct implementation of the applicable air quality plan. There are no additional feasible mitigation measures available to address this significant impact.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative– The impact is considered **significant and unavoidable**.

IMPACT 4.3-3 Expose Sensitive Receptors to Substantial Pollutant Concentrations. *Project-related vehicle trips would contribute vehicles to local intersections that could cause a CO hotspot (i.e., exceedance of the CO ambient air quality standard). However, it is not anticipated that the Proposed Project's land uses would contribute substantial vehicle volumes to existing or future intersections that could cause a CO hotspot. During construction and operation of the Proposed Project, localized air quality emissions would be generated that could affect existing and proposed sensitive receptors. Construction activities would generate diesel particulate matter (diesel PM) emissions that could affect existing and proposed sensitive receptors. Existing regulations and proposed policies and implementation programs would reduce potential exposure to substantial pollutant concentrations. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Construction activities and the operational phase of the Proposed Project could involve activities that could expose sensitive receptors to pollutant concentrations. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

CO Hotspots

A mobile-source pollutant of localized concern is CO. Local mobile-source emissions of CO near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels for local sensitive land uses such as residential units, hospitals, schools, and childcare facilities.

YSAQMD recommends a screening approach to estimate whether a project's traffic impact would cause a potential CO hotspot at any given intersection. If either of the following criteria is met, then the project could have the potential to create a violation of the CO standard.

- A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to an unacceptable LOS (typically LOS E or F); or

- A traffic study indicates that the project will substantially worsen an already existing peak-hour LOS F on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.

a. East Alternative–As discussed in Section 4.13 of this EIR, "Transportation and Circulation" and shown in Table 4.3-8, there are three roadways that would operate at LOS E or F under East Alternative of the Proposed Plan. Therefore, the East Alternative should involve further analysis, according to screening guidance provided by YSAQMD. This screening is performed later in this analysis.

Table 4.3-8. Roadway Volumes Operating at LOS E or F with the East Alternative			
Road Name	Segment	ADT	LOS
County Road 102	E. Gibson Road to Farmers Central Road	22,300	**E**
E. Gum Avenue	Bourn Drive to Pioneer Avenue	10,760	**E**
Maxwell Avenue	East of County Road 102	25,540	**F**
Source: Fehr and Peers 2016			

YSAQMD works closely with the Sacramento Metropolitan Air Quality Management District (SMAQMD) due to their proximity and similar air quality issues. SMAQMD provides additional screening methods to determine if a project would have the potential to create a violation of the CO standard. If all of the following criteria are met, the Proposed Plan would result in a less-than-significant impact on air quality for local CO:

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.
- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other locations where horizontal or vertical mixing of air would be substantially limited.
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average.

The maximum daily volumes on the above listed roadways would not exceed 25,540 vehicles, which would occur on the I-5 Mainline. The corresponding peak hour volumes would be anticipated to be approximately 2,500 vehicles per hour, and therefore, the East Alternative of the Proposed Plan would not increase traffic volumes on the roadways and at intersections to more than 31,600 vehicles per hour. Therefore, emissions of CO from local mobile sources and generated by the East Alternative would not result in or substantially contribute to emissions concentrations that exceed the 1-hour ambient air quality standard of 20 ppm or the 8-hour standard of 9 ppm, respectively. This impact would be considered **less than significant**.

b. South Alternative–As discussed in Section 4.13 of this EIR, "Transportation and Circulation" and shown in Table 4.3-9, there are two roadways that would operate at LOS E or worse under South Alternative of the Proposed Project. Therefore, the South Alternative should involve further analysis, according to screening guidance provided by YSAQMD. This screening is performed later in this analysis.

Table 4.3-9. Roadway Volumes Operating at LOS E or F with the South Alternative			
Road Name	Segment	ADT	LOS
County Road 102	E. Gibson Road to Farmers Central Road	21,370	**E**
I-5 Mainline	East of County Road 102	72,960	**E**
Source: Fehr and Peers 2016			

YSAQMD works closely with the Sacramento Metropolitan Air Quality Management District (SMAQMD) due to their proximity and similar air quality issues. SMAQMD provides additional screening methods to determine if a project would have the potential to create a violation of the CO standard. If all of the following criteria are met, the Proposed Project would result in a less-than-significant impact on air quality for local CO:

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.
- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other locations where horizontal or vertical mixing of air would be substantially limited.
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average.

The maximum daily volumes on the above listed roadways would not exceed 72,960 vehicles, which would occur on the I-5 Mainline. The peak hour volumes are anticipated to be approximately 7,000 vehicles per hour, and therefore, the South Alternative would not increase traffic volumes on the roadways and at intersections to more than 31,600 vehicles per hour. Implementation of the South Alternative would also not contribute traffic to a location where horizontal or vertical mixing of air would be substantially limited, and the mix of vehicle types at these intersections is not anticipated to have a greater percentage of heavy-duty vehicles and would not be substantially different from the County average. Therefore, emissions of CO from local mobile sources generated by the South Alternative would not result in, or substantially contribute to, emissions concentrations that exceed the 1-hour ambient air quality standard for CO of 20 ppm or the 8-hour standard of 9 ppm, respectively. This impact from potential CO hotspots would be considered **less than significant**.

Construction-Related TACs

Implementation of the Proposed Project would result in the construction of new buildings, structures, paved areas, roadways, utilities, and other improvements. Heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles associated with this construction could generate diesel PM, which the ARB has identified as a TAC. This includes construction activities associated with development anticipated under the 2035 General Plan in addition to short-term emissions associated with equipment upgrades, renewable energy facility installations, energy efficiency building upgrades, tree planting, and other measures included in the City's 2035 CAP.

Generation of diesel PM from construction projects typically occurs in a single area (e.g., at the project site) for a short period of time, but could also include linear infrastructure projects to support new land uses. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed would also vary throughout the construction period.

During some equipment-intensive phases, such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction or architectural coatings. Even in intensive

phases of construction, there would not be substantial pollutant concentrations, with the potential exception of the immediate vicinity of the construction site. Concentrations of mobile-source diesel PM emissions are typically reduced by 70percent at a distance of approximately 500 feet (ARB 2005).

The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks for the Maximally Exposed Individual (MEI). According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments (HRAs) used to determine the exposure of sensitive receptors to TAC emissions should be based on a 30-year exposure period. However, such assessments should also be limited to the period/duration associated with construction activities. OEHHA recommends that construction activities for individual projects that are longer than 2 months be evaluated for potential cancer risks.

Construction activities associated with the Proposed Project would have intermittent and temporary construction emissions. With the Proposed Project's focus on promoting infill development – particularly in the Downtown Mixed Use and Corridor Mixed Use designated areas – it is possible that construction projects would occur in areas adjacent to sensitive receptors. However, because the use of off-road heavy-duty diesel equipment would be temporary and intermittent, and because of the highly dispersive properties of diesel PM (Zhu et al. 2002), construction-related TAC emissions associated with typical construction activities would not expose sensitive receptors to substantial concentrations of TACs.

In addition, it is important to note that emissions from construction equipment would be reduced over the period of buildout of the Proposed Project. In January 2001, EPA promulgated a final rule to reduce emissions standards for heavy-duty diesel engines in 2007 and subsequent model years. These emissions standards represented a 90 percent reduction in NO_X emissions, 72 percent reduction of non-methane hydrocarbon emissions, and 90 percent reduction of PM emissions in comparison to the emissions standards for the 2004 model year. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA on May 11, 2004. As such, engine manufacturers were required to meet after-treatment-based exhaust standards for NO_X and PM starting in 2011 that are more than 90 percent lower than 2004 levels, putting emissions from off-road engines virtually on par with those from on-road heavy-duty diesel engines. As construction equipment continues to turnover and/or be retrofitted over time, diesel PM emissions associated with construction will continue to decrease.

However, even considering the information above, because the exact location with respect to sensitive receptors and length of construction activities cannot be determined at the time of this analysis, it is conservatively assumed that certain construction activities could expose sensitive receptors to substantial TAC concentrations. This TAC impact from construction activities is considered **potentially significant**

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Operational TACs

The Proposed Project plans for the development of new residential, commercial, and industrial uses. Residential land uses do not typically generate substantial TAC emissions. Commercial land uses may potentially include stationary sources of TACs, such as dry-cleaning establishments and diesel-fueled back-up generators.[10] These types of stationary sources, in addition to any other stationary sources (including industrial land uses) that may emit TACs would be subject to YSAQMD Rules and Regulations. Land uses that are more likely to generate substantial TAC emissions include industrial land uses that involve stationary sources and manufacturing processes.

ARB has developed the *Air Quality and Land Use Handbook: A Community Health Perspective* to provide guidance on land use compatibility with sources of TACs (ARB 2005). These sources include freeways and high-traffic roads, commercial distribution centers, rail yards, refineries, dry cleaners, gasoline stations, and industrial facilities. The handbook is not a law or adopted policy, but offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs. The handbook indicates that land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations relevant to the Proposed Project include:

- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).
- Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation.
- Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

With careful evaluation of exposure, health risks, and affirmative steps to reduce risk, where necessary, ARB's assumption is that infill development, mixed use, higher density, transit-oriented development, and/or other development types that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.

SMAQMD has developed the *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways* guidance, consistent with the ARB recommendations, and with detailed guidance

[10] Potential risk associated with dry cleaners has, and will continue to be dramatically reduced. At its public hearing on January 25, 2007, the ARB approved amendments to the Dry Cleaning ATCM and the adoption of requirements for Perc manufacturers and distributors. The amendments will over time phase out the use of Perc dry cleaning machines and related equipment by January 1, 2023. In addition, the amendments will put in place revisions to the Curriculum for the Environmental Training Program for Perc Dry Cleaning Operations (Training Curriculum). On December 27, 2007, the approved Dry Cleaning ATCM and the requirements for Perc manufacturers and distributors became state law.

for the Sacramento region (SMAQMD 2011). The protocol includes screening tables based on peak hourly volumes that can be used to evaluate the cancer risk associated with major roadways. Development within the Planning Area would contribute vehicle traffic on these roadways, which could increase the potential health risk for sensitive receptors that are located immediately adjacent to high-volume roadways. As shown in Table 4.3-10, considering the peak vehicle volumes in 2035 and using screening tables in the protocol, receptors may be exposed to a maximum cancer risk of 143 cases in a million within 200 feet of the East Street to SR 113 segment of the east-west stretch of I-5. The protocol states that if the nearest sensitive receptor's increase in individual cancer risk is lower than the evaluation criterion of 276 cases per million, no further roadway-related air quality evaluation is recommended. Since the Proposed Project is consistent with the protocol recommendations, no adverse health risks are anticipated from the roadways in the Planning Area, even in this worst-case location.

Table 4.3-10. Cancer Risk Adjacent to I-5

Road Name	Segment	Receptor Location	East Alternative Additional Cancer Risk	South Alternative Additional Cancer Risk
I-5 Mainline	West Street to East Street	No receptors within 500 feet	N/A	N/A
	East Street to SR 113	Hotel – 217 feet (downwind)	143	143
	SR 113 to E. Main Street	Church – 138 feet (upwind)	121	121
	E. Main Street to County Road 102	House – 121 feet (upwind)	108	108
	East of County Road 102	Hotel – 225 feet (downwind)	143	143

Notes: Conservatively assumes the highest category for peak-hour volumes (e.g., estimated average daily trips [ADT] of 7,500 for I-5 using the 8,000 ADT category and associated health risks in Tables 1 and 2 of the protocol).

Source: SMAQMD 2009, source of traffic volume estimate: Fehr & Peers 2016

Based on screening analysis from SMAQMD, the incremental risk at 10 feet from Interstate 5 through Woodland under the Proposed Project (both East and South Alternatives) is approximately 200 cases in a million north of I-5, 100 cases south of I-5, 220 cases east of I-5, and 150 cases west of I-5 (SMAQMD 2011, Tables 1 and 2, pages 9 and 10). As noted, SMAQMD's protocol states that if the nearest sensitive receptor's increase in individual cancer risk is lower than the evaluation criterion of 276 cases per million, no further roadway-related air quality evaluation is recommended. Even at 10 feet from I-5, future sensitive uses that could be developed under the Proposed Project would not exceed SMAQMD's threshold.

Mobile sources of TACs would be associated primarily with the operation of on-road heavy-duty diesel trucks used for on-site commercial/industrial activities (e.g., unloading/loading). The ARB, in its *Air Quality and Land Use Handbook: A Community Health Perspective*, recommends avoiding the siting of new commercial trucking facilities that accommodate more than 100 trucks per day, or 40 trucks equipped with transportation refrigeration units (TRUs), within 1,000 feet of sensitive receptors (e.g., residences) (ARB 2005).

Operational activities that require the use of diesel-fueled vehicles for extended periods, such as commercial trucking facilities or delivery/distribution areas, may generate diesel PM emissions that could expose sensitive receptors to diesel PM emissions. Although commercial and industrial uses that would be developed under the Proposed Project have not been specifically identified, it is possible that uses developed under the Proposed Project could have tenants that would require large delivery and shipping trucks that use diesel fuel. The diesel exhaust PM emissions generated by these uses would be produced primarily at single locations on a regular basis (e.g., loading dock areas). Idling trucks, including TRUs, increase diesel PM levels at these locations. Occupants

of nearby existing and proposed residences could be exposed to diesel exhaust PM emissions on a reoccurring basis.

ARB has adopted an idling restriction Airborne Toxic Control Measure (ATCM) for large commercial diesel-powered vehicles, which became effective February 1, 2005. In accordance with this measure, affected vehicles are required to limit idling to no longer than 5 minutes, under most circumstances. In addition, projects that utilize TRUs as part of their operations or facilities that meet the required number of loading docks would be required to comply with the ARB's Transport Refrigeration Unit ATCM, which sets in-use emission performance standards for TRUs to limit diesel PM emissions.

Implementation of the Proposed Project would result in the operation of new land uses that could expose sensitive receptors to adverse impacts associated with operational TAC emissions. Because the actual proposed uses have not been determined at the time of this analysis, it is possible that development planned under the Proposed Project could generate substantial TAC emissions as a result of long-term operations. Individual development projects could be located within the siting distances recommended by ARB's Air Quality and Land Use Handbook, and sensitive receptors could experience the adverse health effects from TACs. Under general plans, it is not possible to list each type of new stationary source or describe TAC exposure for any given project or location within the Planning Area without substantial speculation. However, it is possible that projects developed under the Proposed Project would include stationary sources of TACs, such as gasoline-dispensing facilities and diesel-fueled backup generators. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to YSAQMD rules and regulations. Rule 3.4 requires any new or modified stationary source that generates emissions that exceed established emissions limits for each pollutant to comply with Best Available Control Technology and emissions offset requirements. Rule 3.13 requires any constructed or reconstructed major source of TACs to install best available control technology for toxics.

Stationary sources in the Planning Area are permitted and regulated to prevent land use compatibility conflicts with existing uses. However, it is possible that new sensitive land uses developed as part of the Proposed Project could be sited in proximity of stationary sources. It is possible that sensitive receptors under the Proposed Project could locate at distances from stationary sources that would expose them to substantial TAC concentrations. This TAC impact is considered **potentially significant**.

There are two active rail lines running through the city. The California Northern Railroad runs north to south through the middle of the City, and the Sierra Northern Railway runs east to west and runs through the eastern half of the City. As described in Section 4.11 of this EIR, "Noise and Vibration," the California Northern Railroad is a freight line that carries an average of two trains per day, while the Sacramento River Train (running on the Sierra Northern Railway) is an entertainment passenger train that runs an average of one round-trip per day. Both rail lines have sensitive receptors located in proximity of the operational pathway and therefore railroad activities have the potential of exposing sensitive receptors to diesel PM emissions associated with locomotive engines.

Although the ARB Land Use Handbook does not provide specific guidance for siting sensitive receptors with respect to railroad lines, ARB uses 1,000 feet as a minimum distance from most TAC sources, such as distribution centers or rail yards. The closest sensitive receptors to the existing rail lines are located approximately 200 feet south of and 180 feet north of the Sierra Northern Railway line, and approximately 50 feet west of and 100 feet east of the California Northern Railroad. Because sensitive receptors are located within the prescribed buffer zone, this analysis evaluates the potential health risks of railroad operations using the SMAQMD's *Recommended*

Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways (Roadway Protocol) (SMAQMD 2011). The Roadway Protocol determined an "evaluation criterion" over which projects would need to perform a site-specific health risk assessment.

Railroad activities at full buildout of the Proposed Project were conservatively assumed to double from the activity levels described above. Both train types for each rail line were assumed to be equipped with Tier 4 engines at full buildout (year 2035).[11] Locomotive diesel PM emissions occurring in proximity of the City's sensitive receptors were estimated using emission factors from USEPA (EPA 2009). In order to compare railroad emissions with the Roadway Protocol, EMFAC was used to estimate the equivalent number of year 2035 Yolo County vehicles that would generate similar diesel PM emissions. These Yolo County-specific estimates were then converted to Sacramento County 2011 vehicle fleet volumes in order to compare directly with the SMAAMD Roadway Protocol. Table 4.3-11 presents the estimated health risks associated with future railroad activities.

Table 4.3-11. Risk Adjacent to Railways

Yolo County Vehicle Volume (vehicle/hr)[1]	Equivalent Protocol Volume (vehicle/hr)[2]	Distance to Sensitive Receptor (ft)[3]	Protocol Traffic Volume (vehicle/hr)[4]	Protocol Distance to Sensitive Receptor (ft)[5]	Protocol Incremental Cancer Risk
Sacramento River Train					
2,168	933	170 (north)	4,000	100	102
2,168	933	210 (south)	4,000	200	32
California Northern Railway					
4,758	2,048	100 (east)	4,000	100	105
4,758	2,048	50 (west)	4,000	50	83

Notes: hr = hour; ft = feet

[1] Vehicle volumes represent the equivalent number of Yolo County vehicles in year 2035 that would generate the same amount of daily railroad diesel PM emissions. This estimate accounts for the percentage distribution of diesel-fueled vehicles in Yolo County's 2035 vehicle mix from EMFAC.

[2] Vehicle volumes represent the equivalent number of Sacramento County vehicles in year 2011, which is the geographical location and operational year used to develop the Roadway Protocol screening values, that would generate the same amount of daily railroad diesel PM emissions.

[3] Distances represent the closest distance to sensitive receptors along the rail line throughout the City boundaries.

[4] This analysis conservatively uses screening values for the 4,000 vehicles per hour category, which is the lowest screening level, but is substantially higher than the railroad-equivalent number of Sacramento County vehicles.

[5] This analysis uses the nearest incremental receptor distance provided by the Roadway Protocol to conservatively estimate potential cancer risks.

Source: SMAQMD 2011, AECOM 2016

As shown in Table 4.3-11 above, all incremental cancer risks associated with the future railroad operations would be below SMAQMD's evaluation criterion (of 276 excess cases in a million). Given that future locomotive emission rates would continue to decline with more stringent emission standards and higher emissions technology, and the fact that the City's rail lines would not be a substantial amount of diesel PM emissions that

[11] Tier 4 engines are those manufactured relatively more recently with relatively more stringent emission standards.

would trigger a health risk assessment, it is anticipated that railroad emissions from future operations would not generate substantial TAC emissions. Therefore, it is not anticipated that the Proposed Project's sensitive receptors would be exposed to substantial TAC emissions from railroad operations. This TAC impact from railroad operations is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

ARB implements several statewide diesel-related programs and strategies designed to reduce diesel PM emissions and subsequent exposure. The following programs would help at a statewide level to reduce and regulate diesel PM and TAC emissions:

- **In-Use Mobile Agricultural Equipment Regulation**. Used as a regulation for mobile agricultural equipment that moves California towards meeting ambient air quality standards for the San Joaquin Valley by using the cleanest available technologies. The regulation provides the administrative mechanism for emission reductions resulting from mobile agricultural equipment program projects to be eligible for State Implementation Plan credit.

- **In-Use Off-Road Equipment**. Used as a regulation to reduce diesel particulate matter and oxides of nitrogen emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations.

- **New Off-Road Engines and Equipment.** This category consists of regulations applicable to Off-Road Compression-Ignition Engines (a.k.a. diesel engines), and is primarily for the interest and needs of manufacturers and others that are required to obtain certification from ARB. These engines are found in a wide variety of off-road applications, such as farming, construction, and industrial. Some familiar examples include tractors, excavators, dozers, scrapers, and portable generators.

- **Heavy-Duty In-Use Vehicle Regulation.** This regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.

- **Heavy-Duty Vehicle Inspection Program (HDVIP).** Enforcement program developed to control excessive smoke emissions and tampering from heavy-duty diesel trucks and buses. The HDVIP program requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering, and engine certification label

compliance. Any heavy-duty vehicle traveling in California, including vehicles registered in other states and foreign countries may be tested.

- **Heavy-Duty Diesel Emission Control Label Inspection Program.** Enforcement program developed as a way to reduce emissions of air contaminants through the fair, consistent and comprehensive enforcement of air pollution laws, and by providing training and compliance assistance. Each vehicle operating in California - including those in transit from Mexico, Canada, or any other state - must be equipped with engines that meet California and/or U.S.EPA or equivalent emission standards as provided on specified Emission Control Labels (ECLs). The ECL must be legible, maintained at the location originally installed by the engine manufacturer and correspond to the engine serial number stamped on the engine.

- **In-Use Public and Utility Fleets (Heavy-Duty).** Regulation mandating Public Agency and utility vehicle owners reduce diesel PM emissions from their affected vehicles through the application of Best Available Control Technology on these vehicles by specified implementation dates. Implementation is phased-in by engine model year groups with the goal to reduce both criteria pollutant emissions and exposure to toxic air contaminants.

- **In-Use Solid Waste Collection Vehicles (SWCV).** Regulation targeting the reduction of cancer-causing particulate matter and smog-forming nitrogen oxide emissions from diesel-fueled waste collection trucks to reduce the harmful health impacts of exhaust. The regulation requires owners to use ARB verified control technology that best reduces emissions, following a phased-in schedule from 2004 through 2010.

Proposed Project

The following General Plan policies and implementation programs would reduce impacts related to exposure to substantial pollutant concentrations:

- **Goal 7.F Improve Air Quality and Reduce Greenhouse Gas Emissions.** Protect and improve air quality in the Woodland area with the goal of attaining State and Federal health-based air quality standards.

- **Policy 7.F.3 Protect Sensitive Receptors.** For the purposes of environmental review, consider hospitals and residential care facilities to be "sensitive receptors." Discourage the location of new sensitive receptor uses within 500 feet of a limited access state highway (SR 113 and 1-5).

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of the above policies, the impact related to exposure to substantial pollutant concentrations would be reduced.

    a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant** for CO

hotspots and railroad operations and **potentially significant** for construction activities and the potential for sensitive receptors to be exposed to substantial pollutant concentrations from stationary sources.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant** for CO hotspots and railroad operations and **potentially significant** for construction activities and the potential for sensitive receptors to be exposed to substantial pollutant concentrations from stationary sources.

Mitigation Measures

Mitigation Measure 4.3-3a – Policy 7.F.3 should be amended as follows:

- **Policy 7.F.3. Protect Sensitive Receptors.** For the purposes of environmental review of potential toxic air contaminant impacts, consider residentially designated land uses, hospitals and other medical facilities, ~~and~~ residential care facilities, schools, day care centers, playgrounds to be "sensitive receptors." Discourage the location of new sensitive receptor uses within 500 feet of a limited access state highway (SR 113 and 1-5). Implement applicable buffer distances recommended by the California Air Resources Board between sensitive uses and sources of substantial pollutant concentrations.

Mitigation Measure 4.3-3b – Implement Mitigation Measure 4.3-1b.

Mitigation Measure 4.3-3c – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Air Quality 2)

a. New development shall be required to demonstrate adherence with applicable YSAQMD-recommended health risk thresholds involving sensitive receptors, uses that involve substantial truck trips, and large gas stations, as defined by the applicable regulations. "Substantial truck trips" is defined as more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or TRU unit operations that exceed 300 hours per week. A "large gas station" is one that would be anticipated to accommodate a throughput of 3.6 million gallons per year or greater.

b. Proposed uses that include sensitive receptors may demonstrate compliance with this implementation program by providing a minimum 1,000-foot buffer from existing uses that involve substantial truck trips and a minimum 50-foot buffer from existing large gas stations.

c. Proposed uses that involve substantial truck trips may demonstrate compliance with this implementation program by providing a minimum 1,000-foot buffer from properties where the City's land use designation would allow sensitive receptors.

d. Proposed large gas stations may demonstrate compliance with this implementation program by providing a minimum 300-foot buffer, while typical gas dispensing facilities would provide a minimum 50-foot buffer from existing sensitive receptors and from properties where the City's land use designation would allow sensitive receptors.

e. Avoid siting new sensitive receptors within 500 feet of the edge of the closest travel lane of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

f. Avoid siting new sensitive land uses within 300 feet of any existing dry cleaning operation.

g. As an alternative to these buffer distances, proposed sensitive receptors, uses that involve substantial truck trips, and large gas stations may provide a site-specific health risk assessment, using methods consistent with applicable guidance from the Office of Environmental Health Hazard Assessment, with mitigation, if necessary, to demonstrate compliance with applicable YSAQMD-recommended health risk thresholds. When health risk impacts exceed YSAQMD-recommended thresholds, feasible on-site mitigation measures to reduce TAC exposure shall be implemented to mitigate health risk impacts below YSAQMD thresholds. On-site measures could include, but are not limited to providing enhanced filtration systems (e.g., MERV 13 or greater) for near-by sensitive receptor buildings, changes to the TAC emission source's operation, and positioning of exhaust and intake for ventilation systems to minimize exposure among others.

Mitigation Measure 4.3-3d – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Air Quality 3)

a. New development that would require the use of diesel-fueled construction equipment within 300 feet of an existing sensitive receptor shall use an equipment mix, incorporate buffering, schedule construction activities, or use other strategies to reduce potential health risk consistent with guidance from the Yolo-Solano Air Quality Management District.

b. Alternatively, a project applicant may prepare a site-specific estimate of diesel PM emissions associated with total construction activities and evaluate for health risk impact on existing sensitive receptors in order to demonstrate that applicable YSAQMD-recommended thresholds for toxic air contaminants would not be exceeded or that applicable thresholds would not be exceeded with the application of alternative mitigation techniques approved by the City.

The Proposed Project contains policies to reduce emissions associated with both construction and operational activities. The Proposed Project includes Policy 7.F.3 that would discourage development in locations that would conflict with the buffer recommendations in the ARB Air Quality and Land Use Handbook. Mitigation Measures 4.3-3c and 4.3-3d provide specific guidance tied to performance standards that have been developed to protect the public health. The buffer distances incorporated into Mitigation Measure 4.3-3c are consistent with guidance from ARB. Implementation Program Air Quality 3 includes as an option to use an equipment mix, including the use of Tier 4 engine emission standards, which have been shown to reduce PM emissions by more than 90 percent from current levels or site-specific analysis and mitigation with clear performance outcomes tied to YSAQMD-recommended thresholds.

Summary of Impact after Mitigation

a. East Alternative–With the incorporation of mitigation, the TAC impact attributable to construction activities would be **less than significant**. However, the potential for sensitive receptors to be exposed to substantial pollutant concentrations from stationary sources remains significant, even with the

Proposed Project's policies and mitigation measures described above. There is not additional feasible mitigation. The impact related to stationary sources of TACs is **significant and unavoidable**.

b. South Alternative–With the incorporation of mitigation, the TAC impact attributable to construction activities would be less **than significant**. However, the potential for sensitive receptors to be exposed to substantial pollutant concentrations from stationary sources remains significant, even with the Proposed Project's policies and mitigation measures described above. There is not additional feasible mitigation. The impact related to stationary sources of TACs is **significant and unavoidable**.

IMPACT 4.3-4 Objectionable Odors Affecting a Substantial Number of People. *The Proposed Project includes policies that would avoid exposure of a substantial number of people to objectionable odors. The impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project could involve actions that would expose people to objectionable odors. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The human response to odors is subjective and sensitivity to odors varies greatly among the public. Two situations increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odors. YSAQMD has developed a list of facilities that are known producers of odors where more analysis may be warranted or where greater distance should separate a project from the odor source. Those facilities include, but are not limited to, wastewater treatment facilities (such as the WPCF), chemical manufacturing, sanitary landfill, transfer station, painting/coating operations (e.g., auto body shops), and food processing facility.

The following land use types are widely considered major sources of odors: wastewater treatment and pumping facilities, chemical manufacturing facilities, sanitary landfills, fiberglass manufacturing facilities, transfer stations, painting/coating operations (e.g., auto body shops), composting facilities, food processing facilities, confined animal facilities, asphalt batch plants, rendering plants, metal smelting plants, and coffee roasters. This list is meant not to be entirely inclusive, but to act as general guidance. Odor sources in the Planning Area would be expected to include cooking and food processing facilities, other industrial sources, the wastewater treatment plant (WPCF), and other sources.

The City conducted an analysis of the Proposed Project's impacts on the WPCF (Nexgen 2015). The WPCF has several sources of odors. The facility has open water surfaces of raw sewage exposed to the air. In addition, the oxidation ditches have a musty smell similar to compost and septic sludge and algae die-off within ponds can produce odors. Offensive odors can be detected for several hundred feet from the area. The report included mitigation measures for future development near the WCPF, such as the dedication of a land buffer; the construction of solid walls and fans; the addition of chemicals to reduce the formation of hydrogen sulfide; conversion to mechanical sludge dewatering; cover, contain, or scrub foul air from open water surfaces; communication to the public; or a combination of these. The report concluded that WPCF would incur substantial construction and operations and maintenance costs, and/or diminished operational flexibility in order to avoid future odor impacts.

Minor sources of odors associated with the Proposed Project would be associated with the construction of the proposed land uses. The predominant source of power for construction equipment is diesel engines. Exhaust odors from diesel engines, as well as VOC emissions associated with asphalt paving and the application of architectural coatings, may be considered offensive to some individuals. Similarly, diesel-fueled locomotives traveling along railroad lines, and diesel-fueled trucks traveling on local roadways would produce associated diesel exhaust fumes. However, because odors associated with diesel fumes would be temporary and would disperse rapidly with distance from the source, construction-generated and mobile-source odors would not result in the frequent exposure of on-site receptors to objectionable odor emissions.

According to YSAQMD, for a project located near an existing source of odors, the impact is potentially significant when the project site is at least as close as any other site that has already experienced significant odor problems related to the odor source. For projects locating near a source of odors where there is currently no nearby development and for odor sources locating near existing receptors, the determination of significance should be based on whether odor complaints from the public have occurred in the vicinity of a similar facility at a similar distance.

YSAQMD regulates nuisance odors, although certain odors are exempted, such as odors from agricultural activities and composting facilities. Any actions related to odors are based on citizen complaints to local governments and the YSAQMD.

Potential sources that may emit odors during construction activities include equipment and vehicle diesel exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the development area. Exhaust odors from diesel engines, as well as ROG emissions associated with asphalt paving and the application of architectural coatings may be considered offensive to some individuals. Similarly, diesel-fueled trucks traveling on local roadways would produce associated diesel exhaust emissions. However, odors associated with diesel fumes, asphalt paving, and architectural coatings would be temporary and would disperse rapidly with distance from the source. Projects constructed under the Proposed Project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. Therefore, construction-generated odors would not result in frequent exposure of sensitive receptors to objectionable odor emissions. As a result, this impact would be less than significant.

Implementation of the Proposed Project would apply a range of land use designations including retail, office, commercial and industrial uses. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact.

All new development projects will be required to meet existing regulations, including permitting requirements and disclosure laws. Compliance with permitting requirements, air district rules and regulations, and state and local requirements would reduce potential odor-related impacts.

a. East Alternative–The SP-2 Area is adjacent to, and east of the City's WPCF, and, under the East Alternative, is planned for a variety of land uses including some that may be odor sensitive uses.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The following 2035 General Plan policies would reduce impacts related to odor exposure:

- **Policy 7.F.6 Odor Mitigation.** Require odors associated with the wastewater treatment plant to be mitigated to acceptable levels in conjunction with planning and development for any land within the odor buffer identified in Figure 7-6. Require an odor mitigation study to be prepared to identify specific measures to be undertaken and a fee program to be in place prior to the approval of development.

- **Policy 5.H.8 Development Proposals.** Review development proposals in the vicinity of the wastewater treatment plant site to ensure their safety, compatibility, and sufficient mitigation of odor nuisances.

- **Policy 5.H.11 Hazards and Nuisances.** Investigate hazards and nuisance potential associated with operations at the City's wastewater treatment plant, including odor nuisances, and identify and implement any buffering requirements or operational changes at the plant that may be necessary.

    a. East Alternative–Policy 2.L.5 is specific to the East Alternative.

- **Policy 2.L.5 Specific Plan-2.** Encourage SP-2 to develop as a sustainable "complete neighborhood" with a town center so that most daily needs can be met within the Specific Plan area. Promote the use of renewable energy sources and water conservation tools to achieve zero net energy buildings. Secure an alternate site for processing waste from the Pacific Coast Producers tomato processing plant prior to adoption of a Specific Plan for SP-2. If development occurs within the boundary of the odor buffer depicted in Figure 7-6, the developer must bear all costs associated with odor mitigation. A Specific Plan for SP-2 may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria. Through 2035, development shall be limited to a maximum of 25 percent (265 acres) of the total Specific Plan area, located in the northwest portion of SP-2 and adequately buffered from the Water Pollution Control Facility.

    b. South Alternative–There are no policies specific to the South Alternative

Summary of Impact Analysis

The human response to odors is subjective, and sensitivity to odors varies greatly among the public. Minor sources of odors, such as exhaust from mobile sources, garbage collection areas, and charbroilers associated with commercial uses, are not typically associated with numerous odor complaints, but are known to have some temporary, less concentrated odorous emissions.

The WPCF headwork facility and pond system are also both odor sources within the City. The headworks area includes an influent pump station, screens, and grit removal, all of which are open to atmosphere and not equipped with any odor controls and odor scrubbers for the headwork area. Although there have been odor abatement options identified in odor studies for the WPCF (Nexgen 2015), the WPCF would incur substantial construction and operations and maintenance costs, and/or diminished operational flexibility in order to avoid future odor impacts. With implementation of proposed policies, the Proposed Project would not result in substantial odor exposure. Policy 7.F.6 requires odors associated with the wastewater treatment plant to be mitigated to acceptable levels in conjunction with planning and development for any land within an odor buffer. The odor buffer zone was developed through an evaluation of odor emissions associated with the WPCF and consideration of wind speeds and wind direction in the area surrounding this facility. Through this study of odor emissions, a buffer was developed, outside of which there would not be substantial odor emissions.

a. East Alternative–The SP-2 Area is adjacent to, and east of the City's WPCF potential impacts are addressed by proposed policies, including Policy Specific Plan-2, which is specific to the East Alternative. Policy Specific Plan-2 requires any development within the odor buffer to bear all costs associated with odor mitigation. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

4.4 BIOLOGICAL RESOURCES

4.4.1 INTRODUCTION

This section addresses known or potential biological resources in the Planning Area. The analysis includes a description of the existing environmental conditions at the time of the Notice of Preparation (NOP), the methods used for assessment, the impacts associated with implementing the proposed Project, and mitigation measures proposed to reduce potentially significant impacts. This section also includes a brief overview of the federal, State, and local laws and regulations pertaining to the protection of biological resources in Yolo County.

The biological resources information presented in this section is based on review of available background reports; previous studies conducted in or near the Planning Area; biological resource databases, including the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), Biogeographic Information and Observation System (BIOS), and the California Native Plant Society (CNPS) Inventory; aerial photography interpretation; an official species list obtained from the U.S. Fish and Wildlife Service Information, Planning, and Conservation System (IPaC); and the 2035 Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP).

The baseline year for the biological resources setting is 2013, the year the NOP was published; however, updated database searches (CNDDB, CNPS, USFWS) were conducted in April 2016, and habitat mapping was updated in 2016 by comparing Google Earth aerial imagery from 2015 and the 2015 Yolo HCCP/NCCP habitat layers against habitat layers obtained from the Yolo Habitat Conservancy in 2013 to identify any changes in land cover. No significant in the existing setting occurred that would affect the analysis that is presented in this section. The baseline information is sufficient for characterizing the environmental setting.

No commenters on the NOP identified issues related to biological resources.

4.4.2 ENVIRONMENTAL SETTING

The majority of the land within the city limits is urbanized, although there are undeveloped properties and designated open spaces, including agricultural lands and parks maintained by the City. Parks and other open space within the city's urban settings provide habitat for a number of native plant and wildlife species. However, diversity and abundance is generally lower compared to natural habitats, which generally are not present within the city limits, except for in the Woodland Regional Park and adjacent City of Woodland Preserve and Spring Lake Alkali Sink Preserve.

The Woodland Regional Park is a 159-acre property located on the east side of County Road 102 (CR 102), just south of County Road 25 (CR 25), in the southeast part of the Planning Area (Exhibit 4.4-1). Unique alkali soils in the Regional Park and adjacent Alkali Grasslands Preserve (Exhibit 4.4-2) provide habitat for a suite of rare and unusual native plants. The Alkali Grasslands Preserve is part of a conservation easement managed by the Center for Natural Lands Management (Dean 2009).The east edge of the Alkali Grasslands Preserve connects to the Conaway Ranch, a 17,300-acre privately-owned ranch that is operated under the terms of a conservation easement purchased by CDFW that requires the use of wildlife-friendly farming practices to grow primarily rice, but also alfalfa and other row crops that support foraging Swainson's hawks (*Buteo swainsoni*) and other raptors. The Conaway Ranch extends into the Yolo Bypass providing a large, connected open space area that provides

valuable habitat for giant garter snake (*Thamnophis gigas*), Swainson's hawk and other raptors, waterfowl, shorebirds, and other resident and migratory birds.

In areas directly surrounding the city limits and within the City's ULL, there are small remnant patches of natural habitat that support relatively high biological diversity. Agricultural land provides important habitat value for certain wildlife species, including foraging habitat for Swainson's hawk, a state-listed threatened species, and rice crops provide habitat for giant garter snake, a species that is State and federally listed as threatened.

Just outside the Planning Area and west of the Sacramento River, there are a number of important biological resources, including sensitive habitats and special-status species associated with agricultural land, waterways, and wetlands. Many of the sensitive biological resources, which are described in more detail below, are found in and around Willow Slough, Cache Creek, and the Yolo Bypass.

4.4.2.1 COMMON HABITAT TYPES IN THE PLANNING AREA

Land use on over 62 percent of the approximately 12,781-acre Planning Area is currently developed, and 24 percent is in agricultural use (Table 4.4-1). Mapped annual grassland habitats and open water habitats each cover approximately 4 percent of the Planning Area. Other habitat types represent less than 1 percent of the total acreage. Habitat types in the Planning Area are shown in Exhibit 4.4-1.

Table 4.4-1. Habitat Types in the Planning Area

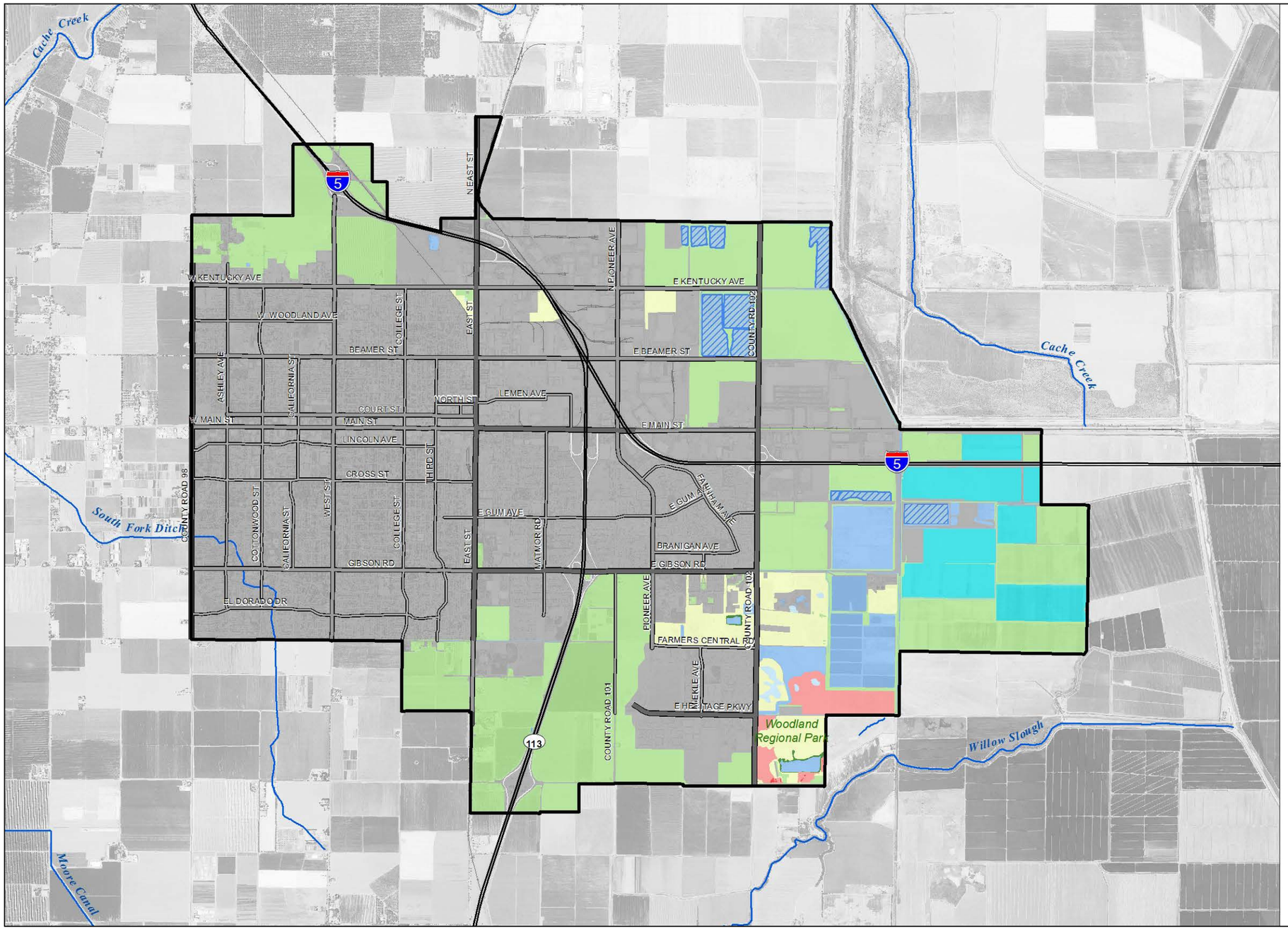
Habitat	Acres
Developed	7,953
Agriculture (other than rice)	3,041
Rice	521
Water	467
Annual Grassland	449
Detention Basins	195
Alkali Prairie	128
Freshwater Wetland	18
Riparian Forest	7
Vernal Pool Complex	1
Total	**12,781**

Note: Figures may not total due to rounding.

Source: Yolo Habitat Conservancy 2013, 2015, USFWS NWI 2013, AECOM 2016.

Developed Land

Developed lands are highly modified areas that generally support a low number of native plant species. Vegetation in developed areas is generally limited to horticultural landscaping in maintained areas and weedy vegetation in areas that are subject to frequent ground disturbance.



LEGEND

Drainages

Habitat Types

- Agriculture
- Alkali Prairie
- Annual Grassland
- Detention Basin
- Developed
- Freshwater Marsh
- Freshwater Wetland
- Reservoir
- Rice
- Riparian Forest
- Perennial Stream
- Vernal Pool Complex
- Water

Transportation

- Highways
- Principal Arterials
- Minor Arterials
- Collectors
- Local Roads

Boundaries

- Planning Area

0 2,000 4,000
FEET

NORTH

Base Map: NAIP 2014
X60285491 036 09/16

Sources: Yolo County Natural Heritage Program 2013, USFWS NWI 2013, Center for Natural Lands Management 2015, Yolo Habitat Conservancy 2015, and AECOM 2016.

Exhibit 4.4-1 **Habitat Types**

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Agricultural Lands

Agricultural lands are subject to regular mechanical disturbance associated with the practices of tillage and crop harvest. Native biodiversity within agricultural lands is generally low because cropland is managed with the goal of producing monotypic vegetation.

Agricultural lands in the Planning Area are comprised of active rice fields, grain and hay crops, and field crops. Within the Planning Area, agricultural lands are concentrated in the vicinity of State Route 113 (SR 113) and in the southeastern portion of the Planning Area in the vicinity of Interstate 5 (I-5), east of County Road 103 (CR 103). Agricultural land is also found north of Kentucky Avenue and East Main Street.

Water

The water land cover type consists of constructed ponds, including treatment ponds, retention basins, and farm/stock ponds. Retention ponds are designed to store stormwater for long duration and generally include a permanent pool of water, as opposed to detention basins, which are described below. Features mapped as water typically contain some amount of permanent surface water.

Annual Grasslands

Annual grasslands are dominated by nonnative grasses, including foxtail barley (*Hordeum murinum*), Mediterranean barley (*H. marinum* ssp. *gussoneanum*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceous*), Italian rye grass (*Festuca perennis*), and oat (*Avena* spp.). Commonly observed forbs include nonnative species such as cutleaf geranium (*Geranium dissectum*) and redstem filaree (*Erodium cicutarium*), and native wildflowers such as valley tassels (*Castilleja attenuata*), clovers (*Trifolium fucatum, T. depauperatum,* and *T. willdenovii*), sea muilla (*Muilla maritima*), hayfield tarplant (*Hemizonia congesta*), and several species of peppergrass (*Lepidium nitidum, L. latipes*, and *L. dictyotum*) (Dean 2009).

Grasslands in the Planning Area are generally subject to some level of periodic maintenance or other type of disturbance, such as disking, mowing, and grazing by cattle or other domestic animals. A few scattered parcels of annual grassland are found along Kentucky Avenue in the northern portion of the Planning Area and along County Road 102 (CR 102) in the southeastern portion of the Planning Area (Exhibit 4.4-1).

Detention Basins

Detention Basins are artificially created depressions in the landscape designed to impound stormwater for short duration in urban or agricultural areas. These basins, therefore, may be temporarily inundated for short periods during and immediately following storms, but they are designed to empty out within a few days and do not hold water for long enough periods to support wetland vegetation or to be categorized as open water. Most of the time, these basins are characterized by ruderal (i.e., weedy) vegetation or agricultural crops.

4.4.2.2 SENSITIVE HABITAT TYPES IN THE PLANNING AREA AND VICINITY

Sensitive habitats are defined as habitats with particularly high ecological values or functions, of limited distribution, or otherwise of concern to federal, State, and/or local resource agencies.[1] Sensitive habitats mapped in the vicinity of the Planning Area by the Yolo Habitat Conservancy in 2013 include freshwater marsh, alkali prairie, riparian forest, freshwater wetlands, drainages, perennial streams, and a reservoir (Exhibit 4.4-1).

Sensitive habitats present at the Woodland Regional Park and adjacent Preserve include 14 acres of seasonal pond, 6 acres of riparian forest, 0.9 acre of northern claypan vernal pools, and 34 acres of alkali prairie. Most sensitive habitats in the Planning Area are also considered jurisdictional wetlands.

For additional discussion related to wetlands, please see Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality."

Freshwater Marsh

Freshwater marsh and associated wetlands form in permanently, or nearly permanently, flooded or saturated soils in depressions or at the edges of streams, rivers, ponds, and lakes, as well as ditches and canals. Distinct vegetation zones often form, as rings, strips, or patches, in response to varying water depths and hydroperiods. Freshwater marshes are dominated by large, perennial herbaceous plants, particularly hardstem bulrush (*Schoenoplectus acutus* var. *acutus*) and cattail (*Typha* spp.). Cattail and bulrush species typically create dense monotypic stands of vegetation with few species present in the understory. Freshwater marsh habitat has not been mapped within the Planning Area, but a large, rectangular patch of freshwater marsh habitat does occur adjacent to the southern edge of the Planning Area boundary, north of Willow Slough (see Exhibit 4.4-1). In addition, minor areas of freshwater marsh habitat that are smaller than the minimum mapping unit used here are expected to occur within ditches, canals, and ponds within the Planning Area.

Freshwater Wetlands

Freshwater wetlands, also often called seasonal wetlands, form in seasonally flooded or saturated soils in depressions or at the edges of streams, rivers, ponds, and lakes, as well as ditches and canals.. Freshwater wetlands occur within the eastern portion of the Planning Area (Exhibit 4.4-1). This category includes a 15-acre, seasonal pond on the Woodland Regional Park site. The seasonal pond acts as a vernal lake, filling in the spring and drying out by June (Dean 2009). A total of 33 acres of freshwater wetland habitat has been mapped within the Planning Area, most of which is contained on the Woodland Regional Park site and the adjacent City of Woodland Preserve.

Vernal pools are types of freshwater wetlands found in the Planning Area at the Regional Park and adjacent lands. A total of approximately 0.9 acre of vernal pool habitat has been mapped on the Woodland Regional Park site (Yolo Habitat Conservancy 2015). Vernal pools are ephemeral wetlands that form in shallow depressions

[1] Sensitive habitats are often designated because they are declining regionally or statewide. Sensitive habitats are of special concern because they have high potential to support special-status plant and animal species and can provide other important ecological functions, such as enhancing flood and erosion control and maintaining water quality. Sensitive habitats include Natural Communities of Special Concern (NCSC) that are identified by the California Department of Fish and Wildlife (CDFW) (e.g., having a high priority for inventory by the California Natural Diversity Database [CNDDB]) or those afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, California's Porter-Cologne Act, or Section 404 of the Clean Water Act (CWA).

underlain by an impervious or restrictive soil layer near the surface that restricts the percolation of water. These wetland types support low-growing, herbaceous plant communities dominated by annual plants and typically characterized by a high percentage of native plant species, many of which may be endemic (restricted) to vernal pools. Vernal pools in the Planning Area are classified as Northern claypan vernal pools and occur on alkaline, silica-cemented hardpan soils that are often saline. Characteristic plant species include coyote thistle (*Eryngium vaseyi*), mousetails (*Myosurus minimus* and *M. sessilis*), Fremont's goldfields (*Lasthenia fremontii*), harlequin downingia (*Downingia insignis*), and woolly marbles (*Psilocarphus brevissimus* and *P. tenellus*) (Dean 2009). Alkaline vernal pools or playas occur in depressions within the alkali prairie habitat in the Planning Area. Because vernal pools and alkali prairie in the area occur in close physical association, on similar geologic formations and soils, and support a similar suite of species, it is often difficult to distinguish vernal pool grassland habitat from alkali prairie habitat (Yolo Habitat Conservancy 2015). A total of 2.35 acres of alkaline pool habitat was mapped within the alkali prairie habitat on the Woodland Regional Park site by Barnett Environmental in 2011.

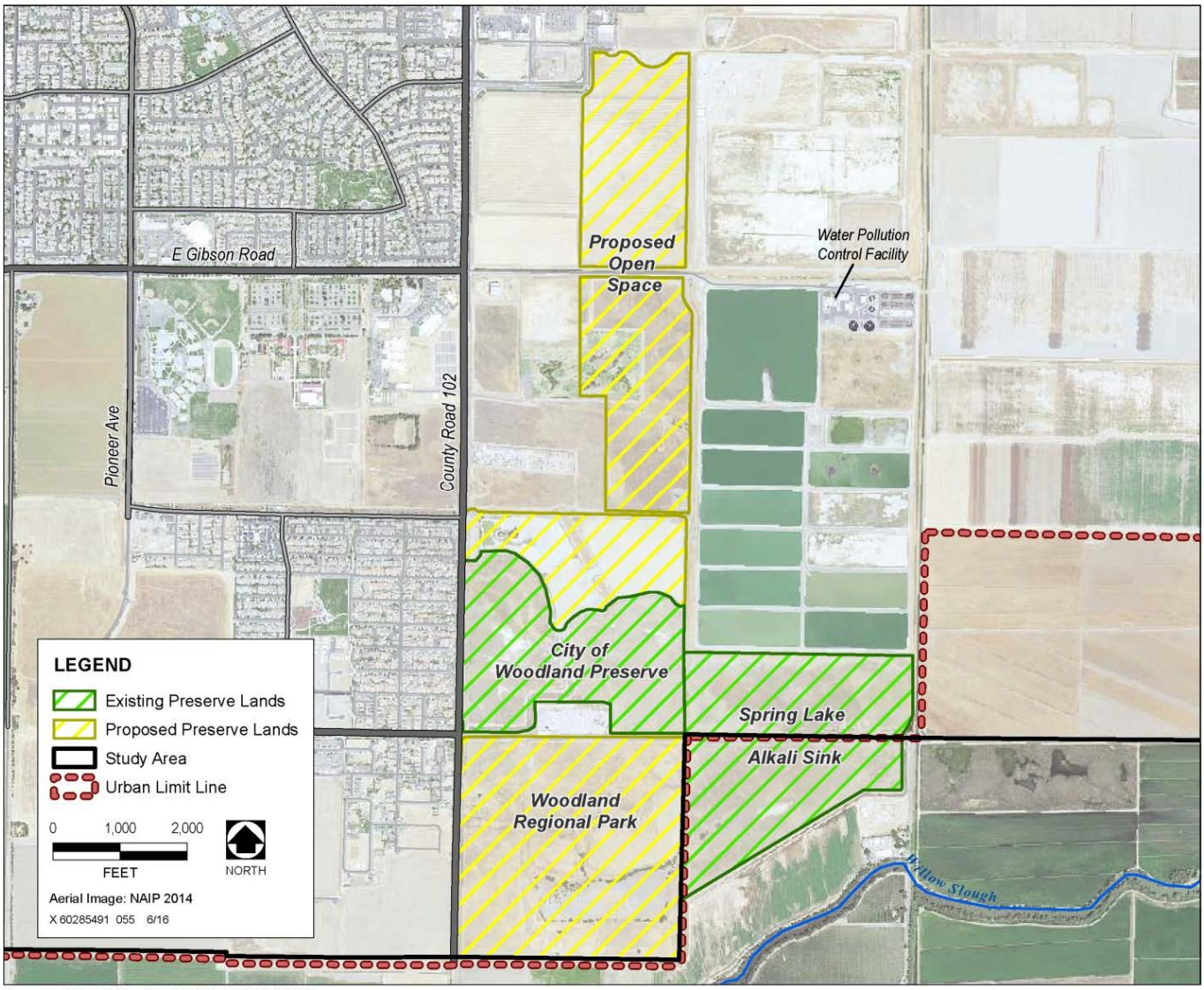
Other seasonal wetlands that are not underlain by claypan and that are characterized by generalist wetland plant species rather than vernal pool or alkali sink endemics may also be present in the Planning Area, including 1.29 acres of seasonal wetland and swale on the Woodland Regional Park site (Barnett Environmental 2011). The swales flow into the large seasonal pond on the Woodland Regional Park site.

Alkali Prairie

The alkali prairie community occurs on seasonally flooded, saline-alkaline clay soils with salts that include sodium, magnesium, and boron (Yolo Habitat Conservancy 2015). Salt encrustations are often deposited on the surface as the soil dries. Typical salt-tolerant plants found in the alkali prairie habitat in the Planning Area include saltgrass (*Distichlis spictata*), alkali heath (*Frankenia salina*), common spikeweed (*Centromadia pungens*), Parish's glasswort (*Arthrocnemum subterminale*), and bush seepweed (*Suaeda nigra*). Low areas, or sinks, with a relatively impermeable surface layer retain ponded water through spring into early summer and are generally devoid of perennial vegetation. This habitat supports six special-status plant species known to occur within the Planning Area. Roughly 130 acres of alkali prairie habitat is located in the southeastern portion of the Planning Area, occurring east of County Road 102 in undeveloped areas south and west of the Water Pollution Control Facility and north of Willow Slough (Exhibit 4.4-1). The City of Woodland Preserve and Spring Lake Alkali Sink are existing preserves that protect the majority of this habitat type in the Planning Area and adjacent land to the east of Woodland Regional Park (Exhibit 4.4-2). Approximately 34 acres of this habitat type is present at the Woodland Regional Park.

Riparian Forest

Riparian forests are structurally diverse, tree-dominated habitats that occur along the margins of perennial water bodies. In the Planning Area, riparian forest is present in the Woodland Regional Park site around the perimeter of a large seasonal pond and along the perimeter of other constructed ponds north of Farmer's Central Road and west of County Road 102. It is also mapped north of I-5 near the northeastern edge of the Planning Area boundary and along the Cache Creek levee system and Cache Creek Settling Basin. There are a total of approximately eight acres of this habitat type in the Planning Area. Willow Slough, located south of the southeastern edge of the Planning Area boundary, supports a narrow band of riparian forest (Exhibit 4.4-1).



Source: City of Woodland 2016, AECOM 2016

Exhibit 4.4-2. Existing and Proposed Habitat Preserves

Waterways

Waterways mapped in the vicinity of the Planning Area by the Yolo Habitat Conservancy consist of perennial streams and other drainages, primarily agricultural ditches. Agricultural ditches within the Planning Area include South Fork Ditch (a.k.a. Maple Canal), which enters the Planning Area from the west at Road 98 in a residential area located in the southwestern portion of the Planning Area (Exhibit 4.4-1). The ditch flows east upon entering the Planning Area before turning south in a residential area located in the southwestern portion of the Planning Area, then flows out of the Planning Area south of El Dorado Drive and west of Amherst Way. There are also several ditches constructed and maintained by private landowners. While these canals and ditches typically serve irrigation uses, they are also used to manage runoff from rainfall during the winter.

Perennial streams in close proximity, but outside, the Planning Area include Cache Creek, which is located approximately two miles north of the Planning Area, and Willow Slough located to the south. These streams

support mature riparian forest habitat along the stream banks. Both streams are highly constrained. Outside the riparian corridor, agricultural lands abut Willow Slough and the stream has been impounded along the northwestern edge to create a reservoir. Willow Slough flows in a northeasterly direction and is tributary to the western toe drain of the Yolo Bypass system. Cache Creek, constrained by levees, generally flows south and is also tributary to the western toe drain of the Yolo Bypass system.

Willow Slough and Cache Creek and associated riparian forest habitat provide habitat for a number of wildlife species, including Swainson's hawk, giant garter snake, and numerous species of migratory birds. While agricultural ditches generally provide lower habitat quality than streams, agricultural ditches can support giant garter snake or provide dispersal habitat for this species.

4.4.2.3 GENERAL WILDLIFE USAGE IN THE PLANNING AREA

The majority of the Planning Area is characterized by developed and agricultural lands. Developed lands are generally not of high value for wildlife. Birds and mammals that occur in these areas typically include introduced species adapted to human habitation, such as mourning dove (*Zenaida macroura*), American crow (*Corvus branchyrhychos*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), and raccoon (*Procyon lotor*). Although agricultural lands typically provide lower habitat values for most species than native habitats, they can provide important habitat for some species, such as Swainson's hawk and giant garter snake, and generally provide greater habitat values than urban areas and developed land. Regionally, rice fields support large wintering populations of waterfowl and shorebirds, and provide habitat for giant garter snakes. Alfalfa, disked fields, fallow fields, dry-land pasture, beets, tomatoes, irrigated pasture, grain and hay, and other row crops tend to support large rodent populations and therefore provide good foraging habitat for Swainson's hawk, white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and more common raptors, such as American kestrel (*Falco sparverius*), great horned owl (*Bubo virginianus*), and red-tailed hawk (*Buteo jamaicensis*). Detention basins in the Planning Area also provide foraging habitat for raptors, including Swainson's hawk, when they are dry. Although SP-1, SP-2, and SP-3 areas do not have substantial hedgerows, these areas between planted fields also offer habitat value.

Annual grasslands generally provide habitat for a wide variety of wildlife species; however, annual grassland habitat within the Planning Area is somewhat limited and generally exists in relatively small patches surrounded by developed land uses, thereby reducing the value of this habitat for many species. Nonetheless, annual grasslands in the Planning Area are expected to support a number of small mammal species, including California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), deer mouse (*Peromyscus maniculatus*), California vole (*Microtus californicus*), and western harvest mouse (*Reithrodontomys megalotis*) that provide prey for a variety of raptor species likely to hunt in the area, as mentioned previously regarding the agricultural habitat. Other common species expected to use the annual grassland habitat in the Planning Area include western toad (*Bufo boreas*), gopher snake (*Pituophis catenifer*), racer (*Coluber constrictor*), and western fence lizard (*Sceloperus occidentalis*), western kingbird (*Tyrannis verticalis*), western meadowlark (*Sturnella neglecta*), Brewer's blackbird (*Euphagus cyanocephalus*), northern mockingbird (*Mimus polyglottos*), striped skunk (*Mephitis mephitis*), black-tailed jackrabbit (*Lepus californicus*) and coyote (*Canis latrans*). Alkali Prairie in the Planning Area supports generally the same common wildlife species as the annual grassland habitat and also provides valuable foraging habitat for raptors.

Aquatic habitats in and near the Planning Area are known or expected to support a number of common wildlife species including red-winged blackbird (*Ageliaeus phoeniceus*), mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), belted kingfisher (*Ceryle alcyon*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), American bullfrog (*Rana catesbeian*a), and Pacific chorus frog (*Pseudacris sierra*).

4.4.2.4 SPECIAL-STATUS SPECIES

Special-status species include plants and animals in the following categories:

- species officially listed by the State of California or the Federal government as endangered, threatened, or rare;
- candidates for state or Federal listing as endangered or threatened;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the State CEQA Guidelines;
- species identified by the California Department of Fish and Wildlife (CDFW) as species of special concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local or regional planning documents; and
- taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
    - CRPR 1A - Plants presumed to be extinct in California;
    - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
    - CRPR 2A - Plants presumed to be extinct in California, but more common elsewhere;
    - CRPR 2B - Plants that are rare, threatened, or endangered in California, but more common elsewhere;
    - CRPR 3 - Plants about which more information is needed (a review list); and
    - CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW's CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that potential impacts to CRPR 1 and 2 species be evaluated in CEQA documents. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380. However, these species may be evaluated by the lead agency on a case-by-case basis.

A list of special-status species that could potentially occur in the Planning Area or immediate vicinity, provided suitable habitat conditions were present, was developed through review of available background reports; previous studies conducted in or near the Planning Area; biological resource databases, including the CNDDB and CNPS Inventory; an official list obtained from the U.S. Fish and Wildlife Service Information, Planning, and

Conservation System (IPaC); and the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo Habitat Conservancy 2015).

Special-Status Plants

Based on the database searches and literature review, 11 special-status plant species have been documented or reported to occur in the Planning Area or nearby within Yolo, Sutter, Sacramento, or Solano Counties (Table 4.4-2 and Exhibit 4.4-3). One species, palmate-bracted bird's beak, is federally and state listed as endangered. The other 10 special-status species have California Rare Plant Ranks (CRPR) of 1B indicating that these species are considered rare or endangered and tracked by CDFW and CNPS. These species are listed below in Table 4.4-2 along with their status, habitat, and potential to occur in the Planning Area.

Table 4.4-2. Special-Status Plant Species With Potential to Occur Within the Planning Area

Species	Federal[1]	State[2,3]	Habitat	Potential for Occurrence in the Planning Area
Ferris' milk-vetch *Astragalus tener* var. *ferrisae*	—	1B.1	Subalkaline flats and mesic sites in valley and foothill grassland, meadows and seeps; 15 to 250 foot elevation. Bloom: April–May.	**Could occur.** Potentially suitable habitat is present in the alkali prairie and annual grassland habitats in the Planning Area.
Alkali milk-vetch *Astragalus tener* var. *tener*	—	1B.2	Alkaline soils within playas, vernal pools, and adobe clay valley and foothill grassland habitats; 0 to 196-foot elevation. Bloom: March–June	**Known to occur.** Two occurrences documented within the Planning Area.
Heartscale *Atriplex cordulata* var. *cordulata*	—	1B.2	Saline or alkaline flats or scalds in chenopod scrub, desert scrub, or meadow, and grassland habitats in sandy soils; 1 to 500 foot elevation; Blooms April–October.	**Could occur.** Potentially suitable habitat is present in the alkali prairie and annual grassland habitats in the Planning Area.
Brittlescale *Atriplex depressa*	—	1B.2	Alkaline clay soils within chenopod scrub, meadow and seeps, playas, vernal pools, and valley and foothill grassland habitats; 0 to 1,050-foot elevation. Bloom: April–October	**Known to occur.** Four occurrences documented within the Planning Area.
Palmate-bracted bird's beak *Chloropyron palmatum*	E	E 1B.1	Alkaline soils in seasonally flooded lowlands; 16 to 510-foot elevation. Bloom: May–October	**Known to occur.** Three occurrences documented within the Planning Area.
San Joaquin spearscale *Extriplex joaquinana*	—	1B.2	Alkaline soils on chenopod scrub, meadow and seeps, playas, and valley and foothill grassland; 3 to 2,740-foot elevation. Bloom: April–October	**Known to occur.** Three occurrences documented within the Planning Area and one occurrence documented within two miles of the Planning Area.
Woolly rose-mallow *Hibiscus lasiocarpus* var. *occidentalis*	—	1B.2	Marshes and swamps (freshwater); from 0 to 320 feet in elevation. Blooms June to September.	**Unlikely to occur.** Marsh habitat is very limited in the Planning Area and of marginal quality.

Table 4.4-2. Special-Status Plant Species With Potential to Occur Within the Planning Area

Species	Federal[1]	State[2,3]	Habitat	Potential for Occurrence in the Planning Area
Heckard's pepper-grass *Lepidium latipes* var. *heckardii*	—	1B.2	Alkaline flats in valley and foothill grassland; 6 to 656-foot elevation. Bloom: March–May	**Known to occur.** Two occurrences documented within the Planning Area and one occurrence documented within two miles of the Planning Area.
California alkali grass *Puccinellia simplex*	—	1B.2	Saline flats, mineral springs; below 3,000 feet elevation. Bloom: March–May.	**Known to occur.** Suitable habitat is present in the alkali prairie and annual grassland habitats in the Planning Area and this species has been previously documented at two locations in the southeast portion of the Planning Area.
Suisun Marsh aster *Symphiotrichum lentum*	—	1B.2	Brackish and freshwater marshes and swamps; 0–10 foot elevation; Blooms: May–November.	**Unlikely to occur.** Marsh habitat is very limited in the Planning Area and of marginal quality. This species is restricted to the Suisun Marsh and Sacramento-San Joaquin River Delta.
Saline clover *Trifolium hydrophilum*	—	1B.2	Marshes and swamps, vernal pools, and mesic, alkaline valley and foothill grassland; 0 to 984-foot elevation. Bloom: April–June	**Known to occur.** One occurrence documented within the Planning Area.

Notes:

[1]Federal:

E = Listed as endangered under ESA.

[2]State:

E = Listed as endangered under CESA.

[3]California Rare Plant Ranks and extensions

1B = Rare or endangered in California and elsewhere.

.1 = Seriously endangered in California (>80 percent of occurrences are threatened and/or high degree and immediacy of threat).

.2 = Fairly endangered in California (20 to 80 percent of occurrences are threatened).

Sources: USFWS 2016, CNDDB 2016, CNPS 2016; compiled by AECOM in 2016.

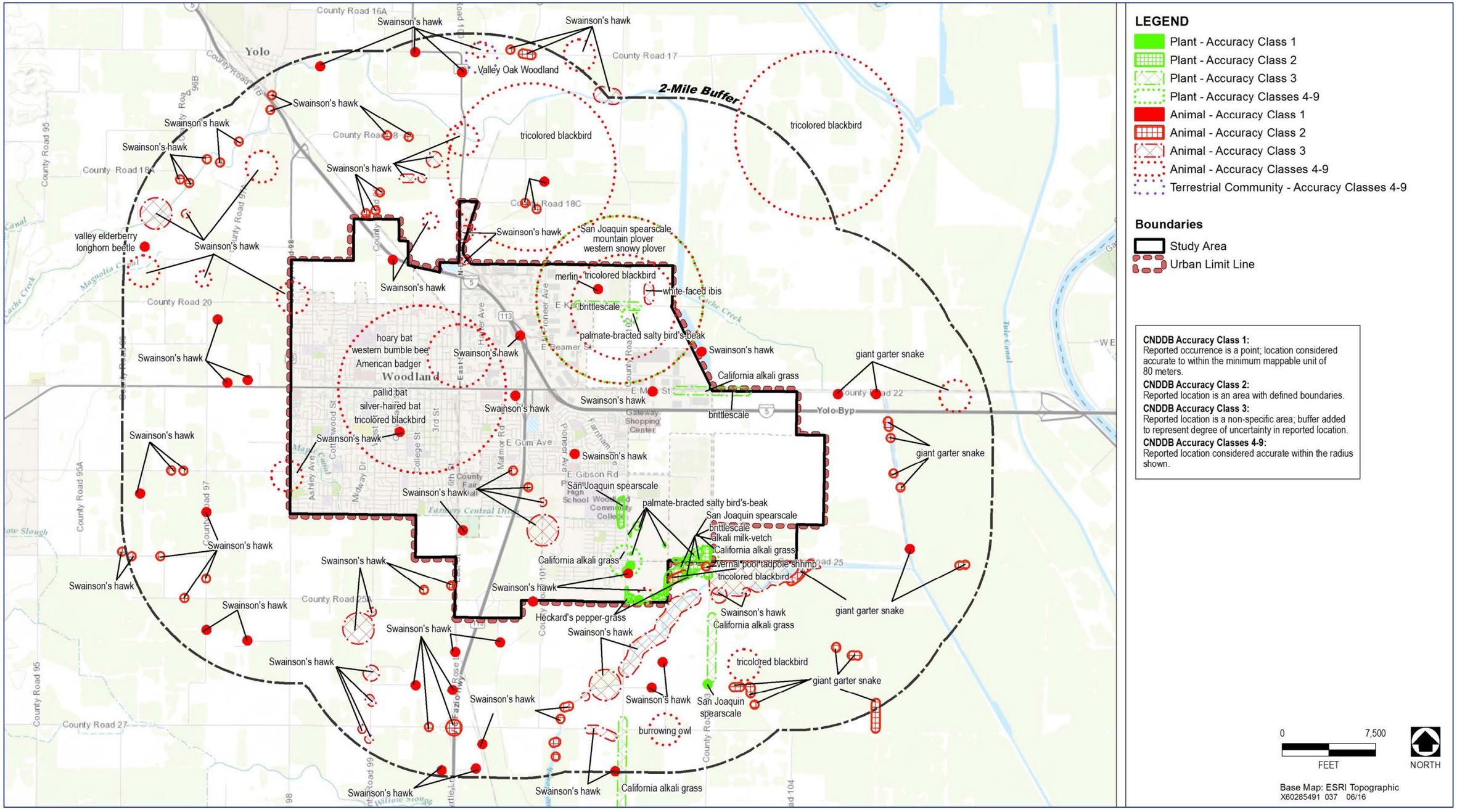


Exhibit 4.4-3

Special-Status Species

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Special-Status Wildlife

Based on the database searches and literature review, 28 special-status wildlife species, not counting fish, have been documented or reported to occur in the Planning Area or nearby within Yolo, Sutter, Sacramento, or Solano counties. These species are listed below in Table 4.4-3, along with their status, habitat, and potential to occur in the Planning Area.

There are no special-status fish species that are known to occur in the Planning Area. Two fish species listed as threatened under the ESA, Delta smelt (*Hypomesus transpacificaus*) and steelhead (*Oncorhynchus mykiss*), are identified on the USFWS official list of species that could be affected by projects in the Planning Area. However, the Planning Area is outside of the known range of delta smelt, which is restricted to San Francisco Bay and the Sacramento–San Joaquin Delta, and there are no waterways in the Planning Area that could support steelhead or other special-status fish species. No critical habitat for special-status species is found in the Planning Area or the surrounding radius of 2 miles. The nearest designated critical habitat (Delta smelt critical habitat) is located over 7 miles southeast of the Planning Area (USFWS 2016).

Table 4.4-3. Special-Status Wildlife Species With Potential to Occur Within the Planning Area

Species	Listing Status		Habitat	Potential for Occurrence in the Planning Area
	Fed.[1]	State[2]		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T	_	Elderberry shrubs (the host plant species), typically as an abundant component in dense riparian habitat below 3,000 feet in elevation; on slightly higher and older floodplain surfaces without saturated soils (Vaghti et al. 2009).	**Could occur.** Elderberry shrubs that could support valley elderberry longhorn beetle may be present in the Planning Area. Nearest known records are from Cache Creek approximately 1.75 miles northwest of the Planning Area.
Vernal pool fairy shrimp *Branchinecta lynchi*	T	_	Vernal pool habitats ranging from small, clear pools in sandstone rock outcrops to large, turbid, and/or alkaline vernal pools. Most commonly in grass- or mud-bottomed basalt flow depression pools in unplowed grasslands.	**Could occur.** Vernal pools are present in the Planning Area. There are a total of 10 CNDDB occurrence records in Yolo County.
Vernal pool tadpole shrimp *Lepidurus packardi*	E	_	Vernal pools or swales that form in slight depressions after being inundated following fall and winter rains. The pools contain clear to highly turbid water and have an impervious hardpan, claypan, or basalt layer beneath the soil surface that retains the water for a few months at a time.	**Likely to occur.** Vernal pools are present in the Planning Area. This species is known to occur in the alkali grassland preserve adjacent to the Planning Area at the southwest corner of County Road 25 and County Road 103. There are a total of 7 CNDDB occurrence records in Yolo County.

Table 4.4-3. Special-Status Wildlife Species With Potential to Occur Within the Planning Area				
Species	Listing Status		Habitat	Potential for Occurrence in the Planning Area
	Fed.[1]	State[2]		
Amphibians and Reptiles				
California red-legged frog *Rana draytonii*	T	SSC	Foothill streams with dense shrubby or emergent riparian vegetation, minimum 11–20 weeks of water for larval development, and upland refugia for aestivation.	**Unlikely to occur.** The Planning Area is outside this species' currently known occupied range. Nearest known occurrences are approximately 25 miles southwest of the Planning Area in Napa County. This species is not known to disperse at distances over 2.25 miles and is believed to have been completely eliminated from the Valley floor.
California tiger salamander *Ambystoma californiense*	T	T	Vernal pools and seasonal wetlands with a minimum 10-week inundation period and surrounding uplands, primarily grasslands, with burrows and other belowground refugia (e.g., rock or soil crevices).	**Could occur.** Seasonal wetlands and ponds that may provide suitable breeding habitat for this species are present in the Planning Area and this species could also be present in underground refugia in annual grassland and alkali prairie habitats within 1.3 miles of breeding habitat. The only known record of this species from the nine quad search area is a 1993 record from the City of Davis. There are eight CNDDB occurrence records of this species in Yolo County.
Western pond turtle *Emys marmorata*	_	SC	Permanent and nearly permanent waters, including ponds, lakes, marshes, slow-moving streams, rivers, sloughs, and irrigation canals/ditches with open bank areas, emergent vegetation, and logs or boulders for basking. Nests along the aquatic habitat shore or in adjacent uplands in sunny, open hillsides or fields, as long as appropriate soil moisture and warmth are present. Generally nest within 325 feet of aquatic habitat, but has been reported to nest up to1,600 feet from water.	**Could occur.** Potentially suitable aquatic habitat is present in and near the Planning Area and there is potential for this species to nest in undeveloped grassland and alkali prairie habitats in the Planning Area. There are a total of two CNDDB occurrence records documented in Yolo County.
Giant garter snake *Thamnophis gigas*	T	T	Cultivated rice, freshwater marsh, and slow moving streams, ditches, or canals.	**Likely to occur.** Nine occurrences documented within two miles of the Planning Area and suitable habitat is present. There are a total of 54 CNDDB occurrence records documented in Yolo County.
Birds*				
Swainson's Hawk *Buteo swainsoni* (nesting)	_	T	Nests in riparian forest and isolated trees, open woodlands, and woodland margins; nests and forage in grasslands and agricultural fields.	**Known to occur.** Suitable nesting and foraging habitat are present. Numerous occurrences documented throughout Planning Area. There are a total of 516 CNDDB occurrence records documented in Yolo County.

Table 4.4-3. Special-Status Wildlife Species With Potential to Occur Within the Planning Area				
Species	Listing Status		Habitat	Potential for Occurrence in the Planning Area
	Fed.[1]	State[2]		
Northern harrier *Circus cyaneus* (nesting)	_	SSC	Nests and forages in grasslands, agricultural fields, and marshes. Nests on the ground within patches of dense, often tall, vegetation in undisturbed areas (MacWhirter and Bildstein 1996).	**Could occur.** Suitable nesting and foraging habitat is present in and adjacent to the Planning Area. There is one CNDDB occurrence record of this species in Yolo County.
White-tailed kite *Elanus leucurus* (nesting)	_	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	**Could occur.** Suitable nesting and foraging habitat is present in and adjacent to the Planning Area. There are five CNDDB occurrence records of this species in Yolo County.
Least bittern *Ixobrychus exilis* (nesting)	_	SSC	Nests in freshwater and brackish marshes with tall, dense emergent vegetation with clumps of woody plants over deep water.	**Unlikely to nest.** This species may nest adjacent to the Planning Area in suitable habitat along Cache Creek and Willow Slough, but there is no suitable nesting habitat in the Planning Area.
Western snowy plover *Charadrius alexandrinus nivosus* (nesting)	T	SSC	Nests and forages on sandy and gravelly beaches along the coast and the shores of inland alkali lakes. Has also been documented nesting on levees of artificial ponds in Yolo County, including sewage treatment ponds. Needs sandy or gravelly, friable soils for nesting.	**Could occur.** One record of nesting in the Planning Area at the Woodland Sugar Ponds in 1970 and has been documented nesting in the Yolo Bypass Wildlife Area as recently as 2006. These are the only two CNDDB records of this species in Yolo County.
Mountain plover *Charadrius montanus* (wintering)	_	SSC	Forages in short grasslands and plowed agricultural fields where vegetation is sparse and trees are absent.	**Likely to occur.** One occurrence documented within the Planning Area. There are a total of 11 CNDDB records of this species in Yolo County.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis* (nesting)	T	E	Nests in large blocks of deciduous riparian thickets or forests with dense, low-level or understory foliage adjacent to slow-moving watercourses, backwaters along broad, lower floodplains of larger river systems. Willow and cottonwood are almost always a component of the vegetation. In the Sacramento Valley, also utilizes adjacent walnut orchards.	**Unlikely to nest.** Could possibly nest in riparian habitats adjacent to the Planning Area along Cache Creek or Willow Slough, but there is no suitable habitat present in the Planning Area. The species known range of distribution is limited to the Upper Sacramento, Lower Feather, South Fork Kern, Amargosa, Santa Ana, and Colorado Rivers.
Grasshopper sparrow *Ammodramus savannarum* (nesting)	_	SSC	Forages and nests in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs. Nests in depressions on the ground at the bases of grass clumps. Prefers large tracts of habitat.	**Could occur.** This species could nest in the annual grassland or alkali prairie habitats in the Planning Area. This species has not been documented in the Planning Area. There is one documented occurrence in Yolo County.

Table 4.4-3. Special-Status Wildlife Species With Potential to Occur Within the Planning Area				
Species	Listing Status		Habitat	Potential for Occurrence in the Planning Area
	Fed.[1]	State[2]		
Song sparrow – "Modesto" population (*Melospiza melodia*) (year round)	_	SSC	Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees. Forages primarily on exposed ground or in leaf litter.	**Could occur.** This species is unlikely to nest in the Planning Area due to a lack of suitable marsh and riparian habitat, but may nest adjacent to the Planning Area and forage within the Planning Area. There are four documented occurrences in Yolo County.
Purple martin *Progne subis* (nesting)	_	SSC	Nests in tree cavities, bridges, freeway overpasses, utility poles, lava tubes, and buildings. Forages in foothill and low montane oak and riparian woodlands; less frequently in coniferous forests and open or developed habitats.	**Could occur.** This species could potentially nest under I-5 or SR 113 overpasses or in other man-made structures in the Planning Area. The potential for this species is low however because the only known breeding colony in the region is in the City of Sacramento where they nest in weep holes in a hollow-box bridge over I-5.
Bank swallow *Riparia riparia* (nesting)	_	T	Nests in colonies in unvegetated vertical banks or cliffs with fine-textured, sandy soils, typically next to streams, rivers, or lakes. Forages in a variety of habitats near nests.	**Unlikely to nest.** Could nest in riparian habitats adjacent to the Planning Area along Cache Creek or Willow Slough if suitable vertical bank structure is present, but there is no suitable nesting habitat present in the Planning Area. There have been 18 occurrences of this species documented in the CNDDB in Yolo County.
Tricolored Blackbird *Agelaius tricolor* (nesting)	_	C	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	**Could occur.** There is a very limited amount of potential breeding habitat in the Planning Area, but breeding habitat is abundant in the immediate vicinity along Cache Creek and Willow Slough. Three occurrences have been documented in the vicinity of the Planning Area, including a large, active nesting colony southeast of the Planning Area on the north side of Willow Slough. There are 23 CNDDB occurrence records of this species in Yolo County.
Yellow-headed blackbird *Xanthocephalus xanthocephalus* (nesting)	_	SSC	Nests in marshes with tall, dense emergent vegetation, most commonly at the edges of lakes, reservoirs, or ponds with relatively deep water. Forages in freshwater marshes, and sometimes in nearby open fields, preferably with moist ground.	**Unlikely to occur.** This species may nest in freshwater marsh habitats in the vicinity, but there is no suitable nesting habitat in the Planning Area. May forage in grassland and alkali prairie habitat within the Planning Area. There is only one CNDDB record of this species in Yolo County.
Loggerhead shrike *Lanius ludovicianus* (nesting)	_	SSC	Forages and nests in grasslands, shrublands, and open woodlands. Nests in trees and shrubs.	**Could occur.** The annual grassland and alkali prairie habitats in the Planning Area provide suitable foraging habitat and this species could nest in trees or shrubs in or near these habitats. There are no CNDDB records of this species in Yolo County.

Table 4.4-3. Special-Status Wildlife Species With Potential to Occur Within the Planning Area				
Species	Listing Status		Habitat	Potential for Occurrence in the Planning Area
	Fed.[1]	State[2]		
Yellow-breasted chat *Icteria virens* (nesting)	_	SSC	Forages and nests in riparian thickets of willow, blackberry, and wild grape within 10 feet of the ground.	**Could occur.** Suitable habitat is present in and adjacent to the Planning Area but there are no CNDDB records of this species in Yolo County.
Yellow warbler *Setophaga petechial* (nesting)	_	SSC	Nests in riparian vegetation such as willows, cottonwoods, and alders.	**Unlikely to nest.** The Planning Area is outside this species' current breeding range. There are no CNDDB records of this species in Yolo County.
Burrowing owl *Athene cunicularia* (year round)	_	SSC	Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils.	**Could occur.** Suitable habitat is present in the Planning Area in grasslands, alkali prairie and agricultural habitats. One occurrence documented within 2 miles of the Planning Area. There have been 39 CNDDB occurrences of this species documented in Yolo County.
Least Bell's vireo *Vireo bellii pusillus* (nesting)	E	E	Nests and forages in low, dense riparian vegetation along perennial or intermittent streams.	**Unlikely to nest.** The Planning Area is outside this species' current breeding range and suitable nesting habitat is lacking within the Planning Area. Potentially suitable nesting habitat is present near the Planning Area along Cache Creek and Willow Slough. Species has been observed in Yolo Bypass Wildlife Area (2011 CNDDB record) presumably attempting to establish first nesting territory in Yolo County in decades.
Mammals				
American badger *Taxidea taxus*	_	SSC	Drier open shrub, forest, and herbaceous habitats with friable soils for digging burrows.	**Unlikely to occur.** Requires extensive patches of open, undisturbed habitat. The small habitat patch size, lack of connectivity to suitable large patches of habitat, and surrounding agriculture and urban development in the Planning Area make it unsuitable for this species. Last record from the area was 1997 roadkill record from junction of County Road 31 and County Road 97D west of Davis. There is a U.C. Davis museum specimen that was collected from the City of Woodland, but the date of collection is unknown.
Pallid bat *Antrozous pallidus*	_	SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in rock crevices, oak hollows, bridges, or buildings.	**Could occur.** This species could roost under bridges or in other man-made structures in the Planning Area. There is one CNDDB record of this species in the Planning Area from 1957.

Table 4.4-3. Special-Status Wildlife Species With Potential to Occur Within the Planning Area				
Species	Listing Status		Habitat	Potential for Occurrence in the Planning Area
	Fed.[1]	State[2]		
Western red bat *Lasiurus blossevilli*	_	SSC	Roosts primarily in dense tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards (Pierson et al. 2004). Prefers habitat edges and mosaics with trees that are protected from above and open below and open areas for foraging, including grasslands, shrublands, and open woodlands.	**Unlikely to occur.** Maternity and roosting colonies unlikely to occur in the Planning Area because of lack of suitable habitat; however, this species may roost in adjacent riparian habitats along Cache Creek and Willow Slough and this species could forage in the Planning Area. The only recent record of this species in the area is a 1999 record from the Sacramento River near Knights Landing.

Notes:

[1] Federal:
T = Listed as threatened under ESA
E = Listed as endangered under ESA

[2] State:
T = Listed as threatened under CESA
E = Listed as endangered under CESA
C = Candidate for listing under CESA
F = Fully Protected under California Fish and Game Code
SSC = Considered a species of special concern by CDFW

* Because the distribution and abundance of individual bird species varies seasonally, the season, or life phase, during which the species is of conservation concern in California is provided in parentheses beneath the bird species scientific name. There is potential for any of these bird species to fly over or pass through the Planning Area, however, these species would not be at risk of adverse effects unless nesting on or otherwise residing in the Planning Area during the season or life phase when the species is of conservation concern in California.

Source: CNDDB 2016, USFWS 2016; Shuford and Gardali 2008; compiled by AECOM in 2016.

4.4.3 REGULATORY FRAMEWORK

4.4.3.1 FEDERAL

Endangered Species Act, 16 U.S.C. Section 1531 et seq

Pursuant to the Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), U.S. Fish and Wildlife Service (USFWS) has regulatory authority over species listed or proposed for listing as endangered or threatened. USFWS and the National Marine Fisheries Service have authority over projects that may result in take of a species listed as threatened or endangered under ESA (i.e., a federally listed species). In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law.

Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

The take prohibition of ESA Section 9 applies only to listed species of fish and wildlife. Section 9(a)(2)(B) describes federal protection for endangered plants. In general, ESA does not protect listed plants located on nonfederal land (i.e., areas not under federal jurisdiction), unless such species are already protected by state law.

Section 7 of the ESA outlines procedures for federal interagency cooperation to protect and conserve federally listed species. Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroying or adversely modifying designated critical habitat.

For projects where federal action is not involved and take of a listed species may occur, a project proponent may seek an incidental take permit under section 10(a) of the ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that ensures minimization and mitigation of impacts associated with the take.

Clean Water Act, 33 U.S.C. Section1251 et seq.

Section 404 Permit Program

Section 404 of the Federal Clean Water Act (CWA) requires a project applicant to obtain a permit from the U.S. Army Corps of Engineers (USACE) before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters, and wetlands adjacent to these waters. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of CWA pending USACE and U.S. Environmental Protection Agency (EPA) review.

As part of the review of a project, USACE must ensure compliance with applicable federal laws, including EPA's Section 404(b)(1) Guidelines. USACE regulations require that impacts to waters of the United States are avoided and minimized to the maximum extent practicable, and that unavoidable impacts are compensated (33 Code of Federal Regulations [CFR] 320.4[r]).

In 2008, USACE and EPA issued regulations governing compensatory mitigation for activities authorized by permits issued by USACE (33 CFR 332). The rule establishes a preference for the use of mitigation banks because they provide established wetland habitats that have already met success criteria thereby reducing some of the risks and uncertainties associated with compensatory mitigation involving creation of new wetlands that cannot yet demonstrate functionality at the time of project implementation. The rule also establishes a preference for providing compensatory mitigation within the affected watershed. Ideally, compensatory mitigation would take place at a mitigation bank within the same watershed as the waters to be replaced. If mitigation banks are not available within the affected watershed, then compensatory mitigation involving creation or restoration within the affected watershed may be preferable to using a mitigation bank outside the affected watershed.

Section 401 Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine Regional Water Quality Control Boards (RWQCBs).

Migratory Bird Treaty Act, 16 U.S.C. Section 703, et seq.

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

4.4.3.2 STATE

California Endangered Species Act, California Fish and Game Code Section 2050, *et seq.*

California Endangered Species Act (CESA) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species. Furthermore, CESA states that reasonable and prudent alternatives shall be developed by the California Department of Fish and Wildlife (CDFW), together with the project proponent and any state lead agency, consistent with conserving the species, while at the same time maintaining the project purpose to the greatest extent possible. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured. Standard CESA issuance requirements can include land acquisition, permanent protection and management, and/or funding in perpetuity of compensatory lands.

A "take" of a species, under CESA, is defined as an activity that would directly or indirectly kill an individual of a species. The CESA definition of take does not include "harm" or "harass" as is included in the federal act. As a result, the threshold for a take under CESA may be higher than under ESA because habitat modification is not necessarily considered take under CESA. The take of State-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of CESA. The State has the authority to issue an incidental take permit under California Fish and Game Code Section 2081, or to coordinate with USFWS during the Section 10(a) process to make the federal permit consistent with CESA.

As under federal law, listed plants have considerably less protection than fish and wildlife under California State law. The California Native Plant Protection Act (California Fish and Game Code Section 19000 et seq.) allows landowners to take listed plant species from, among other places, a canal, lateral ditch, building site, or road, or other right-of-way, provided that the owner first notifies CDFW and gives the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed.

Lake and Streambed Alteration Agreement, California Fish and Game Code Section 1602

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFW, or use any material from the streambeds, without first notifying CDFW of such activity and obtaining a final agreement authorizing such activity.

"Stream" is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW lake or streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act, California Water Code Section 13000, *et seq.*

The Porter-Cologne Act (California Water Code Section 13000, *et seq.*) requires that each of the state's nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The RWQCB's jurisdiction includes federally protected waters, as well as areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

Fully Protected Species, California Fish and Game Code Sections 3511, 4700, 5050, and 5515

Four sections of the California Fish and Game Code (Fish and Game Code Sections 3511, 4700, 5050, and 5515) list 37 fully protected species. These statutes prohibit take or possession at any time of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. CDFW has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

Protection of Bird Nests and Raptors, California Fish and Game Code Section 3503

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young. These violations can be caused by disturbance of nesting pairs by nearby human activity.

4.4.3.3 REGIONAL

Yolo Habitat Conservation Plan/Natural Community Conservation Plan

The Planning Area is within the proposed Yolo HCP/NCCP coverage area, which encompasses the whole of Yolo County. The Yolo HCP/NCCP is in draft form (Second Administrative Draft dated March 31, 2015) and is not an approved HCP or NCCP. The Yolo HCP/NCCP is intended to serve as a HCP under the ESA and an NCCP under the California Natural Community Conservation Act. The 12 species proposed for coverage under the plan are species that have potential to occur in the plan area that are currently listed as threatened or endangered under ESA or CESA, or that have potential to become listed during the 50-year life of the Plan. The Yolo HCP/NCCP will allow Yolo County, the Yolo Habitat Conservancy (formerly the Yolo HCP/NCCP Joint Powers Authority), and the cities of Woodland, Davis, Winters, and West Sacramento to receive incidental take permits under the ESA and CESA for activities and projects they conduct and those under their jurisdiction. The Yolo HCP/NCCP will provide a framework to improve conservation of natural resources, including endangered species habitat, while streamlining the permitting process for planned development, infrastructure, and maintenance activities by replacing the individual project system of permitting and mitigation with a countywide mitigation and conservation program that comprehensively coordinates the implementation of permit requirements. This approach benefits natural resources and project proponents by addressing project effects and mitigation requirements comprehensively in a way that is more efficient and effective for sensitive species and their essential habitats and creating habitat reserves that will be larger in scale, more ecologically valuable, and easier to manage than individual mitigation sites created under the current approach.

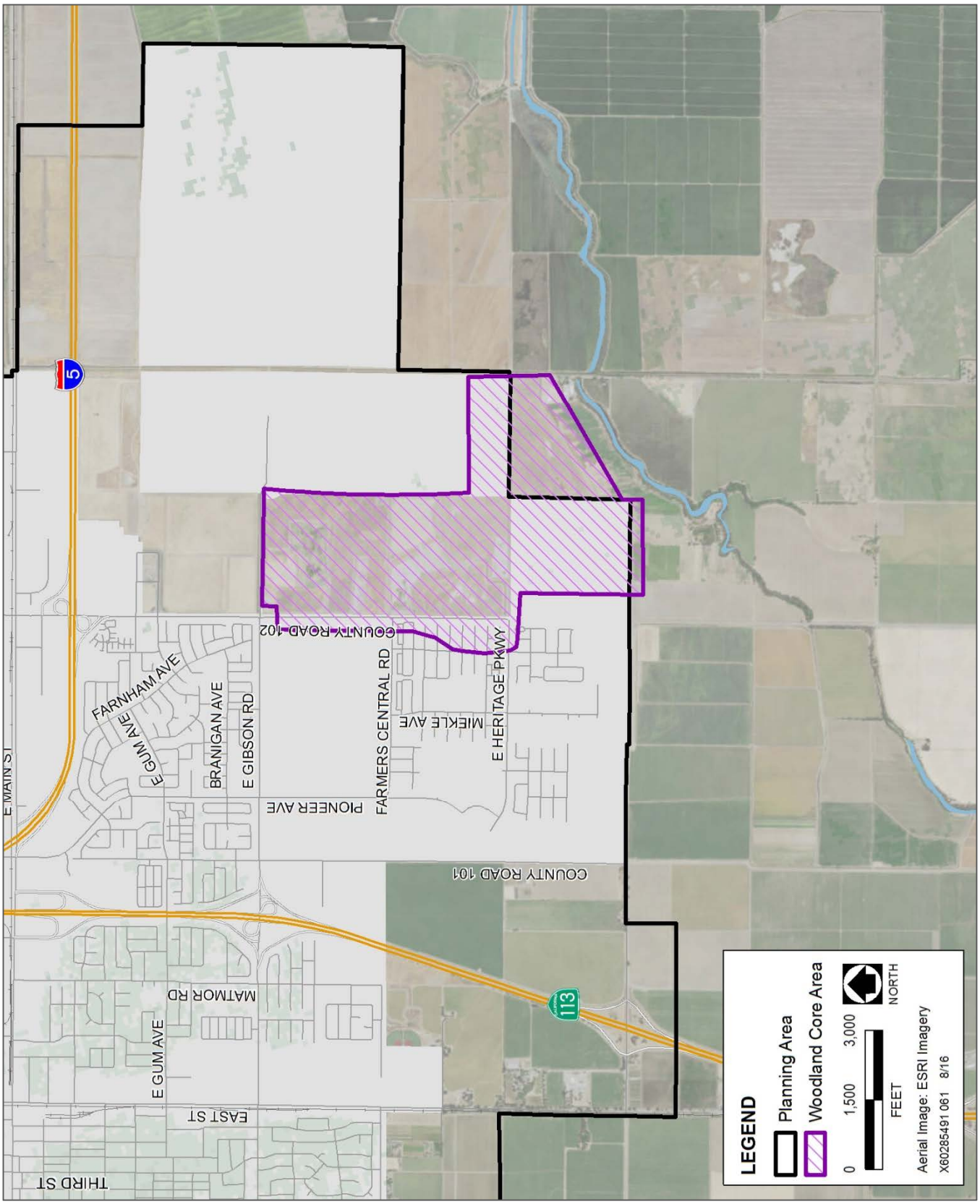
Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon

The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005) was released by USFWS on December 15, 2005. This plan focuses on 33 species of plants and animals that occur exclusively or primarily within vernal pool ecosystems, including the federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp.

The plan outlines recovery priorities and provides goals, objectives, strategies, and criteria for recovery. One of the overall objectives of the recovery plan is to promote natural ecosystem processes and functions by protecting and conserving intact vernal pools and vernal pool complexes. Habitat protection under the recovery plan includes the protection of the topographic, geographic, and soil features that support hydrologically interconnected systems of vernal pools, swales, and other seasonal wetlands within an upland matrix that together form hydrologically and ecologically functional vernal pool complexes.

While not regulatory in nature, the Recovery Plan should be taken into consideration when analyzing potential impacts on vernal pools and associated biota to ensure that projects do not prevent or impair the plan's future long-term implementation success. It is also used by the USFWS to determine recommendations and requirements during endangered species consultation for vernal pool dependent species. Species covered in the Recovery Plan that are known to occur or may occur in the Planning Area consist of Ferris' milk-vetch, alkali milk-vetch, vernal pool fairy shrimp, and vernal pool tadpole shrimp.

The Planning Area is within the Solano-Colusa Vernal Pool Region, and a portion of the Planning Area (the Woodland Regional Park and parcels north of the park to the southeast corner of Gibson Road and CR 102, plus the southern portion of the Water Pollution Control Facility) is within the Woodland core area (Exhibit 4.4-4)



Source: USFWS 2005

Exhibit 4.4-4 **Woodland Core Area within the Solano-Colusa Vernal Pool Region**

identified in the vernal pool recovery plan (USFWS 2005). Core areas are the specific sites that USFWS has deemed necessary to recover federally endangered and threatened vernal pool species. The Woodland and Davis Core Area is ranked in Zone 2. Protection of Zone 2 core areas is important for recovery of some species that are rare and localized but have significant populations within Zone 2. Protection of Zone 2 core areas is a lower priority than protection of Zone 1 core areas because USFWS believes that within each Zone 1 core area, species occurrences and suitable vernal pool habitat must be protected to prevent extinction or irreversible decline of at least one species covered in the recovery plan. At the time of designation, the Woodland Core Area was not known to support any listed species and was designated for protection of alkali milk-vetch; however, vernal pool tadpole shrimp have since been discovered in the Woodland Core Area in the Spring Lake Alkali Sink preserve just east of the Woodland Regional Park.

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The County's General Plan contains numerous goals, policies, and actions to protect biological resources. Key mitigating policies include:

- Policy CO-2.14 Ensure no net loss of oak woodlands, alkali sinks, rare soils, vernal pools or geological substrates that support rare endemic species, with the following exception. The limited loss of blue oak woodland and grasslands may be acceptable, where the fragmentation of large forests exceeding 10 acres is avoided, and where losses are mitigated.

- Policy CO-2.22 Prohibit development within a minimum of 100 feet from the top of banks for all lakes, perennial ponds, rivers, creeks, sloughs, and perennial treams. A larger setback is preferred. The setback will allow for fire and flood protection, a natural riparian corridor (or wetland vegetation), a planned recreational trail where applicable, and vegetated landscape for stormwater to pass through before it enters the water body. Recreational trails and other features established in the setback should be unpaved and located along the outside of the riparian corridors whenever possible to minimize intrusions and maintain the integrity of the riparian habitat. Exceptions to this action include irrigation pumps, roads and bridges, levees, docks, public boat ramps, and similar uses, so long as these uses are sited and operated in a manner that minimizes impacts to aquatic and riparian features.

- Policy CO-2.41 Require that impacts to species listed under the State or federal Endangered Species Acts, or species identified as special-status by the resource agencies, be avoided to the greatest feasible extent. If avoidance is not possible, fully mitigate impacts consistent with applicable local, State, and Federal requirements.

- Policy CO-2.42 Projects that would impact Swainson's hawk foraging habitat shall participate in the Agreement Regarding Mitigation for Impacts to Swainson's Hawk Foraging Habitat in Yolo County entered into by the CDFG and the Yolo County HIP/NCCP Joint Powers Agency, or satisfy other subsequent adopted mitigation requirements consistent with applicable local, State, and federal requirements.

In addition to the policies that directly relate to the protection of biological resources, there are numerous goals, policies, and actions that indirectly may help to protect biological resources, including: smart growth policies; policies to reduce air, water and soil pollution; policies to reduce the impacts of global climate change; and hazardous waste control policies.

4.4.3.4 LOCAL

City of Woodland 2002 General Plan

The 2002 General Plan included goals, policies, and implementation programs to protect environmental resources – water, air, vegetation, wildlife, and open space – that contribute to the city's economy and are important elements in the quality of life of Woodland's residents. Key mitigating policies include:

- 7.A.5. The City shall continue to require the use of feasible and practical best management practices (BMPs) to protect receiving waters from the adverse effects of construction activities and urban runoff.

- 7.B.2. Until the countywide Habitat Conversation Plan/Natural Community Conservation Plan is adopted, prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the City shall require, as part of the environmental review process, a biotic resources evaluation of the site by a wildlife biologist. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of federally- or state-listed rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit, the City shall determine the feasibility of the identified mitigation measures. Significant ecological resource areas shall, at a minimum, include the following:

  a. Any habitat for federally- or state-listed rare, threatened or endangered animals or plants.

  b. Large areas of non-fragmented natural habitat

  c. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway.

- 7.B.3. In connection with the countywide Habitat Conservation Plan/Natural Communities Conservation Plan, the City shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations.

- 7.B.4. The City shall require that development in areas known to have particular value for wildlife be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.

City of Woodland Tree Ordinance, Woodland Municipal Code Chapter 20A

The City of Woodland Tree Ordinance (Woodland Municipal Code Chapter 20A) governs the planting, removal, and preservation of the following trees on public property and specified private property within the City:

- heritage trees, which are defined as any valley oak tree with a diameter at breast height (DBH) of 30 inches or greater that is of good quality in terms of its health, vigor, growth, and conformity to generally accepted horticultural standards of shape for its species;

- specimen trees, which is any tree of interest because of its size or unusual species, other than a heritage tree, that is of good quality in terms of health, vigor, growth, and conformity to generally accepted horticultural standards of shape for its species, as designated by the City Council upon recommendation of the tree commission;

- landmark trees, which are defined as a tree or stand of trees of historical or public significance as designated by the City Council upon recommendation of both the tree commission and the historical preservation commission; and

- street trees, which are defined as any tree growing in the tree maintenance strip (strip of land parallel to a public street and adjacent thereto), whether or not planted by the City.

The City Tree Ordinance makes it unlawful to move, remove, top, cut down, poison, set fire to or permit fire to burn in proximity to, or perform any act that results in the unnatural death or destruction of a street tree; perform any activity that will interfere with or retard the natural growth of any street tree; perform any work or permit any work to be performed within the drip line of a street tree that would endanger the tree; or perform major maintenance on a street tree without a tree permit from the director of public works.

The City Tree Ordinance also requires that applications for development projects be accompanied by a tree plan containing the following information:

- the location, size, species, and condition of all existing trees on the project site;

- identification of trees proposed to be removed and those proposed to be preserved and the reason for any proposed tree removal;

- a program for the preservation of street trees, heritage, specimen, landmark trees, and trees with aesthetic value (i.e., trees with a 9-inch diameter or larger measured at 44 inches above the ground, in healthy condition) during and after completion of the project, as required in the City standard specifications, engineering design standards, Section 8, grading and erosion control;

- a program for the replacement of any trees proposed to be removed, as required by Section 20A-1-100; and

- any change in the trees to be removed and/or saved as designated on the approved development plan shall only be permitted upon the written approval of the director (Ordinance No. 1230, Section 4 [part]; Ordinance No. 1300, Section 4 [part]).

4.4.4 Environmental Impacts and Mitigation Measures

4.4.4.1 Methodology

The 2035 General Plan East and South Alternatives are compared against existing biological conditions (i.e., environmental baseline) to determine potential impacts on biological resources that would result from implementation of the Proposed Project. The alternatives are analyzed at an equal, program level of detail for biological resources impacts. Potential impacts to biological resources resulting from growth and associated land use conversion that might occur with implementation of the Proposed Project were determined by overlaying land use change areas for the East Alternative and South Alternative with the existing habitat layers (as shown in

Exhibit 4.4-1), quantifying potential loss of common and sensitive habitats (e.g., wetlands, alkali prairie), and evaluating potential effects on special-status species that could result from this habitat loss and other potential direct and indirect effects.

Table 4.4-4 shows the acreage of each habitat type that would be subject to development under each Alternative, not including potential flood infrastructure development in Flood Study Areas.

Table 4.4-4. Estimate of Potential Habitat Loss by Alternative

Habitat Type	East Alternative	South Alternative
	Acres Subject to Loss	Acres Subject to Loss
Agriculture (other than rice)	1,522	1,825
Rice	182	0
Annual Grassland	121	121
Detention Basin	151	137
Water	32	12
Freshwater Wetland	2	2
Total	**2,009**	**2,097**

Notes: Figures may not total due to rounding. Under the worst-case scenario, up to 521 additional acres of agricultural habitat could be converted under each alternative as a result of flood infrastructure development in the Flood Study Areas.

Under the East Alternative, it is assumed that SP-1B and SP-1C would not be developed and would continue to be used for agriculture. While the East Alternative expects that the entire acreage of SP-1A and SP-3 would develop, it only assumes 25 percent of land designated as SP-2 would develop by 2035.This analysis assumes that under the South Alternative, entire acreage of SP-1 (areas A, B, and C) and SP-3 would develop by 2035, but the SP-2 Area would not be developed and would continue to be used for the cultivation of rice and other agricultural crops.

The East Alternative and the South Alternative each include designation of 873 acres of Open Space and 521 acres of Flood Study Area that currently consist of annual grasslands, alkali prairie, freshwater wetlands, open water, and existing parks. Allowed uses in the Flood Study Area designation include open space, low-intensity agriculture, and recreation. Existing natural habitats (i.e., annual grasslands, alkali prairie, and freshwater wetlands) and agricultural uses would be retained within the designated Open Space with buildout of the Proposed Project, and would continue to provide similar habitat functions as they do under existing conditions.

Within the Flood Study Areas, residential, commercial, and industrial uses are not allowed under the action alternatives; however, the City's eventual comprehensive flood solution could include development of flood-related infrastructure in these areas within the 2035 planning timeframe. Because it is not currently known where, how, what kind, or if flood infrastructure would be developed in the Flood Study Areas, potential habitat losses cannot be quantified at this time and the potential impacts of implementing flood development in these areas is discussed generally in this section as a potential additional impact beyond the specific impacts that result from buildout of the other land use categories. The Flood Study Areas currently support agricultural land uses. Under the worst-case scenario, it is assumed that all 521 acres of agricultural land within the Flood Study Areas could ultimately be converted to non-agricultural uses. This represents a conservative approach because it is not known how much of the land in the Flood Study Area may ultimately be required for flood-related infrastructure; portions of it may well remain as farmland in perpetuity and areas that are converted to non-agricultural uses

could still provide similar habitat functions as they do currently. It is assumed that the City's comprehensive flood solution would be similar under the East Alternative and the South Alternative.

Goals and policies pertaining to management and protection of biological resources in the Planning Area are mostly found in the Conservation and Open Space Element of the 2035 General Plan. The impact analysis in this EIR considers implementation of goals and policies in the 2035 General Plan, along with the Climate Action Plan (2035 CAP), including Strategy UF-5 which relates to the preservation of managed open space areas for habitat.

4.4.4.2 THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines and Section 15065 of the CEQA Guidelines. The Proposed Project would result in a significant impact related to biological resources if it would do any of the following:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

4.4.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to biological resources are discussed in detail below.

4.4.4.4 IMPACT ANALYSIS

IMPACT Loss of Special-status Plants and Loss of Special-status Plant Habitat. *Implementation of the Proposed Project would result in conversion of habitat for special-status plant species, which could result in loss of*

4.4-1 *special-status plants either through direct removal or through habitat degradation. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Implementation of the Proposed Project, including the potential development of open space with renewable energy resources to satisfy 2035 CAP Strategy E-6, could result in direct removal or degradation of potentially suitable habitat for nine special-status plant species (see Table 4.4-2). Seven of these species have been previously documented in the Planning Area, including palmate-bracted bird's beak, a species that is federally and State-listed as endangered. Loss of suitable habitat could result in direct removal of these species.

Although development under the Proposed Project could result in loss of suitable and occupied habitat for special-status plants, the proposed General Plan Land Use Designations would ensure the majority of known occupied and potential habitat would remain in open space land uses for conservation of the special-status plant species and habitats that occur there. The majority of previously documented special-status plant occurrences are located within the Woodland Regional Park and adjacent parcels to the north that are designated as Open Space under the Proposed Project. Some of these adjacent lands are already protected under conservation easements (i.e., the City of Woodland Preserve and Spring Lake Alkali Sink). These areas are within the Woodland Core Area identified in the Vernal Pool Recovery Plan (USFWS 2005) as important habitat for protection of rare, localized vernal pool species, such as alkali milk vetch. The City is currently in negotiations with the Yolo Habitat Conservancy to establish a permanent conservation easement over the Regional Park site. Therefore, implementing the Proposed Project would not result in direct removal of known special-status plant occurrences at these locations. However, special-status plants could be present at previously undiscovered locations that would be developed with buildout of the Proposed Project, and there are previously documented occurrences of special-status plants at other locations outside of the areas designated as Open Space.

In addition, potential flood infrastructure development in Flood Study Areas could result in loss of special-status plants if they are present. Two special-status plant species, brittlescale and San Joaquin spearscale, have been previously documented in the Flood Study Areas.

In addition to direct removal, habitat modification could degrade habitat quality to a degree that it is no longer suitable for special-status plants to regenerate, and these plant populations could eventually die out. Indirect impacts could result from pollutants transported by urban runoff and other means, airborne particulates, changes in vegetation as a result of changes in land use and management practices, altered hydrology from the construction of adjacent development and roadways, habitat fragmentation, and the introduction or spread of invasive species or noxious weeds from surrounding development.

a. East Alternative–Most of the areas identified for new development under the East Alternative, including the SP-1, SP-2, and SP-3 areas, are currently used for agriculture and therefore have low potential to support special-status plants. Thus, the East Alternative minimizes the potential for direct removal of special-status plants by designating most of the known occupied habitat and suitable habitat as open space and focusing new development on agricultural lands. However, special-status plants could be present at previously undiscovered locations, including along drainage channels and in hedgerows, that would be developed with buildout of the South Alternative, and there are previously documented occurrences of special-status plants at other locations outside of the areas designated as Open Space.

b. South Alternative–Most of the areas identified for new development under the South Alternative, including the SP-1 and SP-3 Areas, are currently used for agriculture and therefore have low potential to support special-status plants. Thus, the South Alternative minimizes the potential for direct removal of special-status plants by designating most of the known occupied habitat and suitable habitat as Open Space. However, special-status plants could be present at previously undiscovered locations, including along drainage channels and in hedgerows, that would be developed with buildout of the South Alternative, and there are previously documented occurrences of special-status plants at other locations outside of the areas designated as Open Space.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Compliance with the federal ESA and CESA would reduce impacts on palmate-bracted bird's beak because it would require that this species be avoided or that any loss of this species be fully mitigated as a condition of permit approvals. These laws would apply to palmate-bracted bird's beak which is the only plant species within the Planning Area that is protected under FESA or CESA. Although USFWS does not issue take authorization for plants, this species is also listed as endangered under CESA, and take authorization from CDFW would be required for any losses. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured.

Proposed Project

The Proposed Project includes a goal and policies to reduce this potential impact.

2035 General Plan

- **Goal 7.B Maintain and Protect Biological Resources.** Maintain and protect natural habitats throughout the Planning Area, especially types that are considered sensitive by the Yolo HCP/NCCP. Protect sensitive wildlife and plant species.

- **Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan.** Continue to participate in the planning process for the countywide Habitat Conservation Plan/Natural Community Conservation Plan. Once adopted, fully implement the Plan to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats in the Woodland area. Evaluate the opportunity for adoption and implementation of a Local Conservation Plan to provide additional clearance under the California Environmental Quality Act (CEQA) for general biological resource impacts.

- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.

- **Policy 7.B.3 Special-Status Species.** Support preservation of the habitats of Federally- or State-listed rare, threatened, endangered, and/or other special status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

- **Policy 7.B.4 Fish and Wildlife.** Support the management efforts of the California Department of Fish and Wildlife to maintain and enhance the productivity of important wildlife species by protecting identified critical habitat for these species from incompatible suburban, rural residential, or recreational development.

- **Policy 7.B.5. Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for rare native plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and sensitive special-status plant and wildlife habitats.

2035 CAP

- **Strategy E-6: Renewable Energy Generation and Procurement.** Production or procurement of electricity for residential or business use through solar PV, wind, and geothermal systems. The following major renewable energy options are currently available:

    - Individual solar PV installations - Rooftop PV systems and PV parking shade structures are within reach of more community members as PV technologies have improved, costs have reduced significantly, and more accessible options for up-front financing have become available.

    - Community solar - A PG&E-administered program that allows businesses and individuals to buy shares in renewable energy developments and receive credit on their electric bills for the use of the renewable energy they generate. Community solar was developed through SB 43 (2013) to allow renters and property owners who are unable to install solar on their own properties to obtain renewable energy through PG&E and the other major utilities.

    - Green Certificates, or Renewable Energy Certificates - These are tradable commodities that represent the environmental value of renewable energy generated by one party that may be sold to another party.

    - Community Choice Aggregation (CCA) - CCA enables California cities and counties to supply electricity to the customers within their borders. A CCA is responsible for providing the energy, which it either generates or procures from other sources, but does not own the transmission and delivery systems. Because CCAs can choose the sources of their power mix, many communities look to CCA as a mechanism for increasing the amount of renewable energy they use.

- Action**:** Balance open-space maintenance with solar opportunities by promoting the installation of solar systems on existing development or in dual-use applications, such as parking lots, building roofs, and stormwater detention basins.

► **Strategy UF-5: Open Space Preservation.** Maintenance of environmental benefits and enhancement of community appreciation of open space areas to minimize the potential for development sprawl. Managed open space areas include the East Detention Pond at County Road 102 and Farmers Central Road, the alkali grasslands preserve lands east of County Road 102, and the old City of Woodland landfill and regional park site.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on special-status plants and plant habitat would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **potentially significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 4.4-1a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Biological Resources 1)

a. The City will require biological inventory surveys for new developments that could affect special-status species or sensitive habitat in areas designated for development under the General Plan.

b. The City will work with project applicants to identify opportunities to preserve special-status species occurrences and sensitive habitats through design and planning. If the HCP/NCCP is adopted and state and federal ITPs have been issued, the City shall implement the applicable requirements of the HCP/NCCP as relevant to any specific land use project. If the HCP/NCCP is not in place and/or ITPs have not been issued, the City shall follow the steps described below.

c. If the City determines it is reasonable and feasible to do so, while still achieving the specific project development goals and objectives, the City will require preservation of occupied special-status species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols,

where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status species and sensitive habitats.

d. If the project would result in take of state or federally listed species, the City will require project proponent/s to obtain take authorization from the U.S. Fish & Wildlife Service or the California Department of Fish and Wildlife, as appropriate, depending on species status, and comply with all conditions of the take authorization.

e. If the Yolo HCP/NCCP is not adopted or the affected species or habitat is not covered under the plan, the City will require project applicants to develop a mitigation and monitoring plan, in coordination with CDFW and/or USFWS, as appropriate depending on species status, to compensate for the loss of special-status species and sensitive habitats. The mitigation and monitoring plan will describe in detail how loss of special-status species or sensitive habitats shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, management and monitoring to avoid indirect habitat degradation (e.g., management of invasive plant species, maintenance of required hydrology), success criteria ensuring that habitat function goals and objectives are met and target special-status species are established, performance standards to ensure success, and remedial actions if performance standards are not met. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment).

f. If available, purchase of mitigation credits at an agency-approved mitigation bank (i.e., approved by the agency with jurisdiction over the affected species or habitat) in Yolo County, will be acceptable for compensatory mitigation for special-status species that are not covered under the Yolo HCP/NCCP.

Mitigation Measure 4.4-1b – Policy 7.B.5., Policy 7.B.7, and Policy 7.B.11 should be amended as follows:

- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including sensitive habitat types (e.g., alkali sink and prairie, freshwater wetlands, freshwater marsh, riparian forest, drainages), ~~wetland preserves, riparian corridors, woodlands,~~ special-status plant occurrences, and floodplains. ~~Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.~~ Maintain connectivity between open space areas designated for habitat conservation values within the Planning Area as well as linkages to adjacent habitats outside of the Planning Area, such as Willow Slough, Cache Creek, and habitat preserves to the east.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for ~~rare native~~ special-status plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and ~~sensitive~~ special-status plant and wildlife habitats.

Implementation of these mitigation measures combined with current laws, regulations, and policies would reduce impacts because the General Plan would preserve the majority of the known special-status plant occurrences and suitable habitat in the Planning Area, within designated Open Space land uses that would be protected under permanent conservation easements. These provisions would require new developments to identify and avoid special-status plant populations and their habitats to the extent feasible and compensate for the loss of special-status plants through establishment of new populations or other appropriate measures in coordination with state and federal agencies.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.4-2 Loss and Degradation of Habitat for Special-status Wildlife Species and Potential Direct Take of Individuals. *Implementation of the Proposed Project would allow conversion of undeveloped land that currently supports known occupied and potential habitat for special-status wildlife species to residential, commercial, and other developed land uses. Buildout of the Proposed Project would result in loss and degradation of suitable habitat for several special-status wildlife species and could result in take of State- and Federally-listed wildlife species and loss or displacement of special-status wildlife populations. However, implementation of the 2035 General Plan policies and implementation program and compliance with state and federal laws, along with the General Plan Land Use Diagram would reduce potential impacts on special-status wildlife species. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Implementation of the Proposed Project, including the potential development of open space with renewable energy resources to satisfy 2035 CAP Strategy E-6 and development of flood infrastructure within Flood Study Areas, could result in direct removal or degradation of potentially suitable habitat for 20 special-status wildlife species (see Table 4.4-3). Special-status wildlife species could be affected by proposed land use changes either directly during land conversion or indirectly through modification of suitable habitat, changes in vegetation as a result of land development, and habitat fragmentation. Wildlife could be killed or injured, and nests destroyed at the time of conversion to urban or other development.

a. East Alternative–Development pursuant to the East Alternative would potentially impact 20 special-status wildlife species that have been previously documented in or immediately adjacent to the Planning Area. Special-status wildlife species that could be adversely affected by buildout of the East Alternative include the state and/or federally listed or candidate species valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, giant garter snake, Swainson's hawk, western snowy plover, and tricolored blackbird. . These eight listed species and the 12 additional special-status wildlife species that are not officially listed under CESA or ESA, could be affected by proposed land use changes either directly during land conversion or indirectly through modification of suitable habitat, changes in vegetation as a result of land development, and

habitat fragmentation. The SP-2 Area that would be developed under the East Alternative is located on agricultural land uses (rice and other grain crops) that do not provide suitable habitat for many of the special-status wildlife species known to occur in the region, and do not support any previously documented occurrences of special-status wildlife. Special-status wildlife species that may occur in the Planning Area, but that are unlikely to be found in the SP-2 Area because it does not provide suitable habitat are valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, tricolored blackbird, western snowy plover, grasshopper sparrow, Modesto song sparrow, purple martin, yellow breasted chat, and pallid bat. The primary difference between this alternative and the South Alternative is that implementing the East Alternative would result in loss of 182 acres of rice fields that provide habitat for giant garter snake and implementing the South Alternative would not result in loss of rice fields, but implementing this alternative would result in loss of 88 fewer acres of other agricultural habitats than the South Alternative.

b. South Alternative–Development pursuant to the South Alternative would potentially impact 20 special-status wildlife species that have been previously documented in or immediately adjacent to the Planning Area. Special-status wildlife species that could be adversely affected by buildout of the South Alternative include the state and/or federally listed or candidate species valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, giant garter snake, Swainson's hawk, western snowy plover, and tricolored blackbird. These eight state and/or federally listed species and the 12 additional special-status wildlife species that are not officially listed under CESA or ESA, could be affected by proposed land use changes either directly during land conversion or indirectly through modification of suitable habitat, changes in vegetation as a result of land development, and habitat fragmentation. Implementing the South alternative would result in the loss of 88 more acres of agricultural habitat loss than implementing the East Alternative, but would not result in the loss of any rice fields.

Potential impacts on these listed species and other special-status wildlife species are discussed in more detail below either individually or in related groups. Alternative-specific information is provided, where applicable.

Valley Elderberry Longhorn Beetle

Elderberry shrubs that have potential to support valley elderberry longhorn beetle may be present within the Planning Area along fence rows, roadways, around rural residential properties within agricultural lands, along drainage ditches and pond margins, or in other isolated locations. Elderberry shrubs within land use areas designated for development under the Proposed Project could be removed resulting in loss of valley longhorn beetle larvae and loss of habitat. Indirect impacts from ground-disturbing activities or use of herbicides could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Vernal Pool Branchiopods

Implementing the Proposed Project would allow development in areas that could support vernal pools that have potential to support vernal pool fairy shrimp and vernal pool tadpole shrimp. Vernal pool tadpole shrimp is known to occur in the Maupin Unit of the Alkali Sink Preserve just east of the Woodland Regional Park. The majority of vernal pool habitat in the Planning Area is within the Woodland Regional Park and adjacent parcels to the north that are designated as Open Space under the Proposed Project, and that are proposed to be permanently preserved under a conservation easement under both Alternatives. Some of these adjacent lands are already protected under conservation easements (i.e., the City of Woodland Preserve and Spring Lake Alkali Sink Preserve).The City is currently in negotiations with the Yolo Habitat Conservancy to establish a permanent conservation easement over the Regional Park site.

Although the majority of potential habitat for vernal pool branchiopods would be preserved under the Proposed Project, potential habitat maybe present at other locations in the Planning Area that would be subject to development, including within the 121 acres of annual grassland habitat mapped in the opportunity areas. There is also low potential for remnant vernal pools to be found in agricultural lands if they have not been deep ripped. Conversion of vernal pool habitat, if it is present, to developed land uses could result in direct take of vernal pool branchiopods listed under the ESA if they are present. In addition, development in areas adjacent to vernal pool habitat could result in indirect impacts on vernal pool species through habitat degradation and fragmentation. The USFWS generally considers vernal pool habitats within 250 feet of development to be subject to indirect effects that could be deleterious to vernal pool branchiopods, such as hydromodification, loss of habitat connectivity, and degradation of water quality. The direct removal of habitat and potential degradation of retained habitat could have substantial adverse effects on listed vernal pool branchiopods.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

California Tiger Salamander

Implementing the Proposed Project would allow development in areas that support freshwater wetlands and ponds that could provide suitable breeding habitat for California tiger salamander, and in grasslands that provide potential upland habitat for this species. There are no current or historic records of this species occurring in or near Woodland, except a 1993 record of a single California tiger salamander from the city of Davis. Nonetheless, potentially suitable habitat is present, and impacts could occur. Conversion of suitable wetland or upland habitat could result in direct take if they are present. Filling breeding habitat could result in loss of eggs and larvae, which would also constitute take.

Indirect impacts on California tiger salamander could result from development adjacent to aquatic habitat through exposure to herbicides, pesticides, and other toxins; and altered hydrology. Hydromodification that increases hydration periods, such as urban runoff, could promote invasion of predators, such as fish or bullfrogs, into aquatic breeding habitat. Alternatively, if hydration periods are decreased, then the affected habitat may not remain inundated long enough for California tiger salamander eggs and larvae to complete development and metamorphosis. In addition, development within 1.3 miles of breeding habitat could disconnect breeding habitat

from upland habitat required for the majority of the California tiger salamander life cycle and result in increased mortality due to vehicle strikes, predation, and interactions with humans (e.g., human collecting, handling, harassment). Reduction of available upland habitat could cause salamanders to be above ground longer as they look for refuge, leaving them vulnerable to desiccation and predation. The direct removal of habitat and potential degradation of retained habitat could have substantial adverse effects on California tiger salamander if they are present.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Western Pond Turtle

Ponds, drainages, and marshes in and adjacent to the Planning Area provide suitable habitat for western pond turtle, and this species could nest in uplands up to 0.3 mile from aquatic habitat. There are no current or historic records of this species occurring in the Planning Area, and the likelihood of resident populations of this species occurring in the Planning Area is low due to a lack of adequately sized water bodies with suitable hydrology and vegetation. A population of western pond turtles is known to occur on the UC Davis campus, and there is the potential for it to occur in the Planning Area based on the presence of potentially suitable aquatic habitat (i.e., ponds and drainages). Furthermore, suitable aquatic habitat is present adjacent to the Planning Area, and individuals from these nearby habitats could nest in uplands in the Planning Area, particularly in the Flood Study Areas near Cache Creek.

Implementing the Proposed Project would allow development in areas that support potential aquatic habitat and upland nesting habitat. Draining, grading, or filling aquatic habitat during construction could kill western pond turtles by hitting, crushing, or smothering them if they are present. Development in upland areas could result in direct destruction of eggs or death of hatchlings and overwintering juveniles.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Giant Garter Snake

Giant garter snake is known to occur in the vicinity of the Planning Area and has been documented in drainages that are connected to the Planning Area. Implementing the Proposed Project would allow development in areas containing agricultural ditches and other waterways that provide dispersal habitat and possibly resident habitat for giant garter snake. Draining, grading, or filling aquatic habitat during construction, as well as construction activities within 200 feet of suitable aquatic habitat, could result in direct take of giant garter snake if they are present and permanent loss of habitat.

a. East Alternative–Giant garter snake has been documented in drainages that are connected to the Planning Area, particularly in the Yolo Bypass and Willow Slough near SP-2. In addition to

waterways, including agricultural ditches, SP-2 development areas support approximately 182 acres of cultivated rice fields that provide suitable habitat for giant garter snake. Implementing the East Alternative would allow conversion of these rice fields, as well as areas containing agricultural ditches and other waterways that provide dispersal habitat and possibly resident habitat for giant garter snake. Conversion of these habitats, as well as construction activities within 200 feet of rice fields and suitable aquatic habitat, could result in direct take of giant garter snake, if they are present, and permanent loss of a substantial amount of suitable habitat.

b. South Alternative–Areas proposed for developed land uses under the South Alternative do not currently support cultivated rice fields; however, this species could be present in waterways in the Planning Area, including agricultural ditches. Draining, grading, or filling aquatic habitat during construction, as well as construction activities within 200 feet of suitable aquatic habitat, could result in direct take of giant garter snake if they are present and permanent loss of habitat. Implementing this alternative would result in 182 fewer acres of giant garter snake habitat loss than implementing the East Alternative.

Special-Status and Migratory Birds

A number of special-status bird species are known or have potential to nest and forage in the Planning Area, as noted in Table 4.4-3. Implementing the Proposed Project would allow development in areas that currently support annual grassland and agricultural habitats, as well as scattered trees, that could support nesting birds. Special-status bird species potentially nesting in trees in the Planning Area include Swainson's hawk, white-tailed kite, and loggerhead shrike. Burrowing owl is a ground (underground burrows) dwelling species that could be found in grassland, agricultural, and alkali prairie habitats. Tricolored blackbird is a marsh nesting species that could be present in the Planning Area. Northern harrier is a ground nesting species that could be found in grassland, alkali prairie, agricultural, or marsh habitats in or near the Planning Area, and grasshopper sparrow could nest on the ground in the grassland and alkali prairie habitats. Western snowy plover could nest at water treatment facilities, and purple martin could nest in highway overpasses or other man-made structures in the Planning Area. Mountain plover may winter in grasslands and agricultural fields in the Planning Area. In addition to the habitat acreage presented in Table 4.4-4, up to 521 acres of agricultural habitat suitable for special-status and migratory birds could be converted to other habitat types as a result of flood infrastructure development.

Portions of the Planning Area that would be opened to possible development include areas of annual grassland and agricultural habitat that are important foraging grounds for Swainson's hawk. Removal of substantial acreage of foraging habitat could reduce the small mammal prey base for Swainson's hawks and other raptors. Large raptors generally require large areas of suitable foraging habitat, and a reduced prey base could eventually lead to displacement of some nesting Swainson's hawks if sufficient foraging habitat is no longer available to support current local population numbers. If all 521 acres of the Flood Study Area was converted to noncompatible habitat types due to flood infrastructure development, this would increase the likelihood that Swainson's hawk pairs would be displaced from the area.

Construction resulting from implementation of the Proposed Project could disturb active bird nests in and near the construction area, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Tree removal and ground disturbances could result in the direct destruction of active nests of birds protected under the MBTA and California Fish and Game Code. Loss of common migratory birds and raptors (those not meeting the

definition of special-status as provided above) would not be a significant impact under CEQA, but mitigation to avoid the loss of active nests of these species *is* required for compliance with the MBTA and California Fish and Game Code.

a. East Alternative–The East Alternative Land Use Diagram would designate the majority of annual grassland and alkali prairie habitat as Open Space; therefore, substantial acreage of these habitats would be preserved and continue to provide foraging and nesting opportunities to special-status bird species. However, removal of agricultural and grassland habitat and individual trees could result in mortality of individuals and nest abandonment of the special-status bird species discussed here. The loss of substantial amounts of winter foraging habitat could result in permanent displacement of mountain plover from the area. The loss of substantial acreage of agricultural habitat could reduce reproductive success of Swainson's hawk pairs known to nest in the area, thereby resulting in a decline in local population numbers and nesting pairs could be permanently displaced from the local area due to lack of sufficient prey. Implementation of the East Alternative could lead to a loss of special-status birds, their eggs, or young, either through direct removal or indirect impacts resulting in nest abandonment, or loss of foraging habitat in quantities that result in displacement of Swainson's hawks or reduced reproductive success. Implementing the East Alternative would result in loss of 1,967 acres of Swainson's hawk foraging habitat compared to 2,083 acres under the South Alternative (116 fewer acres). Suitable foraging habitat within the East Alternative consists of 1,522 acres of agricultural crops other than rice, 182 acres of rice, 121 acres of annual grassland, and 151 acres of detention basin.

b. South Alternative–The South Alternative Land Use Diagram would designate the majority of annual grassland and alkali prairie habitat as Open Space. Therefore; substantial acreage of these habitats would be preserved and continue to provide foraging and nesting opportunities to special-status bird species. However, removal of agricultural and grassland habitat and individual trees could result in mortality of individuals and nest abandonment of the special-status bird species discussed here. The loss of substantial amounts of winter foraging habitat could result in permanent displacement of mountain plover from the area. The loss of substantial acreage of agricultural habitat could reduce reproductive success of Swainson's hawk pairs known to nest in the area, thereby resulting in a decline in local population numbers, and nesting pairs could be permanently displaced from the local area due to lack of sufficient prey. Implementation of the South Alternative could lead to a loss of special-status birds, their eggs, or young, either through direct removal or indirect impacts resulting in nest abandonment, or loss of foraging habitat in quantities that result in displacement of Swainson's hawks or reduced reproductive success. Implementing the South Alternative would result in loss of 2,083 acres of Swainson's hawk foraging habitat compared to 1,967 acres under the East Alternative (116 more acres). Suitable foraging habitat within the South Alternative consists of 1,825 acres of agricultural crops other than rice, 121 acres of annual grassland, and 137 acres of detention basin.

Pallid Bat

Implementing the Proposed Project would allow development that could result in the removal of human-made structures that may support bat roosts. If these structures are used by bats as a day roost, hibernation roost, or maternity colony roost, implementation of the Proposed Project could result in injury and mortality of pallid bat.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Compliance with the federal ESA and CESA would reduce potential impacts on valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, giant garter snake, Swainson's hawk, and tricolored blackbird because it would require that these State and/or federally listed species be avoided or that any loss of these species be fully mitigated as a condition of take authorization. For projects with a federal nexus (e.g., receiving federal funding or requiring federal permits) federal agencies are required under Section 7 of the ESA to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. Section 10(a) of the ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that ensures minimization and mitigation of impacts associated with the take. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated. Additionally, adequate funding must be ensured for implementation of those mitigation measures, monitoring compliance with mitigation measures, and evaluating the effectiveness of the measures.

Compliance with the MBTA and Section 3503 of the California Fish and Game Code would ensure that nesting raptors and other birds are not adversely affected by implementation of the Proposed Project because it would require project applicants to avoid disturbing or destroying active bird nests either directly or indirectly. Project applicants would be required to conduct preconstruction nesting bird surveys for any work conducted during the nesting season, which is generally considered to be February 15-September 15, and avoid removing or destroying active nests, or disturbing nesting birds in such a way that it results in nest abandonment.

Proposed Project

The 2035 General Plan includes goals and policies that would reduce the potential impact to wildlife species.

- **Goal 7.B Maintain and Protect Biological Resources.** Maintain and protect natural habitats throughout the Planning Area, especially types that are considered sensitive by the Yolo HCP/NCCP. Protect sensitive wildlife and plant species.

- **Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan.** Continue to participate in the planning process for the countywide Habitat Conservation Plan/Natural Community Conservation Plan. Once adopted, fully implement the Plan to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats in the Woodland area. Evaluate the opportunity for adoption and implementation of a Local Conservation Plan to provide additional clearance under the California Environmental Quality Act (CEQA) for general biological resource impacts.

- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.

- **Policy 7.B.3 Special-Status Species.** Support preservation of Federally- or State-listed threatened, endangered, and other special-status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

- **Policy 7.B.6. Open Space Buffer.** Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for rare native plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

- **Policy 7.B.8 Native and Compatible Non-Native Plant Species.** Require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in order to preserve the visual integrity of the landscape and provide habitat conditions suitable for native wildlife.

- **Policy 7.B.9. Tree Canopy.** Manage, enhance, and improve the City's tree canopy as a valuable ecological resource.

- **Policy 7.B.10. Urban Forest Management Plan.** Establish an urban forest management plan to guide the protection and enhancement of the urban forest.

Policy 7.B.11 Sensitive Site Planning. Site new development to maximize the protection of native tree species and special-status plants and wildlife habitats.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on special status wildlife and habitat would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **potentially significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 4.4-2a – Policy 7.B.6 and 7.B.8 should be amended as follows:

- **Policy 7.B.6. Open Space Buffer.** Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29 and its existing wildlife habitat values.

- **Policy 7.B.8 Native and Compatible Non-Native Plant Species.** Require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in order to preserve the visual integrity of the landscape, ~~and~~ provide benefits ~~habitat conditions suitable~~ for native wildlife, and ensure that a variety of plants suited to the region are maintained.

Mitigation Measure 4.4-2b – Implement Mitigation Measure 4.4.1a

Mitigation Measure 4.4-2c – Implement Mitigation Measure 4.4.1b

With implementation of these changes, impacts would be reduced because these provisions would preserve the majority of sensitive habitats (e.g., alkali prairie and vernal pools) that could support special-status wildlife within the Open Space land use designation, would require development projects to identify and avoid special-status wildlife or provide compensation for loss of habitat.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.4-3 Loss and Degradation of Riparian Habitat or Other Sensitive Natural Communities. *Implementation of the Proposed Project would result in conversion of undeveloped land that currently supports a limited amount of riparian habitat and possibly remnant alkali prairie to residential, commercial, and other developed land uses. (All other sensitive natural communities, including vernal pool habitats and other freshwater wetlands found in the Planning Area are addressed under impacts on federally protected wetlands and are not discussed here.) Therefore, buildout of the Proposed Project could result in loss and degradation of riparian or alkali prairie habitat. However, implementation of the 2035 General Plan policies and implementation programs and compliance with state and federal laws, along with the General Plan Land Use Diagram would reduce potential impacts on riparian habitat and other sensitive natural communities. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Changes in land use designations that would occur with implementation of the Proposed Project would allow development in areas that contain ponds and waterways, both natural and manmade, that support small strips of riparian forest habitat. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

A total of approximately 7 acres of riparian forest habitat has been mapped in the Planning Area and most of this (approximately 6 acres) is within the Woodland Regional Park. All of the 129 acres of previously mapped alkali prairie habitat in the Planning Area is within the Woodland Regional Park and adjacent City of Woodland Preserve and Spring Lake Alkali Sink preserve; however, parcels north of these preserves around the Mountain Valley Golf Center and Woodland Community College, as well as Flood StudyAreas may support remnants of alkali prairie habitat that have not been previously mapped. While the majority of these areas would be preserved in designated Open Space areas, some of these areas are designated for Business Park and Public/Quasi Public land uses and flood infrastructure could be developed in the Flood Study Ares. Habitat in these areas is already fragmented by roads and surrounding development and degraded by past agricultural activities. Nonetheless, development in these areas could result in removal of riparian forest and/or alkali prairie vegetation or further habitat degradation from pollutants transported by urban runoff, changes in vegetation as a result of changes in land use and management practices, and altered site hydrology from the construction of adjacent urban development and roadways.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Compliance with Section 1602 of the California Fish and Game Code would further reduce potential impacts on riparian habitat because it would require project applicants to notify CDFW if their project includes work on the bed and bank of a stream or other water body, including drainage canals and artificial lakes, and obtain a Lake and Streambed Alteration Agreement. The Lake and Streambed Alteration Agreement would include measures to avoid, minimize, or compensate for adverse effects to riparian habitat that must be implemented as a condition of the agreement.

Proposed Project

The 2035 General Plan includes goals and policies to reduce this potential impact.

- **Goal 7.B Maintain and Protect Biological Resources.** Maintain and protect natural habitats throughout the Planning Area, especially types that are considered sensitive by the Yolo HCP/NCCP. Protect sensitive wildlife and plant species.

- **Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan.** The City will continue to participate in development of the HCP/NCCP and will fully implement the Plan, once adopted, to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats.

- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from

incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.

- **Policy 7.B.3 Special-Status Species.** Support preservation of Federally- or State-listed threatened, endangered, and other special-status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

- **Policy 7.B.6. Open Space Buffer.** Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for rare native plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and sensitive special-status plant and wildlife habitats.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on riparian habitat and other sensitive natural communities would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.4-3a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Biological Resources 2):

> If the project would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, the City will require project proponent/s to notify the California Department of Fish and Wildlife, obtain a Lake and Streambed Alteration Agreement if determined necessary by the California Department of Fish and Wildlife, and comply with all conditions of the Lake and Streambed Alteration Agreement.

Mitigation Measure 4.4-3b – Implement Mitigation Measure 4.4-1a

Mitigation Measure 4.4-3c – Implement Mitigation Measure 4.4-1b

Mitigation Measure 4.4-3d – Implement Mitigation Measure 4.4-2a

With implementation of these changes, impacts would be reduced because these provisions would preserve the majority of sensitive habitats (e.g., alkali prairie and riparian forest) within the Open Space land use designation, and would require development projects to identify and avoid sensitive habitats or provide compensation for loss of habitat.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.4-4 Loss and Degradation of Federally Protected Wetlands. *Implementation of the Proposed Project would result in conversion of land that currently supports waterways and ponds and may support freshwater marsh, vernal pools, and other freshwater wetlands to residential, commercial, and other developed land uses. These wetland habitats and other waters may be protected under Section 404 of the CWA. Therefore, buildout of the Proposed Project could result in loss and degradation of federally protected wetlands. The impact is considered potentially significant.*

Implementing the Proposed Project would allow development in areas that currently support, or may support, wetlands and other waters, including vernal pools and other freshwater wetlands, ponds, and drainage canals. Impacts on wetlands and other waters could occur through habitat conversion, encroachment, routine maintenance, or other activities in the immediate vicinity of waterways and in habitat supporting wetlands. Land conversion could result in direct fill of wetlands and other waters. Indirect impacts could result from adjacent development that leads to habitat modifications such as changes in hydrology and reduction in water quality caused by urban runoff, erosion, and siltation. It is likely that most wetlands and some waterways in the Planning Area would qualify as waters of the United States due to hydrological connectivity to navigable waters (e.g., the Sacramento River via Willow Slough, Cache Creek, and the Yolo Bypass) or adjacency to other waters of the United States; however, some wetlands may be disclaimed by the USACE as isolated waters or may be excluded from regulation under the Clean Water Act. Ditches, including agricultural ditches that were not constructed in streams, are not modified streams, do not drain wetlands, and have only ephemeral or intermittent flow are generally excluded from the Clean Water Act according to the Clean Water Rule issued July 13, 2015 (80 FR 37053). Any wetlands or other waters disclaimed by the USACE would still be subject to regulation by Central Valley RWQCB as waters of the state, and impacts to waters of the state would require mitigation. The 2035 General Plan land use designations would retain most of the lands that potentially support vernal pools and alkali sink within designated Open Space areas. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative– The areas designated for development under the East Alternative support a number of drainage ditches and canals, and development in these areas may result in fill of federally protected wetlands and other waters as well as potential indirect impacts to wetlands and waterways retained within developed areas. The SP-2 Area that could be developed under the East Alternative is agricultural land with a high percentage of rice and numerous agricultural ditches; however, this area is not expected to support federally protected wetlands. The East Alternative contains approximately 1.9 acres of previously mapped freshwater wetlands and 32 acres of water within areas subject to

development. There may be additional acreage of wetlands and waters that have not been previously mapped. The SP-2 Area that could be developed under the East Alternative is agricultural land with 182 acres of rice fields and numerous agricultural ditches; however, this area is not expected to support federally protected wetlands.

b. South Alternative–The areas designated for development under the South Alternative support a number of drainage ditches and canals, and development in these areas may result in fill of federally protected wetlands and other waters as well as potential indirect impacts to wetlands and waterways retained within developed areas. The South Alternative contains approximately 1.7 acres of previously mapped freshwater wetlands and 12 acres of water within areas subject to development. There may be additional acreage of wetlands and waters that have not been previously mapped.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Compliance with Section 404 of the Clean Water Act would reduce potential impacts on federally protected wetlands because it would require project applicants to obtain a permit from the USACE for any activity resulting in fill of wetlands and other waters of the United States. A wetland mitigation plan that satisfies USACE requirements will be needed as part of the permit application. Project applicants that obtain a Section 404 permit will also be required to obtain water quality certification from the Central Valley RWQCB pursuant to Section 401 of the CWA. If the project involves work in areas containing waters disclaimed by the USACE, project applicants would be required to obtain a Waste Discharge Requirement permit from the Central Valley RWQCB pursuant to the Porter Cologne Act. In accordance with these state and federal regulations, mitigation resulting in no net loss of functions and values of affected wetlands and waters is required.

Proposed Project

The 2035 General Plan includes goals and policies to reduce this potential impact.

- **Goal 7.B Maintain and Protect Biological Resources.** Maintain and protect natural habitats throughout the Planning Area, especially types that are considered sensitive by the Yolo HCP/NCCP. Protect sensitive wildlife and plant species.

- **Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan.** The City will continue to participate in development of the HCP/NCCP and will fully implement the Plan, once adopted, to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats.

- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.

- **Policy 7.B.3 Special-Status Species.** Support preservation of Federally- or State-listed threatened, endangered, and other special-status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for rare native plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and sensitive plant and wildlife habitats.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on federally protected wetlands and other waters of the United States would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.4-4a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Biological Resources 3)

If the project would result in ground disturbance on sites containing waterways or other aquatic habitats, the City will require project proponent/s to complete a delineation of waters of the United States according to U.S. Army Corps of Engineers' methods, and to submit the completed delineation to the U.S. Army Corps of Engineers for jurisdictional determination. If the project would result in fill of wetlands or other waters of the United States, the City will require project proponent/s to obtain a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers and water quality certification from the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. If the project involves work in areas containing waters disclaimed by the USACE, project applicants shall obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board pursuant to the Porter Cologne Act. Project applicants shall be required to obtain all needed permits prior to project implementation, to abide by the conditions of the permits, including all mitigation requirements, and to implement all requirements of the permits in the timeframes required therein.

Mitigation Measure 4.4-4b – Implement Mitigation Measure 4.4-1a

Mitigation Measure 4.4-4b – Implement Mitigation Measure 4.4-1b

With implementation of these changes, impacts would be reduced because it would preserve the majority of wetland and aquatic habitats (e.g., alkali sink and freshwater wetlands) within the Open Space land use designation and would require development projects to identify and avoid wetland habitats or provide compensation resulting in no net loss of habitat functions and values. Policies requiring protection of special-status species and their habitats also protect wetlands and drainages because these include special-status species such as vernal pool branchiopods, vernal pool plants, and giant garter snake that are associated with aquatic habitats**.**

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.4-5 Interference with Wildlife Movement Corridors and Nursery Sites. *The Proposed Project plans for development within the Pacific flyway, a major bird migration route. However, buildout of the Proposed Project would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds such that it would no longer function as a migratory corridor. This impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The City of Woodland is located within the Pacific flyway, which is a major north-south route for migratory birds along western North America. Large numbers of waterfowl and shorebirds may move through the area seasonally and may congregate and forage in wetlands, grasslands, and agricultural fields during winter or use them as resting grounds during longer migrations from the Arctic to Central or South America.

a. East Alternative–Land use changes allowed under the East Alternative would allow development to occur in agricultural habitats within the Pacific flyway, but this development would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds such that it would no longer function as a migratory corridor because there still would be abundant agricultural habitat of equal or better value to migrating birds surrounding the Planning Area and this agricultural habitat, along with Cache Creek, Willow Slough, and the Yolo Bypass would continue to support the needs of migratory birds and provide wildlife movement opportunities for other native resident or migratory wildlife species in the area. Development envisioned under the East Alternative would not cause any areas of natural habitat to become isolated. Waterways within the East Alternative development areas consist primarily of agricultural ditches and canals that do not support riparian vegetation that would provide cover for wildlife movement.

   The Planning Area and areas designated for development under the East Alternative do not currently provide an important connection between any areas of natural habitat that would otherwise be isolated and the Planning Area is not located within any of the ecological corridors identified in the Yolo HCP/NCCP as important to maintaining connectivity between communities, habitat patches, species

populations, or the Yolo HCP/NCCP proposed reserve system. No native wildlife nursery sites have been identified in the Planning Area. Therefore, implementing the East Alternative would not interfere substantially with the movement of any native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

b. South Alternative–Land use changes allowed under the South Alternative would allow development to occur in agricultural habitats within the Pacific flyway, but this development would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds such that it would no longer function as a migratory corridor. While a limited amount of agricultural habitat that may be used as resting grounds or winter foraging grounds would be converted to other uses, abundant agricultural habitat of equal or better value to migrating birds surrounds the Planning Area and would continue to support the needs of birds that migrate through the area. Cache Creek, Willow Slough, and surrounding agricultural open space provide movement opportunities for other native resident or migratory wildlife species in the area, and development within the Planning Area would not cause any areas of natural habitat to become isolated. Waterways within the Planning Area consist primarily of agricultural ditches and canals that do not support riparian vegetation that would provide cover for wildlife movement.

   The Planning Area and areas designated for development under the South Alternative do not currently provide an important connection between any areas of natural habitat that would otherwise be isolated, and the Planning Area is not located within any of the ecological corridors identified in the Yolo HCP/NCCP as important to maintaining connectivity between communities, habitat patches, species populations, or the Yolo HCP/NCCP proposed reserve system. No native wildlife nursery sites have been identified in the Planning Area. Therefore, implementing the South Alternative would not interfere substantially with the movement of any native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

There are no applicable proposed goals, policies, and implementation programs.

Summary of Impact Analysis

There are no applicable laws, regulations, or policies.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.4-6 Conflict with Local Ordinances Protecting Biological Resources. *The 2035 General Plan policies and compliance with City ordinance would reduce potential impacts on protected trees. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Implementing the Proposed Project would allow development in areas containing street trees, heritage trees, landmark trees, specimen trees, or other trees protected under the City of Woodland Tree Ordinance (Woodland Municipal Code Chapter 20A).

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would potentially result in removal of a greater number of trees than the East Alternative. Although a tree inventory has not been completed for the Planning Area, review of aerial photography suggests that implementing the South Alternative could potentially result in removal of more protected trees than implementing the East Alternative because there are more trees in the areas that would be developed under the South Alternative, particularly within SP-1B and SP-1c. there appear to be no trees within the SP-2 development area.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Compliance with the City of Woodland Tree Ordinance (Woodland Municipal Code Chapter 20A) would reduce potential impacts on protected trees because it would require applicants for development projects to inventory all trees on their project sites and prepare a program for the preservation of protected trees during and after completion of the project. Project applicants would be required to obtain a permit from the director of the department of public works (director) for any proposed tree removal or work within the drip line of a protected tree, and as a condition of the tree permit, applicants would be required to develop a program for the replacement of any trees proposed to be removed. The person owning or controlling the development project would be required to replace protected trees according to the following specifications:

- For each 6 inches, or fraction thereof, of diameter of street tree approved for removal, two 15-gallon container trees of an approved species shall be planted on the project site.
- For each 6 inches, or fraction thereof, of diameter of heritage tree, specimen tree, or landmark tree approved for removal, four 15-gallon container trees of an approved species shall be planted on the project site.

- If approved by the director, an increased number of smaller trees or a fewer number of larger trees may be planted to replace the affected trees.
- If the project site is inadequate in size to accommodate the replacement trees, the trees shall be planted on public property with the approval of the director. Upon request of the applicant and approval of the director, the City may accept an in-lieu payment of the current retail price per 15-gallon replacement tree on condition that all such payments shall be used for tree-related educational projects and/or City planting programs.
- All trees planted under the provisions of City tree ordinance shall be guaranteed for a period of 1 year from the date of final acceptance of the project by the City. Any tree that does not survive for 1 year from that date shall be replaced by the developer and the replacement tree shall be guaranteed for 1 year (Ordinance No. 1230, Section 4 (part)).

Proposed Project

The Proposed Project includes policies to reduce this potential impact.

2035 General Plan

- **Policy 7.B.9. Tree Canopy.** Manage, enhance, and improve the City's tree canopy as a valuable ecological resource.
- **Policy 7.B.10. Urban Forest Management Plan**. Establish an urban forest management plan to guide the protection and enhancement of the urban forest.
- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and special-status plant and wildlife habitats.

2035 CAP

- **Strategy UF-1: Urban Forest Management Plan.** Development and adoption of a policy framework and comprehensive approach to planting and managing City trees.

  An urban forest management plan will establish a systematic approach to preserving and enhancing Woodland's more than 13,000 trees. A healthy tree population needs species and age diversity and requires proactive maintenance and appropriate planning. The objectives for establishing and managing trees in an urban setting are diverse and may include:

  - Improving aesthetic appeal of streetscapes
  - Eliminating public safety hazards
  - Preventing disease and pest infestations
  - Reducing conflicts with utilities and damage to sidewalks and streets
  - Enhancing recreational and educational opportunities

- Providing energy savings
- Increasing carbon sequestration and improving air quality
- Priorities may vary for downtown, parking lot, median, park, open space, heritage, and residential street trees.

An urban forest management plan typically provides a comprehensive program that addresses these objectives and establishes numerical goals, planting and maintenance techniques and schedules, management responsibilities, monitoring needs, budget and personnel needs, relationship of the plan to other planning documents and ordinances, and strategies for adjusting priorities based on changing needs or resource constraints.

Plan establishment and implementation will be critical to optimizing the potential GHG reductions associated with tree planting and maintenance. However, to avoid double-counting these benefits, they are quantified only under Strategy UF-2.

- **Strategy UF-2: Increased Tree Planting.** Actions to increase tree canopy through planting new trees to increase building shade, increase carbon sequestration, and reduce heat-island effects. The City and the Woodland Tree Foundation have planted an average of 300 trees per year since 2005.
- **Strategy UF-3: Maintenance of Existing Trees.** Actions to implement best practices in tree care and maintenance to:
  - Sustain the benefits of existing mature trees
  - Expand the canopy of existing young trees
  - Maintain the health of future plantings

  Appropriate tree care begins with adequate staking, irrigation, training, and pest management of trees in the first years of their establishment. Maintenance throughout the life of a tree includes cyclical pruning and inspection to eliminate hazards, remove diseased or insect-infested wood, maintain stronger branch structure, and prevent obstructions of street signs and interference with utility lines.

a. According to the 2010 study of Woodland's urban forest resources by Davey Resource Group, the existing urban forest annually captures and stores about 600 metric tons of CO2.East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The 2035 General Plan does not propose to change the City's existing tree ordinance. With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on protected trees would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.4-7 Conflict with an Adopted Habitat Conservation Plan Natural Community Conservation Plan. *The General Plan Land Use Diagram and 2035 General Plan policies and implementation programs have been designed to provide consistency with the proposed Yolo HCP/NCCP. This impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Consistency with the Yolo HCP/NCCP cannot be determined because the plan has not been adopted. The exact scope and content of the final adopted Plan is not known at this time, and a consistency evaluation for the General Plan with the final Yolo HCP/NCCP is not possible. However, the 2035 General Plan includes specific policies to maintain consistency with the Yolo HCP/NCCP and to fully implement the plan once adopted. The Proposed Project has been designed for consistency with the current working draft of the proposed Yolo HCP/NCCP and has designated the Woodland Regional Park and parcels to the north as Open Space land for conservation of sensitive habitat and special-status plants known to occur there. These are the only lands within the Planning Area that are identified in the proposed Yolo HCP/NCCP as a part of the future reserves system. The City is currently in negotiations with the Yolo Habitat Conservancy to establish a permanent conservation easement over the Woodland Regional Park site. Therefore, implementing the South Alternative would not reduce the effectiveness of the Yolo HCP/NCCP conservation strategy and would not interfere with attaining the overall biological goals and objectives of the Yolo HCP/NCCP.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The 2035 General Plan includes goals and policies to reduce this potential impact.

- **Goal 7.B Maintain and Protect Biological Resources.** Maintain and protect natural habitats throughout the Planning Area, especially types that are considered sensitive by the Yolo HCP/NCCP. Protect sensitive wildlife and plant species.

- **Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan.** Continue to participate in the planning process for the countywide Habitat Conservation Plan/Natural Community Conservation Plan. Once adopted, fully implement the Plan to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats in the Woodland area. Evaluate the opportunity for adoption and implementation of a Local Conservation Plan to provide additional clearance under the California Environmental Quality Act (CEQA) for general biological resource impacts.

- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.

- **Policy 7.B.3 Special-Status Species.** Support preservation of Federally- or State-listed threatened, endangered, and other special-status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

- **Policy 7.B.6 Open Space Buffer.** Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for rare native plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Successful implementation of the 2035 General Plan policies and implementation programs, along with the General Plan Land Use Diagram, would reduce impacts related to the HCP/NCCP.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **potentially significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **potentially significant**.

Mitigation Measures

Mitigation Measure 4.4-7a – Implement Mitigation Measure 4.4-1a

Mitigation Measure 4.4-7b – Implement Mitigation Measure 4.4-1b

Mitigation Measure 4.4-7c – Implement Mitigation Measure 4.4-2a

With implementation of these changes, impacts would be reduced because these provisions would ensure that growth projected under the Proposed Project would not conflict with the goals and objectives of the Yolo HCP/NCCP because it would preserve habitat identified for preservation under the current Draft HCP/NCCP and would require project applicants to participate in the Plan, if adopted, to mitigate impacts on covered species and habitats consistent with the Yolo HCP/NCCP conservation strategy.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.4-8 Substantial Reduction in the Habitat of a Fish or Wildlife Species, Cause a Fish or Wildlife Population to Drop Below Self-Sustaining Levels, Eliminate a Plant or Animal Community, or Substantially Reduce the Number or Restrict the Range of an Endangered, Rare, or Threatened Species. *Implementing the Proposed Project would not substantially reduce the habitat of a fish or wildlife species, eliminate a plant or animal community, or substantially reduce the number or restrict the range of any endangered, rare, or threatened species because the majority of known occurrences of special-status species and their habitat would be preserved. This impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The majority of the Planning Area consists of developed and agricultural land that provides limited habitat values to most species. There is a limited amount of natural habitat in the Planning Area to support native species. Implementation of 2035 CAP Strategy E-6 could potentially require land for the development of renewable energy generation facilities. The proposed General Plan Land Use Designations would ensure the majority of known occupied and potential habitat for special-status plants and wildlife that currently exists within the Planning Area would remain in open space land uses for conservation of these species. There is no habitat for fish species in the Planning Area. The Proposed Project would result in loss and degradation of suitable habitat for several special-status wildlife species and could result in take of State- and federally-listed wildlife species and loss or displacement of special-status wildlife populations. However, implementation of the 2035 General Plan goals and policies and compliance with State and federal laws, along with the General Plan Land Use Diagram would reduce potential impacts on special-status species, as discussed under Impacts 4.4-1 and 4.4-2. Therefore, regional populations of these species would not be reduced below self-sustaining levels and project

implementation would not eliminate any plant or animal community or substantially reduce the number or restrict the range of any species.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Compliance with the federal ESA and CESA requires that impacts to special-status species are avoided or that any is fully mitigated as a condition of permit approvals. These laws would apply to palmate-bracted bird's beak as the only State and federally listed plant species in the Planning Area. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured.

Compliance with the federal ESA and CESA would reduce potential impacts on valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, giant garter snake, Swainson's hawk, and tricolored blackbird because it would require that these State and/or federally listed species be avoided or that any loss of these species be fully mitigated as a condition of take authorization. For projects with a federal nexus (e.g., receiving federal funding or requiring federal permits) federal agencies are required under Section 7 of the ESA to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. Section 10(a) of the ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that ensures minimization and mitigation of impacts associated with the take. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated. Additionally, adequate funding must be ensured for implementation of those mitigation measures, monitoring compliance with mitigation measures, and evaluating the effectiveness of the measures.

Proposed Project

The 2035 General Plan includes goals and policies that would reduce the potential impact to wildlife species.

- **Goal 7.B Maintain and Protect Biological Resources.** Maintain and protect natural habitats throughout the Planning Area, especially types that are considered sensitive by the Yolo HCP/NCCP. Protect sensitive wildlife and plant species.

- **Policy 7.B.1 Habitat Conservation Plan/Natural Community Conservation Plan.** Continue to participate in the planning process for the countywide Habitat Conservation Plan/Natural Community Conservation Plan. Once adopted, fully implement the Plan to mitigate the impacts of growth projected under the General Plan on plant and wildlife habitats in the Woodland area. Evaluate the opportunity for adoption and implementation of a Local Conservation Plan to provide additional clearance under the California Environmental Quality Act (CEQA) for general biological resource impacts.

- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and Federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.

- **Policy 7.B.3 Special-Status Species.** Support preservation of Federally- or State-listed threatened, endangered, and other special-status species. Encourage Federal and State agencies, as well as other resource conservation organizations, to acquire and manage endangered species' habitats.

- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

- **Policy 7.B.6. Open Space Buffer.** Continue to work with Yolo County and the City of Davis to maintain the permanent open space buffer between County Roads 27 and 29.

- **Policy 7.B.7 Woodland Regional Park.** Protect and maintain Woodland Regional Park as an important wildlife preserve and habitat for rare native plants and allow for public access that is compatible with and promotes public education of the site's habitat value.

- **Policy 7.B.8 Native and Compatible Non-Native Plant Species.** Require developers to use native and compatible non-native species, especially drought-resistant species, to the extent possible in order to preserve the visual integrity of the landscape and provide habitat conditions suitable for native wildlife.

- **Policy 7.B.9. Tree Canopy.** Manage, enhance, and improve the City's tree canopy as a valuable ecological resource.

- **Policy 7.B.10. Urban Forest Management Plan.** Establish an urban forest management plan to guide the protection and enhancement of the urban forest.

- **Policy 7.B.11 Sensitive Site Planning.** Site new development to maximize the protection of native tree species and special-status plants and wildlife habitats.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

4.5 CLIMATE CHANGE, GREENHOUSE GAS EMISSIONS, AND ENERGY

4.5.1 INTRODUCTION

This section provides background information about greenhouse gas (GHG) emissions and climate change. Emissions of GHGs have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. Cumulative emissions from many projects and activities affect global GHG concentrations and the climate system. Unlike criteria air pollutants and toxic air contaminants (TACs) that tend to have more localized or regional impacts, GHG emissions tend to disperse more broadly and are more of a global concern because of their relatively longer atmospheric lifetimes compared to air quality emissions. Therefore, the total amount and types of GHG emissions, regardless of their location, have the most significant effect on climate change globally.

The analysis for GHG emissions in this section is unique in relation to the environmental baseline. Instead of focusing on the difference between the existing baseline and conditions with implementation of the Proposed Project, the analysis considers GHG emissions with implementation of the Proposed Project in relation to State targets and goals for GHG emissions reduction. The statewide context for GHG emissions analysis was established by Assembly Bill (AB) 32 (2006), the California Global Warming Solutions Act of 2006, which requires reduction of statewide GHG emissions to 1990 levels by 2020. Executive Order B-30-15 establishes a goal for the State government of 40 percent below 1990 statewide emissions levels by 2030, and Executive Order S-3-05 establishes a goal for the State government of 80 percent below 1990 statewide emissions levels by 2050. AB 32, Executive Order B-30-15, and Executive Order S-3-05 do not explicitly impose mandates on local jurisdictions. However, whether local agencies are required to analyze a project's consistency with them in their environmental review of projects was being litigated during the pendency of this EIR and Proposed Project approval and, thus, was an undecided legal issue. Regardless, they do create a framework that can be used to determine whether GHG emissions within the Planning Area would represent a cumulatively considerable contribution to the significant cumulative impact of climate change. Compared to worldwide emissions of GHGs, the Proposed Project will not, by itself, contribute significantly to climate change; however, cumulative emissions from many projects and plans all contribute to global GHG concentrations and the climate system. The State's goals are used in this section to assess the cumulative contribution of the Proposed Project to this impact.

This section also addresses energy, providing a brief overview of State and local laws and regulations pertaining to energy, and an evaluation of the potential energy demand of projects under the Proposed Project. The analysis considers the primary uses of energy; the benefit of existing regulations that require energy-efficient construction and operation; the location, design, and allowable mix of uses of the Proposed Project relative to energy use; the degree to which the Proposed Project would create physical environmental effects related to the construction or expansion of existing transmission facilities; and the potential for the proposed project to result in the wasteful, inefficient, and unnecessary consumption of energy.

Sea level rise is addressed in Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality." Air Quality impacts are discussed in Section 4.3 of this EIR, "Air Quality."

One respondent to the City's NOP expressed support for effective GHG reduction measures. This comment is addressed in the City's Climate Action Plan (2035 CAP) and the General Plan policies referenced in the Environmental Impacts and Mitigation Measures subsection below. Another respondent provided guidance for the

General Plan as it relates to climate change. The respondent also indicated that the CAP should not be an appendix. Please see the 2035 CAP, provided under a separate cover.

4.5.2 ENVIRONMENTAL SETTING

GHGs play a critical role in determining the earth's surface temperature. When high-frequency solar radiation (such as visible light) enters the earth's atmosphere from space (the sun), a portion of the radiation is absorbed by the earth's surface, and a smaller portion is reflected back toward space. However, the re-radiated energy by the earth is not the same high-frequency solar radiation that was received. It is lower frequency infrared radiation (thermal energy). When infrared radiation comes into contact with GHGs in the atmosphere, a portion of that thermal energy can be absorbed by the GHG molecule, re-radiated back toward the earth's surface, or some combination of the two. The heat that would otherwise escape is "trapped" within the earth's atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

Anthropogenic (human-caused) emissions of these GHGs have led to atmospheric levels of GHGs exceeding natural ambient concentrations, thus intensifying the greenhouse effect. Such emissions have led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate (IPCC 2013). GHG emissions associated with fossil fuel combustion for energy-related activities are the primary contributor to human-induced climate change (EPA 2011a).

Prominent GHGs contributing to the earth's greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, and high–global warming potential (high-GWP) GHGs. High-GWP gases are typically emitted at lower rates than CO_2, methane, and nitrous oxide, but these gases could substantially contribute to climate change since they are comparatively more effective at absorbing infrared radiation and can have longer atmospheric lifetimes.

The concept of CO_2-equivalency (CO_2e) is used to account for the different potentials of GHGs to absorb infrared radiation. This potential, known as the global warming potential (GWP) of a GHG, depends on the lifetime or persistence of the gas molecule in the atmosphere, its ability to absorb/trap infrared radiation, and the spectrum of light energy (range of wavelengths and frequencies) absorbed by the gas molecule. GHGs persist in the atmosphere for a long enough time to be dispersed around the globe, continually contributing to the greenhouse effect. The exact lifetime of any particular GHG molecule depends on multiple variables and cannot be pinpointed, but more CO_2 is currently emitted into the atmosphere than is sequestered. Every GHG is measured relative to CO_2, which has a GWP of 1. The other primary GHGs attributed to human activity include methane, which has a GWP of 28, and nitrous oxide, which has a GWP of 265 (IPCC 2013). For example, one ton of methane has the same contribution to the greenhouse effect as approximately 28 tons of CO_2.

4.5.2.1 GREENHOUSE GAS EMISSIONS

CO_2 emissions are byproducts of fossil fuel combustion. Emissions of methane, a highly potent GHG, result from off-gassing—the release of chemicals from nonmetallic substances under ambient or greater pressure conditions. These off-gassing processes typically occur during the decomposition of materials under anaerobic conditions (lack of oxygen) found in natural resources (e.g., wetlands), agricultural practices, and landfills. Nitrous oxide emissions are generated by agricultural practices and soil management activities.

Greenhouse Gas Emission Sectors

The Assembly Bill (AB) 32 Scoping Plan (the Scoping Plan) identifies the primary GHG emission sectors that account for the majority of GHG emissions generated within California. A brief description of each of the GHG emission sectors is provided below.

- Transportation: This sector represents the GHG emissions associated with on-road motor vehicles, off-road equipment, recreational vehicles, aviation, ships, and rail.
- Electricity: This sector represents the GHG emissions associated with use and production of electrical energy. Approximately 25 percent of electricity consumed in California is imported; thus, GHG emissions associated with out-of-state electricity production are also included as part of this sector.
- Industry: This sector represents the GHG emissions associated with industrial land uses (e.g., manufacturing plants and refineries). Industrial sources are predominantly composed of stationary sources (e.g., boilers and engines) associated with process emissions.
- Commercial and Residential: Commercial and residential GHG emission sources include area sources such as landscape maintenance equipment, fireplaces, and natural gas consumption for space and water heating.
- Agriculture: This sector represents the GHG emissions associated with agricultural processes. Agricultural sources of GHG emissions include off-road farm equipment, irrigation pumps, residue burning, livestock, and fertilizer volatilization.
- High Global Warming Potential: This sector represents the generation of high GWP GHGs. Examples of high GWP GHG sources include refrigerants (e.g., hydrofluorocarbons [HFCs], chlorofluorocarbons [CFCs]) and electrical insulation (e.g., sulfur hexafluoride). Although these GHGs are typically generated in much smaller quantities than CO_2, their high GWP results in considerable CO_2e.
- Recycling and Waste: This sector represents the GHG emissions associated with waste management facilities and landfills.

4.5.2.2 Inventory of Greenhouse Gas Emissions

In order to better understand the sources and magnitudes of GHG emissions, public and private entities at the federal, State, and local level are developing GHG inventories. The City worked with UC Davis in 2012 to develop an estimate of communitywide baseline and future emissions. GHG inventories represent one of the first steps in programs to reduce GHG emissions, allowing staff and decision makers to understand the emissions profile of a jurisdiction or facility.

State GHG Inventory

As the second largest emitter of GHGs in the United States and 20th largest in the world, California contributes a large quantity of GHGs to the atmosphere (CEC 2006, ARB 2014a). Although California is second among U.S. states, it is among the most efficient, ranking 45th in emissions per capita (ARB 2014a).

Emissions of CO_2 are byproducts of fossil-fuel combustion and are attributable in large part to human activities associated with the transportation industry, electricity generation, natural gas consumption, and agriculture. In California, the transportation sector is the largest emitter of GHGs (37 percent of statewide emissions), followed by the industrial sector (24 percent) and electricity generation (20 percent) (ARB 2016).

City of Woodland GHG Inventory

On July 15, 2014, the Woodland City Council adopted a "Preliminary 2020 Climate Action Plan," which included a 2005 GHG emissions inventory, a 2020 GHG reduction target, and preliminary strategies to achieve the 2020 target. This effort was considered "preliminary" in acknowledgement of the work being done to update the General Plan and prepare an integrated final CAP for adoption.

In 2012, a GHG emissions inventory was developed for the City of Woodland as part of work performed for the preliminary CAP (UC Davis 2012). This emissions inventory focused on 2005 as the baseline year. At the time this inventory was assembled, 2005 was a common and recommended baseline inventory year (ARB 2010a). The Preliminary 2020 CAP had a GHG emission reduction target to reduce City-wide emissions by 15 percent below 2005 levels by the year 2020, which would align with AB 32 statewide emissions reduction target (City of Woodland 2012). This inventory was updated in 2016 to add solid waste-related emissions, which were not included in the original inventory since the City does not control operations at the landfill. Since the preliminary CAP was developed, consensus within the industry has evolved such that it is common practice for a community to estimate and report solid waste emissions even if its waste is treated outside of the city boundaries.

For Woodland, as for California as a whole, transportation is the top source of emissions, accounting for 65 percent of the total, followed by residential and commercial energy use (29 percent). Table 4.5-1 presents the City of Woodland's 2005 GHG emissions by emissions sector.

Table 4.5-1. City of Woodland Year 2005 Emissions Inventory

Emissions Sector	Emissions (MT CO_2e/yr)	Percent Contribution
Transportation [1]	367,567	65%
Commercial Energy Use	98,155	17
Residential Energy Use	68,704	12
Solid Waste	22,244	4
Water and Wastewater	2,666	<1%
Municipal Energy Use and Transportation [2]	2,676	<1%
Wastewater Reuse	4,377	<1%
Total GHG Emissions	**566,389**	**100%**

Notes: MT CO_2e/yr = metric tons of carbon dioxide equivalent per year; GHG = greenhouse gases. Totals may not add due to rounding.

1 Transportation emissions were calculated by apportioning total Yolo County transportation-related emissions to the City using population. Transportation emissions also include trips along Interstate 5 and Highway 113, some of which could be pass-through trips that are not directly associated with the City's land uses.

2 Only includes Scope 1 and Scope 2 emissions. Scope 3 emissions have been excluded from this total.

Source: City of Woodland 2012.

In the original 2005 inventory, the City's annual emissions for the baseline year 2005 were determined to be approximately 680,224 metric tons (MT) of CO_2e, which includes scope 1, 2, and 3 emissions. Scope 1 includes direct emissions associated with land uses in the Planning Area, including stationary combustion, mobile sources,

process emissions, and fugitive emissions (unintentional releases). Scope 2 includes indirect emissions associated, for example, with energy demand generated by land uses within the Planning Area. Scope 3 includes other indirect emissions over which the City does not have influence, such as air travel, airport ground support equipment, and well-to-pump emissions. The amount of reportable emissions from the City pursuant to general inventory guidelines is 566,389 metric tons of CO_2 equivalent per year (MT CO_2e/year), which only includes scope 1 and scope 2 emissions from sources such as residential/commercial energy use, transportation, water and wastewater, municipal energy use and transportation, wastewater reuse, and with the addition of solid waste-related emissions in the inventory update.

In Woodland, transportation emissions are a dominant part of the inventory. This is typical for most jurisdictions in California and the State as a whole. In order to estimate transportation emissions in the preliminary CAP, Yolo County's total vehicle miles traveled (VMT) were allocated to the City using the City's proportion of the total County's population. Therefore, because the City constitutes a substantial portion of Yolo County's population (approximately 28 percent), a comparable amount of total Yolo County VMT was allocated to the City's GHG inventory. For the proposed 2035 CAP, GHG emissions associated with VMT are estimated specifically for the 2035 General Plan's proposed land uses, not by assigning transportation emissions to the City based on the City's proportion of the County's population.

Exhibit 4.5-1 presents the City of Woodland's GHG emission sectors by their relative contribution to the city's total emissions.

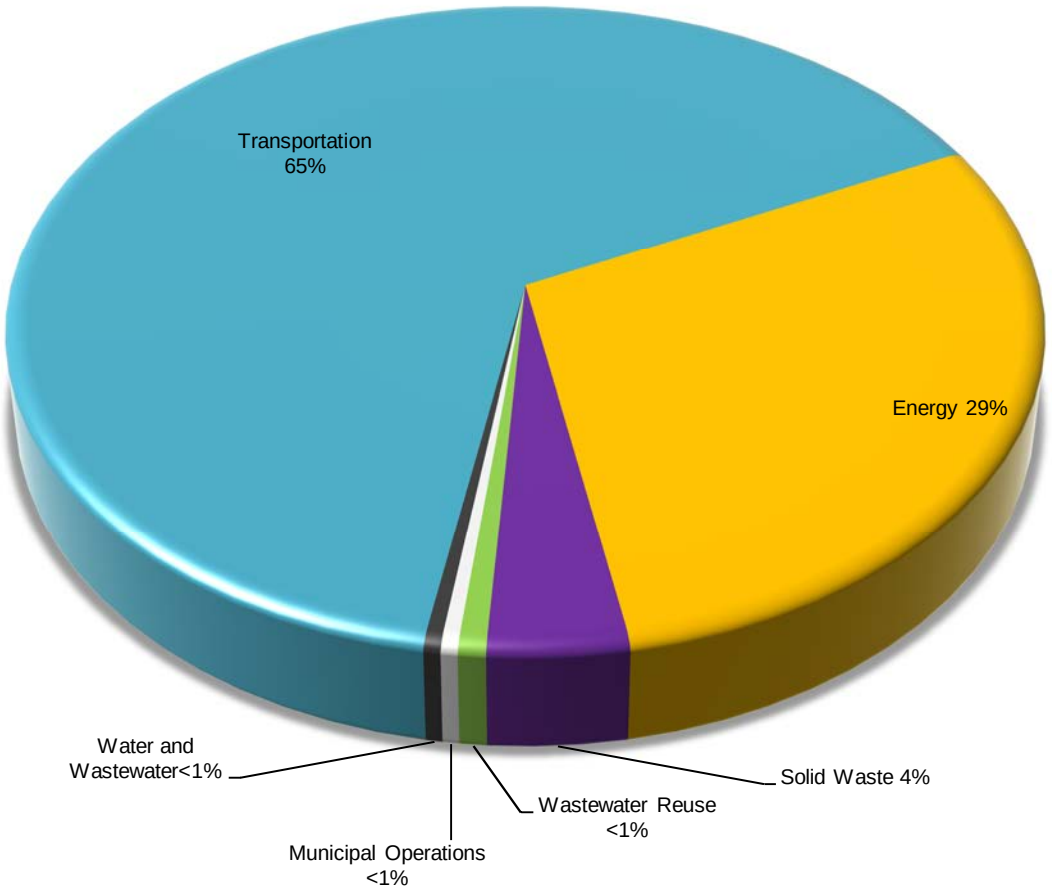


Exhibit 4.5-1. Woodland GHG Emissions by Scoping Plan Category

4.5.2.3 ENERGY

Transportation is, by far, the largest energy consuming sector in California, accounting for approximately 39 percent of all energy use in the state (U.S. Energy Information Administration 2015). Since transportation accounts for more energy consumption than heating, cooling, and powering of buildings, powering industry, or any other use, the travel demand reducing features of the Proposed Project are important for consideration in an assessment of energy efficiency (Lawrence Berkeley National Laboratory 2013). Environmental effects associated with the use of energy in the transportation sector are evaluated in this section, as well as Section 4.3 of this EIR, "Air Quality," and Section 4.11 of this EIR, "Noise and Vibration." Section 4.13 of this EIR, "Transportation and Circulation," summarizes the traffic analysis prepared to support this EIR.

Pacific Gas and Electric (PG&E) provides energy (electricity and natural gas) to the Planning Area and has high-voltage powerlines in the Planning Area. PG&E purchases natural gas from a variety of sources that include utility companies in other western states, as well as Mexico. PG&E serves approximately 15 million customers through 158,000 circuit miles of electric transmission and distribution lines within its 70,000-square-mile service area in northern and central California. In 2014, PG&E delivered approximately 102,589 million kilowatt-hours (kWh) of electricity within its service area (CEC 2015). Of this total, approximately 1,732 million kWh of electricity was consumed in Yolo County (including incorporated and unincorporated areas) (CEC 2015). For the PG&E service territory, the largest consumers of electricity are commercial buildings (36 percent), followed by residential buildings (31 percent), and then industry (16 percent) (Table 4.5-2).

Table 4.5-2. Electricity Consumed in PG&E Territory, 2014

End User	Millions of kWh	Percent
Agriculture and Pumping Water	8,118	8%
Commercial Building	36,457	36%
Commercial Other	5,701	6%
Industry	16,535	16%
Mining & Construction	3,720	4%
Residential	31,610	31%
Streetlight	449	0%
Total	**102,589**	**100%**

Source: California Energy Commission 2015.

Electricity is generated through a combination of nuclear power plants; natural gas-fired power plants; renewable energy sources, such as wind, solar, geothermal, and small hydroelectric facilities; and additional energy purchased from other energy suppliers. As shown in Table 4.5-3, in 2015, PG&E received 25 percent of its electricity from natural gas-fired power plants; 23 percent from nuclear generation; 30 percent from eligible renewable resources, such as biomass, solar, wind, geothermal, and small hydroelectric power plants that generate 30 megawatts (MW) or less of electricity; 6 percent from large hydroelectric power plants; and 17 percent from other unspecified power sources (PG&E 2016).

Table 4.5-3. PG&E Electrical Power Mix Delivered to Retail Customers, 2015	
Electrical Sources	Percent
Natural Gas	25%
Nuclear	23%
Renewable[1]	30%
Large Hydroelectric	6%
Other Unspecified[2]	17%

Notes:
[1] Renewable energy sources include biomass, solar, wind, geothermal, and small hydroelectric power plants that generate 30 MW or less of electricity.
[2] Other unspecified sources refer to electricity that is not traceable to specific generation sources by any auditable contract.
Source: PG&E 2013

Natural gas service in Yolo County is currently provided by PG&E through portions of PG&E's 46,000 miles of natural gas distribution pipelines. In 2014, PG&E delivered approximately 4,386 million therms (MM therms) of natural gas throughout its service area (CEC 2015). The largest consumers of natural gas are industry, with 40 percent, followed by the residential sector at 38 percent, and then commercial buildings, with 19 percent (Table 4.5-4). Yolo County customers consumed approximately 54 MM therms in 2015 (CEC 2015).

Table 4.5-4. Natural Gas Consumed in PG&E Territory, 2014		
End User	Millions of Therms	Percent
Agriculture and Pumping Water	34	1%
Commercial Building	818	19%
Commercial Other	52	1%
Industry	1,760	40%
Mining & Construction	56	1%
Residential	1,665	38%
Total Usage	**4,386**	**100%**

Source: California Energy Commission 2015.

4.5.3 REGULATORY FRAMEWORK

Approaches to addressing climate change and GHG emissions in California are governed by an evolving body of laws, regulations, and case law. Key laws and regulations are summarized below.

4.5.3.1 FEDERAL

While there are no federal GHG-related requirements that directly apply to the Proposed Project, the information below is helpful for understanding the overall context for GHG emissions impacts and strategies to reduce GHG emissions.

Clean Air Act, 42 U.S.C. §7401 et seq.

The U.S. Environmental Protection Agency (EPA) is the agency responsible for implementing the Clean Air Act (CAA). On April 2, 2007, the U.S. Supreme Court held that the EPA must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, 12 states and cities (including California) along with several environmental organizations sued to require the EPA to regulate GHGs as pollutants under the CAA (127 S. Ct. 1438 [2007]). The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and that EPA had the authority to regulate GHGs.

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

On December 7, 2009, the EPA Administrator reached two distinct findings regarding GHGs under Section 202(a) of the CAA, which applied to the federal government's ability to regulate GHG emissions:

- *Endangerment Finding:* The current and projected concentrations of the six key GHGs—CO_2, methane, nitrous oxide, HFCs, PFCs, and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations.

- *Cause or Contribute Finding:* The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule was a response to the fiscal year 2008 Consolidated Appropriations Act (House of Representatives Bill 2764; Public Law 110-161), which required EPA to develop "…mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy…" The Reporting Rule applied to most entities that emit 25,000 metric tons (MT) of CO_2e or more per year. Since 2010, facility owners have been required to submit an annual GHG emissions report with detailed calculations of the facility's GHG emissions. The Reporting Rule also mandated compliance with recordkeeping and administrative requirements to enable EPA to verify annual GHG emissions reports.

EPA and NHTSA Standards

The EPA and National Highway Traffic Safety Administration (NHTSA) issued joint final rules to further improve fuel economy and reduce GHG emissions for passenger cars and light trucks. Final standards have been issued for model years 2017 to 2021, and non-final standards have been issued for years 2022–2025. Non-final standards were intended to help manufacturers prepare for future standards. EPA issued final GHG standards for all nine model years 2017 to 2025 and will be conducting a mid-term evaluation of longer-term standards for model years 2022–2025. The 2017–2025 standards were anticipated to save approximately 4 billion barrels of oil and 2 billion metric tons of GHG emissions. In 2025, if all standards are met through fuel efficiency improvements, the average industry fleetwide fuel efficiency for light duty cars and trucks would be approximately 54.5 miles per gallon (EPA 2012).

In addition to standards for light duty cars and trucks, EPA and NHTSA are also currently implementing Phase 1 of the Medium- and Heavy-Duty Vehicle GHG Emissions and Fuel Efficiency Standards, which apply to model years 2014–2018. It is anticipated that medium- and heavy-duty vehicles built to these standards from 2014-2018

would reduce CO_2 emissions by approximately 270 million metric tons over the lifetime of the standards (EPA 2011b). Phase 2 of these standards would apply to model years 2021–2027 and was anticipated to reduce GHG emissions by 1 billion metric tons over the lifetime of the standards (EPA 2015).

Energy Independence and Security Act, Public Law 110-140

The original 2005 Renewable Fuel Standard Program (RFS) established requirements for volumes of renewable fuel used to replace petroleum-based fuels. The four renewable fuels accepted as part of RFS include biomass-based diesel, cellulosic biofuel, advanced biofuel, and total renewable fuel. The 2007 Energy Independence and Security Act (EISA) expanded the program and its requirements to include long-term goals of using 36 billion gallons of renewable fuels and extending annual renewable fuel volume requirements to year 2022. The four renewable fuels have specific renewable fuel-blending requirements for obligated parties such as refiners and importers of gasoline or diesel fuel.

4.5.3.2 STATE

The State's legal framework for GHG emission reductions has come about through Executive Orders, legislation, regulations, and court decisions. Some of the major components of California's climate change initiative are reviewed below.

Assembly Bill 1493, California Health and Safety Code Sections 42823 and 43018.5

AB 1493 required that the California Air Resources Board (ARB) develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

To meet the requirements of AB 1493, in 2004 ARB approved amendments to the California Code of Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 (13 CCR 1900, 1961), and adoption of Section 1961.1 (13 CCR 1961.1) require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily for the transportation of persons), beginning with the 2009 model year. For passenger cars and light-duty trucks with a loaded vehicle weight (LVW) of 3,750 pounds or less, the GHG emission limits for the 2016 model year are approximately 37 percent lower than the limits for the first year of the regulations, the 2009 model year. For light-duty trucks with LVW of 3,751 pounds to gross vehicle weight (GVW) of 8,500 pounds, as well as medium-duty passenger vehicles, GHG emissions would be reduced approximately 24 percent between 2009 and 2016.California received a waiver from the EPA on June 30, 2009, to enable implementation of AB 1493 requirements.

Beginning in May of 2010, ARB began working with EPA and the NHTSA on the second generation passenger vehicle greenhouse gas regulations for model years 2017–2025. After assessing a range of technologies and associated costs to achieve varying levels of greenhouse gas reduction, in July 2011, a Notice of Intent committed automakers, California, and the Federal government to a series of actions that would enable the development of new national GHG standards. On December 2, 2011, a Notice of Proposed Rulemaking for the national GHG

program was issued, committing the Federal agencies to re-evaluate existing regulations for model years 2022–2025. In January 2012, ARB approved new regulations, as part of the Low-Emission Vehicle III (LEV III) element of the Advanced Clean Cars program, which merged GHG emissions with all other tailpipe emissions into one set of requirements. Reductions under the new regulations would be 36 percent for cars and 32 percent for light-duty trucks from model years 2016–2025. After a review and public comment period, the ARB Board approved the LEV III amendments on November 15, 2012.

Executive Order S-3-05

Executive Order S-3-05, issued in recognition of California's vulnerability to the effects of climate change, set forth the following target dates by which Statewide GHG emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32, Health and Safety Code Section 38500 *et seq*.

In 2006, the California Legislature passed AB 32 (California Health and Safety Code Section 38500 *et seq*.), also known as the Global Warming Solutions Act. Under AB 32, ARB was directed to design and implement feasible and cost-effective emissions limits, regulations, and other measures, to reduce statewide GHG emissions to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions (i.e., cap-and-trade program) that was phased in starting in January 1, 2012 with an enforceable compliance obligation beginning with 2013 GHG emissions. To effectively implement the cap, AB 32 directed ARB to develop and implement regulations to reduce Statewide GHG emissions from stationary sources. AB 32 specified that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. AB 1493 is currently in effect, and has established GHG emission standards for new passenger vehicles from model years 2012 to 2016. These emission standards are anticipated to reduce GHG emissions from passenger vehicles by approximately 30 percent in year 2016 (ARB 2010b).

AB 32 required that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the State achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also included guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Senate Bill 32, Health and Safety Code Section 38566

Senate Bill 32 (SB 32) extends the provisions of AB 32 from 2020 to 2030 with a new target of 40 percent below 1990 levels by 2030. The companion bill, AB 197, adds two non-voting members to the ARB, creates the Joint Legislative Committee on Climate Change Policies consisting of at least three Senators and three Assembly members, requires additional annual reporting of emissions, and requires Scoping Plan updates to include alternative compliance mechanisms for each statewide reduction measure, along with market-based compliance mechanisms and potential incentives.

Climate Change Scoping Plan

Pursuant to AB 32, ARB adopted the Climate Change Scoping Plan (Scoping Plan) in December 2008, outlining measures to meet the 2020 GHG reduction target (i.e., 1990 emissions levels [431 million metric tons of CO_2e]).

To meet the target, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels, or about 15 percent from 2005 levels. With respect to current emissions levels, (i.e., 459 million metric tons of CO_2e), California would need to achieve an approximate 6 percent reduction from 2012 levels (shown in Exhibit 3.7-1) by 2020 to achieve the AB 32 target. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons (MMT) of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and other sources could be achieved should the State implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of Senate Bill (SB) 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

ARB is required to update the Scoping Plan at least once every five years to evaluate progress and develop future inventories that may guide this process. ARB approved the *First Update to the Climate Change Scoping Plan: Building on the Framework* in June 2014 (ARB 2014b). The Scoping Plan update includes a status of the 2008 Scoping Plan measures and other State, Federal, and local efforts to reduce GHG emissions in California from 2008 to 2013 with respect to the 2020 GHG reduction target. The Scoping Plan Update determined that the State is on schedule to achieve the 2020 target (i.e., 1990 levels by 2020). However, an accelerated reduction in GHG emissions is required to achieve the S-3-05 2050 reduction target of 80 percent below 1990 levels by 2050.

The statewide measures adopted under the direction of AB 32, and as outlined in the Scoping Plan, would reduce GHG emissions associated with existing development, as well as new development, including the Proposed Project. The City has presented an estimate of the effectiveness of statewide measures for reducing local emissions in 2020 and 2035 in the 2035 CAP, under separate cover.

ARB has released the 2030 Target Scoping Plan Update Concept Paper to initiate a discussion regarding how to most effectively achieve a 40 percent reduction in GHG emissions by 2030 as compared to 1990 statewide GHG emissions (consistent with Executive Order B-30-15, which is outlined below, and SB 32) (ARB 2016). The second update to the Scoping Plan, which would address the 2030 target pursuant to EO B-30-15, is in development but does not have a release date at the time of this analysis.

Refrigerant Management Program

As part of the AB 32 Early Action Measures, ARB developed the Refrigerant Management Program (RMP) that requires best management practices for non-residential refrigeration systems. The RMP applied to owners/operators of facilities with stationary, non-residential refrigeration systems exceeding 50 pounds of high GWP refrigerants. Businesses that are typically covered under this threshold include supermarkets and grocery stores, food and beverage processors, cold storage warehouses, and industrial process cooling. These types of facilities are required under RMP to register with ARB, perform regular leak inspections and maintenance, leak repairs within 14 days, and retrofit or retire leaking systems. Currently, all facilities that would use more than 50 pounds of high-GWP refrigerant are required to register with ARB.

Executive Order S-1-07

Executive Order S-1-07 acknowledged that the transportation sector is the main source of GHG emissions in California. The order established a goal of reducing the carbon intensity of fuels for mobile, stationary, and portable emissions sources sold in California by a minimum of 10 percent by 2020. It also directed ARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after the

mandates in AB 32 are met. ARB adopted the Low Carbon Fuel Standard on April 23, 2009. This will reduce GHG emissions associated with existing development, as well as new development, including new development under the Proposed Project.

Senate Bill 97, California Public Resources Code Section 21083.05

SB 97, signed August 2007, acknowledged that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the California Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The California Natural Resources Agency adopted those guidelines on December 30, 2009, and the guidelines became effective March 18, 2010.

Senate Bills 1078 (Chapter 516, Statutes of 2002) and 107 (Chapter 464, Statutes of 2006), Executive Orders S-14-08 and S-21-09, and Senate Bill 350

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Executive Order S-14-08 expanded the State's Renewable Portfolio Standard to 33 percent renewable power by 2020. Executive Order S-21-09 directs ARB under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

The 33 percent-by-2020 goal and requirements were codified in April 2011 with SB X1-2. This new Renewable Portfolio Standard applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. Consequently, PG&E, which would be the electricity provider for the proposed project, must meet the 33 percent goal by 2020. SB 350 (2015) increased the renewable requirement to 50 percent by 2030.

These requirements reduce the carbon content of electricity generation, and would reduce GHG emissions associated with existing development, as well as new development, including new development within the Planning Area.

In January 2016, the California Public Utilities Commission (CPUC) reported that California's three largest investor-owned utilities (IOUs) (i.e., Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric Company) collectively provided 26.6 percent of their 2014 retail electricity sales using renewable sources and are continuing progress toward future 2020 requirements (CPUC 2016).

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The executive order aligns California's GHG gas reduction targets with those of leading international governments (the 28-nation European Union, for instance, set the same target for 2030 in October 2014) (Office of the Governor 2015).

Senate Bill 375, Chapter 728, Statutes of 2008

The State Legislature in 2008 passed SB 375, which provided for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 did not create any direct obligation for the City and addressed only GHG emissions associated with the operation of passenger vehicles.

SB 375 aligned regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 required regional transportation plans developed by the state's 18 metropolitan planning organizations, including the Sacramento Area Council of Governments (SACOG), to incorporate a "sustainable communities strategy" that will achieve GHG emission reduction targets set by ARB.

SACOG's first Metropolitan Transportation Plan/Sustainable Communities Strategy for 2035 (the MTP/SCS) was adopted on April 19, 2012. SACOG's MTP/SCS called for meeting and exceeding ARB's GHG reduction goals for passenger vehicles and light-duty trucks of 7 percent by 2020 and 16 percent by 2035, where 2005 is the baseline year for comparison (SACOG 2012). SACOG's updated 2016 MTP/SCS was adopted on February 18, 2016.

Local development consistent with the MTP/SCS may utilize specified CEQA streamlining tools. SB 375 identified three CEQA streamlining options available for consistent projects. These include streamlined review and analysis of residential or mixed-use projects consistent with the SCS; modified review and analysis, through an expedited Sustainable Communities Environmental Assessment (SCEA), for Transit Priority Projects (TPPs) that are consistent with the SCS; and a complete CEQA exemption for TPPs that are consistent with the SCS and meet a specific list of other requirements. In each of these cases, this MTP/SCS EIR serves as a first-tier environmental document under CEQA. SACOG has developed a "Determination of MTP/SCS Consistency Worksheet" to assist lead agencies, including Woodland, in making the required consistency determination necessary to activate these streamlining opportunities.

4.5.3.3 REGIONAL

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The County General Plan contains over 300 policies that would have a beneficial effect on GHG, including assessing current greenhouse gas emissions, increasing public awareness, encouraging businesses to take certain actions that would reduce GHG emissions, and coordinating with local, regional, state, and federal jurisdictions, as well as private and non-profit organizations. Key policies from the County's General Plan include:

- **Policy CO-8.2** Use the development review process to achieve measurable reductions in greenhouse gas emissions.
- **Policy CO-8.6** Increase public awareness about climate change and encourage county residents and businesses to become involved in activities and lifestyle changes that will aid in reduction of greenhouse gas emissions.
- **Action CO-A117** Pursuant to the adopted Climate Action Plan (CAP), the County shall take all feasible measures to reduce its total carbon dioxide equivalent (CO2e) emissions within the unincorporated area

(excluding those of other jurisdictions, e.g., UC-Davis, Yocha Dehe Wintun Nation, DQ University, school districts, special districts, reclamation districts, etc.), from 648,252 metric tons (MT) of CO2e in 2008 to 613,651 MT of CO2e by 2020. In addition, the County shall strive to further reduce total CO2e emissions within the unincorporated area to 447,965 MT by 2030. These reductions shall be achieved through the measures and actions provided for in the adopted CAP, including those measures that address the need to adapt to climate change.

Yolo-Solano Air Quality Management District

The Yolo-Solano Air Quality Management District (YSAQMD) is responsible for maintaining and attaining ambient air quality standards in the project area. YSAQMD provided guidance for projects to analyze air pollutant emissions under CEQA. YSAQMD has not yet developed formal guidance for evaluating GHG emissions. Rather, YSAQMD recommends that projects consider guidance resources from the California Air Pollution Control Officers Association (CAPCOA) to assist with evaluations until formal guidance is available.

4.5.3.4 LOCAL

City of Woodland 2002 General Plan

The 2002 General Plan did not specifically discuss GHG emissions. The General Plan included goals, policies, and implementation programs to encourage energy efficiency in design and development, including establishing development and construction standards which encourage energy conservation, such as:

- Policy 1.B.8. The City shall encourage multi-family developments that include the following features:

  a. Sufficient outdoor privacy for each unit (i.e., patios and decks)

  b. Covered off-street parking

  c. Parking sited off the primary access street and screened with landscaping

  d. Good site and building management and maintenance

  e. Building mass broken into smaller units, possibly including some one-story elements

  f. Pitched and varied rooflines

  g. Functional and accessible interior site open space

  h. Recreational areas for children

  i. Attractive landscaping, including larger trees

  j. Easily identified and sheltered entrances to units

  k. Manageable number of units

  l. Energy efficient design, including landscaping

- Policy 9.B.9. The City shall encourage selective attraction of industrial uses that do not pollute or use excessive resources, such as water and energy, and are appropriate for Woodland character and shall discourage inappropriate uses from considering a Woodland location.

The 2002 General Plan also included policies that could help reduce travel demand and associated GHG emissions, such as:

- Policy 3.D.1. The City shall work with Yolobus to plan and implement additional transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.
- Policy 3.D.5. The City shall require new development to provide sheltered public transit stops, with turnouts, where sufficient population or employment concentrations warrant an existing or future bus route.
- Policy 3.D.7. The City shall consider families' needs in transportation planning efforts and shall promote safe and convenient methods of transportation between school, home, retail shopping, and child care.
- Policy 3.D.8. The City shall continue to emphasize the central role of the Downtown in any transit planning.
- Policy 3.D.10. The City shall investigate alternative transportation uses for existing rail rights-of-way if railroads consider their abandonment.
- Policy 3.D.11. The City shall consider the development of commuter and intercity passenger rail service to Woodland if it is found to be cost-effective and the development of a multi-modal facility for bus, rail, bicycle, and automobile travel.

4.5.4 Environmental Impacts and Mitigation Measures

4.5.4.1 Methodology

The Proposed Project's construction and operational GHG emissions were modeled using the same methods and assumptions as those described in Section 4.3 of this EIR, "Air Quality." The California Emissions Estimator Model (CalEEMod) Version 2013.2.2 and ARB's on-road emissions inventory model, EMFAC2014, estimate GHG emissions, in addition to criteria air pollutant and precursor emissions. The output from this modeling is provided in Appendix C.

4.5.4.2 Thresholds of Significance

Significance criteria are based on Appendix G of the State CEQA Guidelines and guidance from YSAQMD. For energy-related impacts, Appendix F of the State CEQA Guidelines provides guidance for assessing impacts related to energy.

The proposed project would have a significant impact on greenhouse gas emissions and energy if its implementation would:

- generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

- conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases; or
- develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy; or
- require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

As stated in Appendix G, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. YSAQMD has not identified a significance threshold for analyzing GHG emissions associated with land use development. YSAQMD suggests that the project proponent identify thresholds of significance applicable to a project that are supported by substantial evidence and linked with the AB 32 Scoping Plan. This "link" can be evaluated by an assessment of whether a project or plan would have a rate of GHG emissions that would contribute a fair share of the emissions reductions identified in AB 32.

However, AB 32 is focused on the year 2020, and the horizon year for the Proposed Project is 2035. Based on recent court rulings and current standard practice, it is appropriate also to consider whether the Proposed Project's emissions rate would contribute to the State's emission reduction goals for later years as expressed in Executive Order B-30-15 and Executive Order S-3-05. Executive Order B-30-15 calls for a statewide reduction in GHG emissions to 40 percent below 1990 levels by 2030. Executive Order S-3-05 calls for a reduction to 80 percent below 1990 levels by 2050.

Achievement of these later-year targets are challenging absent State reduction programs and guidance for years beyond 2020, such as a revision of the State Scoping Plan. This EIR evaluates whether or not the Proposed Project "incorporates efficiency and conservation measures sufficient to contribute its [the city's] portion of the overall greenhouse gas reductions necessary" for the State to achieve its own mandates (*Center for Biological Diversity, et al. v. California Department of Fish And Wildlife, the Newhall Land And Farming Company*, 62 Cal. 4th 204, 220 (2015), California Supreme Court Case No. 5217763). If the Proposed Project demonstrates that it is sufficiently reducing its overall GHG emissions, the Proposed Project's impact can be determined not to be cumulatively considerable as it will help solve, not further, the GHG problem (*Center for Biological Diversity, et al. v. California Department of Fish and Wildlife*, page 220; Crockett 2011).

Whether or not the Proposed Project would generate GHG emissions that would have a significant impact on the environment depends on whether the Proposed Project's rate of GHG emissions would provide its share of AB 32, Executive Order B-30-15, and Executive Order S-3-05 emissions reductions.

GHG Emissions Efficiency

The GHG emissions efficiency of a project or plan is measured as the amount of emission per specified unit of measurement. For development projects and plans, an appropriate metric is service population. Service population is the sum of residential population and employment. When dividing total GHG emissions by service population, a community is able to evaluate its overall growth and conservation plans and consider whether emissions will decrease on a per-unit basis in a way that is consistent with the State's emissions goals.

The intent of AB 32 is to accommodate population and economic growth in California, but do so in a way that achieves a lower rate of GHG emissions (ARB 2008). With a reduced rate of emissions per resident and

employee, California can accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and supporting efforts to reduce emissions beyond 2020 (consistent with Executive Order B-30-15 and Executive Order S-3-05).

An efficiency target can be developed that mirrors statewide emissions reduction legislation and applicable executive orders for the target year. To create an efficiency target, the statewide emissions target for a specified target year can be divided by the forecast population and employment statewide for the same year. This yields an emissions "budget" for each California resident/employee, and allows a community to assess whether or not its emissions rate is consistent with the statewide emissions budget.

Because the Proposed Project's buildout year is 2035, this analysis has developed a service population GHG efficiency threshold (MT CO_2e/SP/year) for year 2035 based on the original AB 32 year 2020 target, the Executive Order B-30-15 year 2030 target, and the Executive Order S-3-05 year 2050 target. By interpolating between the goals for 2030 and 2050 for year 2035, in the year 2035 the State would need to achieve an emissions level of 50 percent below 1990 levels. The associated population and employment data for year 2035 were obtained from Department of Finance and Employee Development Department (EDD), respectively (DOF 2013, EDD 2015). DOF projections are available for five-year increments between 2010 and 2060, while EDD employment projections are available for 2012 and 2022. The ratio of employment to population estimated in 2022 was applied to the DOF population estimates for 2035 and 2050 to estimate employment in those years. The statewide GHG efficiency in year 2035 then can be calculated by dividing the required emissions level by the projected service population. By using this methodology, if Woodland can demonstrate that it would achieve the 2035 efficiency target, which is interpolated from the State's own goals for 2030 and 2050, the City can demonstrate consistency with the State's Executive Order B-30-15 and SB 32 year 2030 target, and the Executive Order S-3-05 goal for 2050.

The statewide emissions targets, population, and employment must be tailored, however, to focus in on the emission sources that are relevant for the Proposed Project and can be influenced by 2035 General Plan policies and 2035 CAP reduction strategies. Statewide emissions and service populations include emissions that are not directly associated with land uses that are planned under the Proposed Project. In order to develop a GHG efficiency target that is appropriate for the Proposed Project, the non-land use-related emissions and jobs must be removed from consideration. Since the efficiency target is a ratio, with emissions in the numerator and service population in the denominator, it would be appropriate to remove inapplicable emissions sources from the numerator and inapplicable employment estimates associated with these emissions sources from the denominator.

In order to develop an appropriate reduction target for Woodland, for emissions, this means removing consideration of agriculture and forestry, aviation, industrial combined heat and power, manufacturing, mining, national security, oil and gas extraction, petroleum refining, pipelines, rail, and water-borne vehicles. To do the same for employment, this means removing from consideration jobs associated with farming, fishing, forestry, mining, logging, quarrying, oil and gas, heavy industry with substantial process/stationary source emissions, and construction.[1] By removing these emissions and jobs from the calculation of statewide GHG efficiency, the efficiency target is tailored for the land uses consistent with the Proposed Project.

[1] Removing construction-related employment could be viewed as a conservative aspect to the methodology outlined in this section since construction emissions are amortized and included as a part of the overall emissions estimate for the Proposed Plan. However, construction-related employment tends to be transient, can be highly variable, and may not be appropriate to include fully within the denominator of this emissions over service population ratio.

Table 4.5-5 presents the land use-related statewide emissions, population, and employment figures, and calculates the proposed 2035 GHG efficiency target to evaluate the Proposed Project's GHG emissions. This table also provides details on how emissions and employment sectors were removed from consideration in order to create an appropriate efficiency target for comparison in Woodland.

Table 4.5-5. Statewide Efficiency Target – Land Use-Related Emissions and Employment

	2012	2020	2022	2035	2050
Population	38,030,609 [1]	40,619,346 [2]	41,320,928 [3]	45,747,645 [2]	49,779,362 [2]
Employment	15,108,800 [4]	17,012,480 [5]	17,488,400 [4]	19,361,935 [6]	21,068,292 [6]
Service Population (population + employment)	53,139,409	57,631,826	58,809,328	65,109,580	70,847,654
Land Use-Related Emissions (MT CO_2e/yr)	-	293,400,000 [7]	-	146,700,000 [8]	56,680,000 [8]
Emissions Efficiency Targets (MT CO_2e/SP/yr)	-	5.09	-	2.25	0.83
Breakdown of Land Use-Related Emissions, 1990 (2020 AB 32 Target) (MMT CO_2e/yr) [9]					
Sector/Subsector	Total Emissions	Adjusted Emissions	Notes/Adjustments		
Agriculture & Forestry	18.9	0.0	Not included in land use sector		
Commercial	14.4	13.9	Excludes national security emissions from sub sector level 1		
Electricity Generation (Imports)	61.5	61.5	Land use sector includes all emissions		
Electricity Generation (In State)	49.0	34.4	Excludes combined heat and power: industrial from sub sector level 1		
Industrial	105.3	11.7	Industrial emissions excluded from land use sector, except as described in sub sectors below		
Combined Heat and Power: Industrial	*9.7*	*0.0*			
Flaring	*0.1*	*0.0*			
Landfills	*7.4*	*7.4*	*Included*		
Manufacturing	*32.1*	*0.7*	*Construction emissions from sub sector level 2 included in land use sector*		
Mining	*0.03*	*0.0*			
Not Specified	*2.7*	*0.0*			
Oil & Gas Extraction	*14.8*	*0.0*			
Petroleum Marketing	*0.02*	*0.0*			
Petroleum Refining	*32.8*	*0.0*			
Pipelines	*1.92*	*0.0*			

Waste Water Treatment	*3.6*	*3.6*	*Waste water treatment emissions are included in community-wide GHG inventory*
Not Specified	1.3	1.3	Includes all emissions
Residential	29.7	29.7	Includes all emissions
Transportation	150.6	140.9	Excludes aviation, rail, and water-borne emissions from sub sector level 1, includes "non specified"
Total	431.0	293.4	

Source: Analysis by AECOM 2016, sources listed below.

Note: MMT CO_2e = million metric tons of carbon dioxide equivalent; BAU = business-as-usual. Totals may not add due to rounding.

[1] Department of Finance (DOF) Table E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2011-2015, with 2010 benchmark. Available online at: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>

[2] DOF Table P-1 State and County Population Projections, July 1, 2010-2060 (5-year increments). Available online at: <http://www.dof.ca.gov/research/demographic/projections/>

[3] Interpolated from DOF estimates for 2020 (40,619,346) and 2025 (42,373,301). See note 2 for population estimation source.

[4] Employee Development Department (EDD) Employment Projections. Available online at: <http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html>. Sorted to remove jobs from farming, fishing, and forestry occupations sector, production occupations sector, and extraction workers subsector of construction and extraction occupations sector.

[5] Interpolated from 2012 and 2022 revised estimates.

[6] EDD provides 2- and 10-year employment estimates that currently extend to 2022, so the ratio of employment to population estimated in 2022 (i.e., 42.3 percent) was applied to the DOF population estimates for 2035 and 2050 to estimate employment in those years.

[7] Revised 2020 GHG emissions limit from land use-related sectors, which removed emissions from the following sectors and sub-sectors: agriculture and forestry, aviation, combined heat and power for industrial, manufacturing, mining, national security, oil and gas extraction, petroleum refining, pipelines, rail, and water-borne.

[8] Statewide emissions shown assume the state will achieve 1990 emission levels by 2020, 40 percent below 1990 levels in 2030 (per Executive Order B-30-15), 80 percent below 1990 levels in 2050 (per S-3-05), and 50 percent below 1990 levels as interpolated between the 2030 and 2050 statewide GHG reduction targets.

[8] Statewide emissions shown assume the state will achieve 1990 emission levels by 2020, 40 percent below 1990 levels in 2030 (per Executive Order B-30-15), 80 percent below 1990 levels in 2050 (per S-3-05), and 50 percent below 1990 levels as interpolated between the 2030 and 2050 statewide GHG reduction targets.

4.5.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to climate change, GHG, and energy are discussed in detail below.

4.5.4.4 IMPACT ANALYSIS

IMPACT 4.5-1 Generation of Greenhouse Gas Emissions. *Implementation of the Proposed Project would implement planned land uses that would involve GHG emissions associated with short-term construction and infrastructure improvements, along with long-term operational emissions. The impact is cumulatively considerable.*

Potential Impacts Associated with Implementation of the Proposed Project

The intensity and pace of construction under the Proposed Project will depend on market and economic conditions. The Proposed Project plans for the construction of development projects and associated infrastructure improvements that would generate GHG emissions from a variety of sources. Construction-related GHG

emissions would be generated primarily from exhaust emissions associated with off-road construction equipment, heavy-duty material haul trucks, and construction worker commutes. This includes construction emissions associated with development anticipated under the 2035 General Plan in addition to short-term emissions associated with equipment upgrades, renewable energy facility installations, energy efficiency building upgrades, tree planting, and other measures included in the City's 2035 CAP.

Daily GHG emissions would vary depending on the type of construction activities. For example, during construction equipment-intensive phases of projects under the Proposed Project, such as site grading, daily GHG emission would be higher than daily emissions generated during less intensive phases, such as building construction. During the planning horizon, the City anticipates that there will be times with little construction activity and other times when multiple projects are proceeding at once, resulting in higher daily emissions.

In order to estimate maximum annual construction emissions associated with the Proposed Project, it was conservatively assumed that 25 percent of the total land uses would be constructed in a single year. Table 4.5-6 presents the Proposed Project's maximum annual and total construction-related emissions.

Table 4.5-6. Maximum Annual and Total Construction-Related GHG Emissions, Proposed Project

Construction Phase/Category	East Alternative Emissions (MT CO_2e/yr)[1]	South Alternative Emissions (MT CO_2e/yr)[1]
Trenching	85	85
Grading	177	177
Site Preparation	113	113
Building Construction	2,087	2,032
Asphalt Paving	105	105
Architectural Coatings	25	25
Maximum Annual Construction Emissions	2,593	2,538
Total Proposed Project Construction Emissions (total MT CO_2e) [2]	10,371	10,154
Amortized Construction Emissions	346	338

Note: Totals may not add due to rounding.
[1] Emissions are shown in units of metric tons of carbon dioxide equivalent unless noted otherwise.
[2] Total construction emissions are estimated by multiplying the annual worst-case constructions, which represents construction emissions associated with development of 25 percent of the total proposed land uses, by four.
[3] Construction emissions are amortized over 30 years, which is the assumed lifetime of the Proposed Project.
Source: Modeled by AECOM in 2016

Long-term operational emissions would be generated by the day-to-day activities associated with existing and proposed land uses within the Planning Area. Operational GHG emission sources would include energy consumption (i.e., electricity and natural gas), transportation, and water and wastewater. Operational GHG emissions are distinguished by direct and indirect GHG emissions. Direct GHG emissions are those emissions that are generated at the location of consumption or use. For example, mobile-source emissions are direct emissions because GHG emissions are generated as a vehicle begins to move. Indirect emissions are those emissions that occur at a different time or location from the point of consumption or use. For example, electricity-related GHG emissions are indirect emissions because as a consumer uses electricity at their home, the fuel combustion and

emissions associated with creating that electricity likely occurred off-site or at a different time. Table 4.5-7 presents the annual operational emissions associated with the Proposed Project and compares the Proposed Project's GHG efficiency with the year 2035 statewide efficiency threshold.

Table 4.5-7. Annual Operational GHG Emissions, Proposed Project

Emissions Source	East Alternative Emissions (MT CO_2e/yr)	South Alternative Emissions (MT CO_2e/yr)
Transportation	247,390	245,270
Energy	206,353	205,171
Solid Waste	25,858	25,616
Wastewater Reuse	4,880	4,880
Municipal Energy Use	1,562	1,562
Municipal Transportation	1,643	1,643
Water and Wastewater	2,469	2,469
Annual Operational Emissions	490,155	486,611
Annual Operational Emissions + Amortized Construction Emissions	490,501	486,949
Service Population (population + employment)	120,330	119,220
GHG Efficiency (MT CO_2e/SP/yr)	4.08	4.08
2035 Statewide GHG Efficiency Threshold (MT CO_2e/SP/yr)	2.25	2.25

Note: MT CO_2e/yr = metric tons of carbon dioxide equivalent per year; SP = service population
Totals may not add due to rounding.
Source: Modeled by AECOM in 2016

a. East Alternative–Table 4.5-6 presents the East Alternative's maximum annual (2,593 MT CO_2e) and total construction-related emissions (10,371 MT CO_2e). Construction emissions have also been "amortized" to reflect the annual construction emissions component of development activities under the Proposed Project. This amortized construction estimate of 346 MT CO_2e/year can be added to operational emissions to provide an estimate of total annual GHG emissions. As shown in Table 4.5-7, without consideration of the Proposed Project's policies or reduction strategies, the East Alternative would have a GHG efficiency of 4.08 MT CO_2e per service population per year, which exceeds the GHG efficiency threshold of 2.25 MT CO_2e per service population per year.

b. South Alternative–Table 4.5-6 presents the South Alternative's maximum annual (2,538 MT CO_2e) and total construction-related emissions (10,154 MT CO_2e). Construction emissions have also been "amortized" to reflect the annual construction emissions component of development activities under the Proposed Project. This amortized construction estimate of 338 MT CO_2e/year can be added to operational emissions to provide an estimate of total annual GHG emissions. As shown in Table 4.5-7, without consideration of the Proposed Project's policies or reduction strategies, the South Alternative would have a GHG efficiency of 4.08 MT CO_2e per service population per year, which exceeds the GHG efficiency threshold of 2.25 MT CO_2e per service population per year.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

EPA and ARB has developed a body of regulations, programs, and strategies that address GHG emissions from construction and land use development projects. See Section 4.5.1 Regulatory Setting for a description of regulations that would help reduce GHG emissions associated with the Proposed Project.

Proposed Project

The following 2035 General Plan and 2035 CAP policies, reduction strategies, and implementation programs would reduce GHG emissions.

2035 General Plan

- **Goal 2.A Growth and Change.** Support sustainable growth through orderly, well planned development that provides for economic growth, strong social ties, protection of the environment, an enhanced quality of life, and preservation of Woodland's community character and agricultural heritage.

- **Policy 2.A.5 Complete and Well-Designed Neighborhoods.** Promote the development of complete neighborhoods with a physical layout and land use mix that: put residents in close proximity to services and amenities; promotes walking, biking, and transit use; fosters community pride; enhances neighborhood identity; ensures public safety; and meets the needs of all ages and abilities.

- **Policy 2.A.6 Infill Development.** Encourage infill development, adaptive reuse, and the restoration of historic buildings in existing urbanized areas to enhance community character, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, optimize city investment in infrastructure, support increased transit use, and enhance economic vitality.

- **Goal 2.C Smart Growth, Sustainability and Regional Coordination.** Promote Woodland as a leader in sustainable development and support statewide and regional efforts to encourage smart growth, reduce greenhouse gas emissions, fund transportation improvements, conserve resources, and maintain fiscal sustainability.

- **Policy 2.C.1 Compact Form.** Promote compact development patterns, mixed land use and higher-development intensities that conserve land resources, reduce vehicle trips, improve air quality, and facilitate walking, bicycling, and transit use. However, urban development and increased density, as supported by the City in this General Plan, may result in some less desirable impacts, such as increased traffic, greater noise, reduced private residential open space, and reduced privacy than in lower density areas. Where growth and increased density is allowed pursuant to this General Plan, these issues are acknowledged and accepted.

- **Policy 2.C.2 Consistency with the Climate Action Plan.** Ensure that new development is consistent with the objectives and targets of the City's Climate Action Plan.

- **Policy 2.C.3 Alternative Transportation.** Actively support and facilitate mixed-use retail, employment, schools, and residential development around existing and future transit stops, bike routes, and pedestrian paths.

- **Policy 2.C.4 Resource Efficiency.** Encourage and incentivize buildings to be constructed so that they consume less energy, water, and other resources; allow natural ventilation; use daylight effectively; reduce stormwater runoff; and facilitate the use of clean energy whenever possible.

- **Policy 2.I.2 Increase Density.** Within mixed-use corridors, encourage replacement of older low-scale, auto oriented development with well-designed, higher-density, new projects that offer pedestrian orientation, more efficient use of land, and continued, productive economic value.

- **Policy 2.I.3 Green Streets.** Provide continuous street trees along Woodland's key corridors to create a network of "green streets" and cultivate a distinctive sense of identity.

- **Goal 2.M Neighborhoods in New Specific Plan Areas.** Create distinctive and sustainable new neighborhoods.

- **Policy 2.M.1 Compact Form.** Promote the development of compact, complete neighborhoods that locate services and amenities within walking and biking distance of neighborhood residents, reducing the need to travel by car.

- **Policy 2.M.2 Mixed Uses.** Require neighborhood design that incorporates a mix of residential and non-residential development that addresses the basic daily needs of residents and employees. Each new growth area must incorporate some new employment generating uses.

- **Policy 2.M.3 Housing.** Design neighborhoods to include a mix of housing types at a range of densities and affordability levels that accommodate residents at all stages of life. Residential uses must achieve an overall minimum average density of eight dwelling units per gross acre across the Specific Plan.

- **Policy 2.M.4 Pedestrian and Bike Mobility.** Design streets to facilitate pedestrian and bicycle mobility in order to reduce automobile dependence and vehicle miles travelled. Utilize a traditional street grid with walkable blocks. Integrate a seamless greenbelt/trail system that provides recreational and transportation benefits.

- **Policy 2.M.5 Efficiency.** Strive for net zero energy development by encouraging buildings to be constructed so that they consume less energy, water, and other resources; allow natural ventilation; use daylight effectively; and facilitate the use of clean energy whenever possible.

- **Goal 3.E Comprehensive Pedestrian System.** Provide a comprehensive, and integrated pedestrian system that encourages walking and creates an enjoyable way to experience Woodland.

- **Policy 2.M.6 Green Building.** Encourage sustainable, "green" building practices and construction techniques so that structures are designed, built, and renovated in a sustainable and resource-efficient manner.

- **Policy 3.E.1 Pedestrian Promotion.** Promote walking by providing appropriate facilities, programs, and information. Support neighborhood walk-to-school efforts.

- **Policy 3.E.2 Safe and Comfortable Sidewalk Design.** Develop safe and pleasant sidewalks in compliance with adopted design standards to accommodate all users, including persons with disabilities, and complement the form and function of the land uses adjacent to each street segment.

- **Policy 3.E.3 Off-Street Pedestrian Paths.** Continue to develop off-street pedestrian paths for access to schools, recreation facilities, and neighborhood services in existing and future neighborhoods in the city.
- **Policy 3.E.4 Interconnected Network.** Require new development to create complete pedestrian networks with linkages such as walkways, paseos, and shared-use paths that interconnect pedestrian facilities.
- **Policy 3.E.5 Walkable Downtown.** Continue to enhance the pedestrian experience in the Downtown and continue to make streetscape improvements in the Downtown such as street trees, street furniture, public art, and bulb-outs to encourage walking. Evaluate, and when appropriate implement, all-way stops on Main Street in the Downtown.
- **Goal 3.F Comprehensive Bicycle System.** Provide a comprehensive and integrated bicycle system that facilitates bicycling as a viable mode of travel.
- **Policy 3.F.1 Bikeway Master Plan.** Maintain a Bikeway Master Plan (BMP) to reflect current best practices for bike facilities and programs as well as bikeway changes to accommodate the cycling public. Figure 3-3 represents the planned routes in the BMP at the time of this General Plan update, but any future update to the BMP is considered the City's official bikeway plan. In the future, transition the BMP to an Active Transportation Plan that considers all forms of active transportation.
- **Policy 3.F.2 Bikeway Network.** Promote the development of a comprehensive and safe system of recreational and commuter bicycle routes that provide safe and convenient connections between the city's major employment and housing areas; existing and planned bikeways; and schools, parks, retail shopping, and residential neighborhoods.
- **Policy 3.F.3 Bicycle Parking.** Encourage the development of convenient and secure bicycle parking and establish minimum parking standards at employment centers, schools, recreational facilities, transit terminals, commercial businesses, the Downtown core area, and other locations where people congregate.
- **Policy 3.F.4 Bicycle Facilities.** Require residential, commercial and industrial developments to include bicycle lanes or pathways in accordance with the Bikeway Master Plan or Specific Plans when constructing new roadways or upgrading existing streets.
- **Policy 3.F.6 Bicycle and Transit Integration.** Work with YCTD to integrate public transportation systems and facilities with bike networks and accommodations.
- **Policy 3.F.8 Woodland-Davis Bikeway.** Work with Davis and Yolo County to implement the Woodland-Davis Bikeway project and pursue grant funding.
- **Policy 3.K.3 Bicycle Facilities.** Utilize grant monies, license fees, development impact fees and fines, along with capital improvement monies to help fund the development and installation of bikeways and bicycle parking facilities.
- **Policy 3.G.1 Transit Services.** Work with YCTD to plan and implement transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

- **Policy 3.G.5 YCTD Service Planning.** Coordinate with YCTD in the bus service planning process to ensure that routes serve areas with greatest demand and that intercity and inter-regional bus service is responsive to local needs.

- **Policy 3.K.4 Transit Infrastructure.** Require new development to pay a fair share of capital improvements related to transit service.

- **Policy 3.G.8 Transit in Downtown.** Continue to emphasize the central role of Downtown in transit planning including establishing a transit hub in or near Downtown, consistent with the 2016 YCTD Woodland Transit Study.

- **Policy 5.G.5 Recycled Water.** Expand the recycled water system as feasible and in accordance with a Recycled Water System Master Plan, which should provide an evaluation of potential recycled water uses, facilities planning, distribution service areas, recommended recycled water system, financial modeling, implementation strategies, and the feasibility of forming a recycled water utility.

- **Policy 5.H.9 Reduce Demand.** Reduce wastewater system demand through efficient water use by requiring water-conserving design and equipment in new construction; encouraging retrofitting with water-conserving devices; and designing, constructing, and repairing wastewater systems to minimize inflow and infiltration to the extent economically feasible.

- **Policy 5.J.3 New Techniques.** Collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities. Encourage members of the Woodland community to engage in responsible buying and consumption practices to reduce unnecessary packaging and recycling.

- **Policy 5.J.5 Cleanup and Nuisance Abatement.** Enhance nuisance abatement efforts and services that discourage illegal dumping.

- **Policy 5.J.6 Recycling Facilities.** Allow and encourage the development of regional and community-based recycling facilities and secondary resource businesses in areas designated for Regional Commercial and Industrial uses on the General Plan Land Use Diagram.

- **Policy 5.J.7 Promote Waste Reduction.** Promote solid waste reduction, recycling, and composting to Woodland residents and business as an important way to conserve limited natural resources. Encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.

- **Goal 7.F Improve Air Quality and Reduce Greenhouse Gas Emissions.** Protect and improve air quality in the Woodland area with the goal of attaining State and Federal health-based air quality standards.

- **Policy 7.F.4 Landscaping to Improve Air Quality.** Promote the increase of community-wide tree canopy and the use of plants and trees that are efficient pollutant absorbers.

- **Policy 7.F.5 Electric and Natural Gas Powered Equipment.** Promote inclusion of exterior electrical outlets and natural gas hookups in new residential development to encourage the use of electric, rather than gas-powered, equipment.

- **Policy 7.F.7 Inventory of Greenhouse Gas Emissions.** Continue to maintain inventories of community-wide greenhouse gas emissions and greenhouse gas emissions from City operations and track related solid waste, energy, economic, and environmental data. Update the inventories periodically as additional data and methodologies become available.

- **Policy 7.F.8 Reduce Vehicle Miles Travelled**. Continue to work in conjunction with the YSAQMD and other agencies to establish and implement additional transportation control measures that will reduce vehicle travel and improve air quality.

- **Policy 7.F.9 Climate Action Plan.** Implement the Climate Action Plan to achieve the city's greenhouse gas reduction targets by 2020, 2035, and 2050.

    a. East Alternative–The following policy is specific to the East Alternative.

    - **Policy 2.L.5 Specific Plan-2.** Encourage SP-2 to develop as a sustainable "complete neighborhood" with a town center so that most daily needs can be met within the Specific Plan area. Promote the use of renewable energy sources and water conservation tools to achieve zero net energy buildings. Identify a new receiving site for processing waste from the Pacific Coast Producers tomato processing plant prior to adoption of a Specific Plan for SP-2. If development occurs within the boundary of the odor buffer depicted in Figure 7-6, the Developer must bear all costs associated with odor mitigations. A Specific Plan for SP-2 may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.

    b. South Alternative–There are no applicable policies specific to the South Alternative.

2035 CAP

In addition to General Plan policies, the City has developed GHG reduction strategies as a part of the 2035 CAP. The 2035 CAP strategies are organized into the following focus areas:

- Energy
- Transportation and Land Use
- Urban Forest and Open Space
- Water and Waste
- Public Involvement
- Municipal Operations

Each focus area includes overarching objectives, strategies for achieving each objective, and a list of implementation actions associated with each strategy. The objectives and strategies are shown below. Please refer to the 2035 CAP for the implementation actions.

Energy

Objective 1: Reduce Building Energy Use

- Strategy E-1: Lighting Efficiency Upgrades. Installation of high-efficiency lighting. One-fourth of residential electricity use and one-third of commercial electricity use typically go toward lighting.
  - Compact fluorescent lamps (CFLs) and light-emitting diode (LED) bulbs provide the same amount of light (lumens) as incandescent bulbs for as little as 25% the energy use.
  - Solar tubes draw on sunlight to light rooms, using no energy.
  - Switching from T-12 to T-8 fluorescent tubes and using occupancy/vacancy sensors on light switches can provide significant energy savings in commercial applications.
- Strategy E-2: Appliance/Office Equipment Upgrades. Replacement of appliances and office equipment with Energy Star-rated models. Energy Star is the federal government-backed symbol for identifying energy-efficient products. For products to be given the Energy Star rating, they must contribute to significant energy savings that are verifiable through testing. If they cost more than conventional, less energy-efficient counterparts, it must be shown that consumers can recover the additional costs through utility bill savings in a reasonable period of time. Examples of items that may be replaced with Energy Star models, listed from highest to lowest in terms of typical GHG reductions, are: water heater, vending machine, copier, refrigerator, printer, dishwasher, water cooler, computer, clothes washer, and monitor.
- Strategy E-3: Comprehensive Building Efficiency. Improvements of overall building performance through energy-efficient retrofits, and new construction incorporating advanced energy-efficiency features. All new buildings in California must meet the energy-efficiency standards in Title 24, Part 6 of the California Code of Regulations, including CalGreen standards for energy efficiency and water conservation. Typical elements in building energy-efficiency are:
  - Building air sealing
  - Duct sealing and duct replacement
  - Ensuring that appropriate types of attic, wall and/or floor insulation are used
  - Upgrading and/or insulating water heaters
  - Ensuring proper functioning and efficiency of heating and air conditioning systems
  - Reducing heat loss through and around windows
- Strategy E-4: Improved Building Temperature Controls. Improvements to climate control in residences and businesses through measures including:
  - Installing reflective roofing (cool roofs)

  - Replacing heating and cooling equipment with more energy-efficient systems and models
  - Optimizing building temperature controls
  - Using natural factors in new buildings to maintain comfortable conditions

- Strategy E-5: Energy Conservation Education. Educational efforts to induce permanent energy use reduction through conservation. Examples are:
  - Adjusting thermostats a few degrees down in the winter and up in summer
  - Keeping shades closed in summer to reduce indoor heat
  - Using less hot water for showers, laundry, and washing dishes
  - Turning off lights that aren't being used
  - Unplugging "vampire" equipment that isn't being used (i.e., electronic equipment that consumes electricity even when not in use)
  - Using low-flow showerheads and faucets to help reduce hot water use
  - Using ceiling fans
  - Maintaining clean air filters to ensure heating and cooling systems run efficiently

- Objective 2: Increase Renewable Energy Use

- Strategy E-6: Renewable Energy Generation and Procurement. Production or procurement of electricity for residential or business use through solar PV, wind, and geothermal systems. The following major renewable energy options are currently available:
  - Individual solar PV installations – Rooftop PV systems and PV parking shade structures are within reach of more community members as PV technologies have improved, costs have reduced significantly, and more accessible options for up-front financing have become available.
  - Community solar – A PG&E-administered program that allows businesses and individuals to buy shares in renewable energy developments and receive credit on their electric bills for the use of the renewable energy they generate. Community solar was developed through SB 43 (2013) to allow renters and property owners who are unable to install solar on their own properties to obtain renewable energy through PG&E and the other major utilities.
  - Green Certificates, or Renewable Energy Certificates – These are tradable commodities that represent the environmental value of renewable energy generated by one party that may be sold to another party.

- Community Choice Aggregation (CCA) – CCA enables California cities and counties to supply electricity to the customers within their borders. A CCA is responsible for providing the energy, which it either generates or procures from other sources, but does not own the transmission and delivery systems. Because CCAs can choose the sources of their power mix, many communities look to CCA as a mechanism for increasing the amount of renewable energy they use.

Transportation and Land Use

- Objective 1: Implement Land Use Policies to Support Reduced Motor Vehicle Use

- Strategy T/LU-1: Complete Streets Program. Infrastructure designs and measures that provide for safe, convenient walking, bicycling, and transit use.

  "Complete streets" is a planning term for the practice of providing for a combination of elements in roadways that enhance convenient walking, bicycling, and public transit use in addition to passenger vehicle travel. Elements considered may include, for example:

  - Streets that include sidewalks
  - Bike lanes or wide paved shoulders
  - Comfortable and accessible public transportation stops
  - Frequent and safe crossing opportunities
  - Median islands
  - Accessible pedestrian signals
  - Curb extensions
  - Narrower travel lanes

- Strategy T/LU-2: Infill Development, Redevelopment, and Repurposing. Adoption and implementation of land use policies and zoning that promote infill development, mixed use of commercial areas, and other techniques to reduce motor vehicle travel by locating housing near services, transit stops, safe pedestrian and bicycle facilities, and other amenities.

- Strategy T/LU-3: Smart Growth in New Development. Adoption and implementation of land use policies and zoning that promote new development that typically includes:

  - Higher-density development
  - Mixed residential and commercial uses
  - Essential services within short travel distances

  - Transit-oriented, walkable, and bicycle-friendly land uses

  - The "smart growth" concept may include transit-oriented development (TOD), which consists of a mixed-use residential and commercial areas designed to maximize access to, and encourage the use of, public transport. TOD often centers around a transit station or stop that is within one-quarter to one-half mile from the surrounding housing.

- Objective 2: Reduce Vehicle Miles Traveled and Equipment Idling Emissions

- Strategy T/LU-4: Reduced Motor Vehicle Trips. Shortening or elimination of total passenger and delivery vehicle trips by:

  - Reducing work commute trips

  - Increasing carpooling and car sharing

  - Increasing opportunities for residents to shop in Woodland

  - Increasing local markets for locally produced goods

  Reducing vehicle trips can also improve quality of life by reducing traffic congestion, air pollution and associated health effects, and travel-related costs.

- Strategy T/LU-5: Increased Mass Transit Use, Walking, and Bicycling. Reductions in motor vehicle trips through increased incentives and opportunities for mass transit use and safe bicycle and pedestrian travel as alternatives to automobile use.

- Strategy T/LU-6: Reduced Emissions from Vehicle Idling and Other Equipment. Measures to reduce the use of small gas-powered equipment and to reduce vehicle idling, including compliance with state law restricting idling times for trucks and heavy equipment.

- Objective 3: Replace Gas and Diesel Vehicles with Alternative-Fuel Vehicles

- Strategy T/LU-7: Increased Use of Alternative-Fuel Vehicles. Replacement of gasoline- and diesel-fueled vehicles with others that run on alternative fuels that have reduced-GHG or zero-GHG emissions:

  - Flexible fuel vehicle – uses gasoline or E85, a mixture of 85% ethanol and 15% gasoline

  - Hybrid or plug-in hybrid electric vehicle (PHEV) – powered with electricity and gasoline

  - Electric vehicle (EV) – runs on electricity alone

  - Compressed natural gas (CNG) vehicle – runs on compressed natural gas

  - Fuel cell vehicle (FCV) – uses pressurized hydrogen to power a fuel cell, which then generates electricity to run the vehicle

Urban Forest and Open Space

- Objective 1: Increase Community Tree Canopy

- Strategy UF-1: Urban Forest Management Plan. Development and adoption of a policy framework and comprehensive approach to planting and managing City trees.

- An urban forest management plan will establish a systematic approach to preserving and enhancing Woodland's more than 13,000 trees. A healthy tree population needs species and age diversity and requires proactive maintenance and appropriate planning. The objectives for establishing and managing trees in an urban setting are diverse and may include:

    - Improving aesthetic appeal of streetscapes
    - Eliminating public safety hazards
    - Preventing disease and pest infestations
    - Reducing conflicts with utilities and damage to sidewalks and streets
    - Enhancing recreational and educational opportunities
    - Providing energy savings
    - Increasing carbon sequestration and improving air quality

  Priorities may vary for downtown, parking lot, median, park, open space, heritage, and residential street trees.

  An urban forest management plan typically provides a comprehensive program that addresses these objectives and establishes numerical goals, planting and maintenance techniques and schedules, management responsibilities, monitoring needs, budget and personnel needs, relationship of the plan to other planning documents and ordinances, and strategies for adjusting priorities based on changing needs or resource constraints.

  Plan establishment and implementation will be critical to optimizing the potential GHG reductions associated with tree planting and maintenance. However, to avoid double-counting these benefits, they are quantified only under Strategy UF-2.

- Strategy UF-2: Increased Tree Planting. Actions to increase tree canopy through planting new trees to increase building shade, increase carbon sequestration, and reduce heat-island effects. The City and the Woodland Tree Foundation have planted an average of 300 trees per year since 2005.

- Strategy UF-3: Maintenance of Existing Trees. Actions to implement best practices in tree care and maintenance to:

    - Sustain the benefits of existing mature trees

- Expand the canopy of existing young trees
- Maintain the health of future plantings

Appropriate tree care begins with adequate staking, irrigation, training, and pest management of trees in the first years of their establishment. Maintenance throughout the life of a tree includes cyclical pruning and inspection to eliminate hazards, remove diseased or insect-infested wood, maintain stronger branch structure, and prevent obstructions of street signs and interference with utility lines.

According to the 2010 study of Woodland's urban forest resources by Davey Resource Group, the existing urban forest annually captures and stores about 600 metric tons of CO_2

- Strategy UF-4: Public Education. Efforts to increase overall appreciation of and care for Woodland's trees. Public awareness of the benefits and maintenance needs of trees is essential to expanding and sustaining tree canopy. Enhancing public appreciation may embody education and outreach on:
  - Environmental benefits
  - Economic benefits
  - Tree species identification
  - Planting and care
  - Appropriate species selection
  - Diagnosis and treatment of pests and diseases
  - Heritage trees and historical significance
- Objective 2: Maintain and Enhance Open Space Environmental Values
- Strategy UF-5: Open Space Preservation. Maintenance of environmental benefits and enhancement of community appreciation of open space areas to minimize the potential for development sprawl.

  Managed open space areas include the East Detention Pond at County Road 102 and Farmers Central Road, the alkali grasslands preserve lands east of County Road 102, and the old City of Woodland landfill and regional park site.

Water and Solid Waste

- Objective 1: Reduce Per Capita Water Demand
- Strategy W/W-1: Increased Water Conservation. Actions to promote reductions in water use through water conservation awareness and techniques and the use of water-efficient fixtures. Water conservation includes:
  - Making behavioral changes to prevent water waste, such as taking shorter showers

  - Improving water-use efficiency, for example by adjusting sprinklers to ensure water is going where it is needed
  - Upgrading appliances to more water-efficient models
  - Reducing demand by replacing landscape plants that have high water needs with drought-tolerant plants
  - Making the best use of all available water, for example by capturing rainwater and using it for outdoor watering

- Objective 2: Reduce Solid Waste Emissions
- Strategy W/W-2: Solid Waste Reduction and Waste Processing Improvements.

  State law requires each local jurisdiction to divert at least 50% of its waste from landfills through reuse, recycling, and composting. Legislation passed in 2013 directed the state to achieve a 75% diversion rate for trash by 2020. The main methods for reducing waste are:

  - Reduce – minimize waste
  - Reuse – repurpose used materials
  - Recycle – separate materials to be processed into new products
  - Rot – compost organic waste

Public Involvement Strategies

- Objective 1: Build Community Engagement in CAP Implementation
- Strategy PI-1: Citizen-Led Outreach. Establishment of a citizen-led outreach effort that will spearhead public education efforts on climate change and CAP implementation strategies.

  A multidimensional outreach effort will be needed to help Woodland's diverse population realize the benefits of implementing the CAP strategies. Outreach and education activities can be most successful when they arise from within diverse community segments and reflect the perspectives and focuses of those segments. This strategy emphasizes the development of a network of residents, community organizations, and businesses that will be committed to helping inspire others to take actions to improve overall community quality of life through CAP implementation. Participants may include:

  - Business associations
  - School districts
  - Faith-based groups
  - Youth organizations

  - Civic and community service groups
  - Non-profit environmental organizations

- Strategy PI-2: Outreach Materials and Activities. Creation and dissemination of materials that provide an overview of climate change, GHG-reduction guidance, and CAP implementation information.
  - Relevant background may include information from the following, among others:
  - Intergovernmental Panel on Climate Change
  - National Climate Assessment
  - California Climate Change Portal
  - Governor's Office of Planning and Research
  - Institute for Local Government Sustainable Communities program
  - City of Woodland CAP web pages
- Strategy PI-3: Recognition of Business Sustainability Efforts. Recognition of efforts by businesses to implement best sustainability practices.

  Businesses can greatly influence community awareness and acceptance of climate action goals, strategies, and benefits by setting an example through their own practices. Activities helping to promote CAP implementation may take many forms, including:
  - Implementing actions to reduce transportation emissions, energy use, water consumption, or waste generation
  - Providing incentives, such as low-interest loans or product discounts, for others to implement conservation and GHG-reduction measures
  - Investing in the development of new technologies and energy-efficiency measures
  - Conducting facility tours or providing support for other educational activities that demonstrate resource conservation
  - Conducting employee education
  - Developing or participating in certification programs to highlight environmentally sustainable practices
- Objective 2: Measure CAP Implementation Progress and Adjust Actions as Needed

- Strategy PI-4: Progress Checks and Recommendations. Evaluation and adjustment of CAP implementation actions as needed.

  Important elements of a planning process are assessing progress toward plan goals and adapting implementation actions as needed. Implementation strategies may need to be adjusted because of a lack of progress toward one or more objectives or to account for changing conditions or opportunities. Elements of an evaluation of plan progress typically include:

  - Using consistent methods for monitoring plan implementation over time
  - Setting benchmarks, or yardsticks, for measuring progress toward objectives
  - Establishing an agreed-upon course for determining the overall success of implementation
  - Identifying the schedule and approach for plan adjustments or for verification that adjustments are not needed

Municipal Operations

- Objective 1: Incorporate Sustainable Practices into All City Operations.
- Strategy MO-1: Internal Policies. Integration of CAP implementation into City operations.

  Although municipal operations constitute only a small proportion of the total community-wide GHG emissions, the City has a responsibility to lead by example and to commit to reducing GHGs in all aspects of its operations. Integrating CAP strategies into all municipal activities and policies will be important to the success of CAP implementation.

- Strategy MO-2: Purchasing and Contracting. Integration of CAP goals into purchasing and contracting procedures.

  Many of the City's regular operation and maintenance functions, in addition to capital improvement projects, are carried out by companies under contract to the City. These functions include waste collection and disposal, custodial services, and parks maintenance. Integrating GHG-reduction measures into City operations includes ensuring that contracts with all service, consulting, and construction firms also incorporate, where feasible, measures to advance the City's CAP implementation.

- Objective 2: Reduce Emissions from Municipal Electricity Use by 80% or More
- Strategy MO-3: Increased Energy Efficiency and Use of Renewable Energy. Implementation of energy-efficiency measures, energy-efficient technologies, and renewable energy projects.
- Wastewater processing and water production are the highest energy uses in municipal operations, followed by building operations, particularly at the Community and Senior Center and the Police Station, and both facility and outdoor lighting. Methods of reducing GHGs from energy use in municipal operations may include:

  - Improving water and wastewater production processes

  - Improving building performance (climate controls)
  - Upgrading lighting, especially streetlights
  - Replacing equipment and appliances with more energy-efficient models
  - Reducing energy demand through awareness and changes in behavior
  - Using renewable energy

- Objective 3: Reduce Vehicle and Equipment Emissions
- Strategy MO-4: Increased Use of Alternative-Fuel and Fuel-Efficient Vehicles. Partial conversion of the City fleet to vehicles with lower GHG emissions, and adherence to vehicle idling regulations.

  Alternative-fuel vehicles that have reduced GHG or zero GHG emissions include:

  - Flexible fuel vehicle – uses gasoline or E85, a mixture of 85% ethanol and 15% gasoline
  - Hybrid or plug-in hybrid electric vehicle (PHEV) – powered with electricity and gasoline
  - Electric vehicle (EV) – runs on electricity alone
  - Compressed natural gas (CNG) vehicle – runs on compressed natural gas
  - Fuel cell vehicle (FCV) – uses pressurized hydrogen to power a fuel cell, which then generates electricity to run the vehicle

- Strategy MO-5: Reduced Motor Vehicle Use. Measures to reduce employee commute and work trips.

Please see the 2035 CAP, released under a separate cover, for more information. The 2035 CAP is the City's guide to an evolving, rather than a static, plan of action. The specific activities needed to successfully achieve the community's GHG reduction target may change with the availability of new technologies and as the City changes. Chapter 5 of the 2035 CAP describes the City's implementation and monitoring commitments. As described, the City will update GHG inventories, evaluate the performance of individual strategies, evaluate progress toward the City's reduction targets, and make revisions to strategies, as necessary, to ensure that the City will continue to achieve its targets.

Summary of Impact Analysis

With implementation of policies in the 2035 General Plan and reduction strategies in the 2035 CAP, combined with current laws, regulations, and policies, the generation of GHG emissions would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **cumulatively considerable**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **cumulatively considerable**.

Mitigation Measures

Mitigation Measure 4.5-1a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Greenhouse Gas Emissions 1)

a. The City will maintain a Climate Action Plan designed to achieve the reduction targets for land use-related emissions for the years 2020 and 2035 and put the City on a trajectory toward goals for longer-term years, such as 2050. The City's reduction targets may be revised over time, but will represent a rate of emissions that is efficient enough to provide for Woodland's share of AB 32, Executive Order B-30-15, SB 32, and Executive Order S-3-05 emissions reductions.

b. The Climate Action Plan will focus on GHG emission sectors over which the City could have influence – either through entitlement authority, public investments, incentives, or other feasible means. When making the comparison between Woodland's GHG efficiency and that required for the state as a whole, the City can remove from consideration GHG sources that are beyond local control.

c. The City will monitor relevant local, regional, State, and federal legislation and regulations related to GHG emissions, land use planning, and environmental review, and will make changes to the Climate Action Plan accordingly. Future regulations may have the effect of reducing GHG emissions associated with implementation of the Proposed Project. The effect of future regulations shall be taken into account in future revisions to the Climate Action Plan. New transportation modeling tools may become available that allow revisions to emissions estimates based on the City's policies related to land use, urban design, and transportation.

d. The City will revise the Climate Action Plan, as necessary, based on updated inventories and assessments of the effectiveness of reduction strategies no less than every 5 years. If, based on the City's future updated assessments, existing reduction strategies would not achieve the City's reduction targets, the City will make revisions to strategies or develop new strategies. The City will make revisions to its reduction targets, if necessary, to ensure that the target continues to demonstrate an appropriate share of the State's emission reduction goals for Woodland. The City anticipates that a Climate Action Plan update will be needed after new statewide measures are adopted to reduce GHG emissions, such as when the State updates the Air Resources Board Scoping Plan. The City will make revisions to the Climate Action Plan, if necessary, as new technology becomes available that would affect emissions in the Planning Area or the City's ability to forecast future emissions.

e. In maintaining the Climate Action Plan, during the CAP updates described above, the City will consider new or revised reduction strategies that may be necessary to achieve the City's reduction targets, while also promoting other goals of the City's General Plan. The City will identify additional plans, policies, projects, mitigation measures, and regulations that are necessary to reduce GHG emissions and achieve the City's reduction targets. The City will consider regulatory changes, infrastructure investment strategies, incentives, contributions to (or local use of) carbon offset programs, and other measures, as appropriate. The City shall consider financing programs for installation and use of renewable energy infrastructure in new and/or existing development, building codes to further increase energy efficiency in new buildings, incentive programs to assist existing property owners in making energy efficiency upgrades, travel demand management programs for new nonresidential projects, and other mechanisms that would reduce GHG emissions. The City will prioritize reduction strategies that offer co-benefits, such as reducing household or business transportation

costs, reducing household and business utility bills, improving local air quality, reducing energy use, reducing traffic congestion, conserving water and other resources, moderating the heat island effect, preserving natural habitat, creating local jobs, among other benefits.

f. The City anticipates that State funding for GHG-efficient transportation systems and other local applications of the State's GHG reduction mandates will be important in meeting the State's overall GHG goals. Local governments will rely on state funding to improve existing buildings and provide more energy- and GHG-efficient sources of electricity. The City will monitor grant and other funding programs that could be used to implement different components of the Climate Action Plan.

Mitigation Measure 4.5-1b – Implementation of Mitigation Measure 4.3-2a

Mitigation Measure 4.5-1c – Implementation of Mitigation Measure 4.3-2b

As noted, the City developed a preliminary CAP that demonstrates a 15 percent reduction in emissions compared to 2005 levels by 2020. The 2005 baseline was estimated to be approximately 566,389 MT CO_2e. Statewide measures would reduce emissions in 2020 to approximately 541,657 MT CO_2e. Local reductions in the preliminary CAP demonstrate another 60,226 MT CO_2e of reductions, resulting in a 2020 estimate of approximately 481,431 MT CO_2e, or a 15 percent reduction from 2005 levels. Please see the 2035 CAP, released under a separate cover, for details. Pursuant to AB 32, ARB adopted the Climate Change Scoping Plan (Scoping Plan) in December 2008, outlining measures to meet the 2020 GHG reduction target (i.e., achieve 1990 emissions levels by year 2020). To meet the target, California must reduce its GHG emissions by 15 percent from 2005 levels. The City's emission reductions of 15 percent from 2005 levels are consistent with the mandate established for the State government under AB 32.

The Proposed Project contains several policies that would promote mixed-use and infill development. Several policies would site residents, jobs, and retail amenities in proximity of each other to reduce the need for motor vehicle travel. The Proposed Project would encourage alternative modes of transportation. Many policies through various mechanisms would support development of pedestrian and bicycle facilities that would promote non-vehicular modes of travel. For the water and wastewater sector, policies have been developed to encourage minimizing water use and wastewater generation. Policies have also been developed to encourage methods to minimize solid waste generation and increase waste diversion systems. Policies have also been developed to encourage alternative transportation and transit that would reduce transportation-related air quality impacts. Policies require development to be consistent with the City's 2035 CAP and that the City maintain and update its GHG inventory as new information becomes available. Policies commit the City to implementing a CAP, including targets for 2020 and 2035.

The 2035 CAP would achieve local annual reductions that, when combined with estimated future statewide reductions, will achieve an efficiency level of 2.25 MT CO_2e per service population per year, which is consistent with what the State of California would need to achieve goals for the State government under AB 32, Executive Order B-30-15, SB 32, and Executive Order S-3-05. Achieving this level of GHG emissions efficiency in Woodland for the 2035 General Plan horizon year also demonstrates the City's progress toward longer-term reduction target years, such as 2050. This is because the efficiency based reduction target of 2.25 MT CO_2e per service population per year is extrapolated between State's own goals for 2030 (Executive Order B-30-15 and SB 32) and 2050 (Executive Order S-3-05). Lastly, numerous policies would promote low impact development to reduce energy and water consumption, which would also indirectly reduce air pollutant emissions – both criteria

air pollutants and GHG emissions – but are not specifically factored into the calculations on emission reductions. The Proposed Project policies would reduce GHG emissions from various sources (e.g., energy, water, solid waste, transportation). Implementation of these policies would result in an additional reduction in total annual GHG emissions.

The State has just initiated the effort to begin gathering public and stakeholder input regarding approaches that could achieve the nearer-term of the two post-2020 targets (the Executive Order B-30-15 and SB 32 goal for the State to reduce emissions 40 percent below 1990 levels by 2030).

According to ARB's 2030 Target Scoping Plan Concept Paper, Governor Brown has articulated some of the key concepts that will be explored further, including (ARB 2016):

- reducing today's petroleum use in cars and trucks by up to 50 percent;
- increasing from one-third to 50 percent our electricity derived from renewable sources;
- doubling the efficiency savings achieved at existing buildings and making heating fuels cleaner;
- reducing the release of methane, black carbon, and other short lived climate pollutants; and
- managing farm and rangelands, forests and wetlands so they can store carbon.

The 2030 target for the State government will require multiple efforts that achieve reductions from multiple sources, including existing efforts that are already underway, along with new programs. In order to achieve more ambitious emission reduction goals, the State will need to be flexible enough to accommodate innovation and change, provide incentives for voluntary efforts, and remove regulatory barriers (ARB 2016). A holistic perspective that continues California's efforts to link related policy priorities will be needed for post-2020 emission reduction goals. For example, the State will need to continue to connect infrastructure investments with GHG reduction goals for passenger vehicles, connect open space preservation objectives with sequestration potential, and connect economic development goals for both rural and urban communities with progress on environmental justice (ARB 2016). Although the State is just initiating its efforts on developing a strategy to achieve post-2020 goals, it appears that it will be important in defining this strategy to identify areas where there is synergy among multiple positive outcomes.

The next Scoping Plan will outline the actions necessary to achieve the 2030 goal and is expected to help contribute also to the more ambitious 2050 goal established in Executive Order S-3-05 for the State government. Without any information about how the next Scoping Plan will approach the 2030 goal, and without any information about how the State may approach a 2050 goal, it is not possible to determine whether GHG emissions in Woodland would mirror the State's efforts toward either of these milestones. However, the 2035 CAP and the 2035 General Plan commit the City to revisiting the emissions inventory and CAP reduction strategies when new information is available and making appropriate changes. The General Plan includes several policies, as noted above, that address the major emission sources for Woodland: transportation and energy. Policies that promote mixed-use and infill development and locate residents in proximity of jobs, amenities, entertainment, and other destinations will help to reduce travel demand and the main source of local emissions. Policies throughout the Proposed Project encourage non-vehicular modes of transportation and support development of pedestrian and bicycle facilities. The Proposed Project policies would reduce GHG emissions from various sources (e.g., energy, water, solid waste, transportation). Implementation of these policies would result in an additional reduction in total annual GHG emissions. Policies in the 2035 General Plan, reduction strategies in the 2035 CAP, and mitigation identified in this section will reduce local GHG emissions and commit

the City to adjust policies and reduction measures, as needed, when future information related to the State's efforts become available.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than cumulatively considerable with mitigation.**

b. South Alternative– The impact is considered **less than cumulatively considerable with mitigation.**

IMPACT 4.5-2 Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases. *2035 General Plan policies and implementation programs and the 2035 CAP ensure that GHG emissions within the Planning Area occur at a rate that is consistent with goals set for the State government to reduce GHG emissions. Projects that seek to use streamlining identified under SB 375 would need to determine consistency with SACOG's MTP/SCS. The impact is potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the Sacramento region links land use, air quality, and transportation needs. The MTP/SCS supports the Sacramento Region Blueprint, which implements smart growth principles, including housing choice, compact development, mixed-use development, natural resource conservation, use of existing assets, quality design and transportation choice. It also provides increased transportation options while reducing congestion, shortening commute times, and improving air quality.

SACOG is designated by the State and federal governments as the Metropolitan Planning Organization (MPO) and is responsible for developing a regional transportation plan (MTP) in coordination with Sacramento, Yolo, Yuba, Sutter, El Dorado and Placer counties and the 22 cities within those counties (excluding the Tahoe Basin). The plan incorporates county-wide transportation planning developed by the Placer County Transportation Planning Agency and the El Dorado County Transportation Commission, under memoranda of understanding (MOUs) between those agencies and SACOG. The law further requires the long-range regional transportation plan (MTP) to cover at least a 20-year planning horizon, and be updated at least every four years.

In 2008, California passed the Sustainable Communities and Climate Protection Act, Senate Bill 375 (SB 375). This law requires MPOs to develop a Sustainable Communities Strategy (SCS) as part of the MTP, which identifies policies and strategies to reduce GHG emissions from passenger vehicles to targets set by the California Air Resources Board (ARB). Having already validated the benefits to an integrated transportation and land use planning approach in the Blueprint and earlier MTPs, SACOG views the SCS not as a separate and distinct element of the plan, but rather as integral to the entire plan.

As a part of developing the MTP/SCS, SACOG has developed population and employment projections that inform land use and transportation planning throughout the region. According to these projections, the city's population is expected to increase to 66,041 people in 2035 and the number of housing units is expected to increase to 24,452 (City of Woodland 2013:21). SACOG expects employment in the city to increase to 33,368 jobs. As indicated in Table 4.10-4 the population, housing, and employment projections under the General Plan would be substantially higher than the SACOG projections for 2035. The General Plan assumes a total population

of approximately 74,990 people, 26,980 dwelling units, 44,210 local jobs, and approximately 36.5 million square feet of non-residential development over the planning horizon (Table 4.10-7).

The methodology and purpose of the City's estimate of development capacity under the Proposed Project is different from the methodology and purpose of SACOG's forecast for the purposes of the MTP/SCS. The SACOG projections are market-based growth estimates that project the amount and location of likely growth in the region based on a variety of socio-economic factors that are updated every four years. The City's general plan is a long range planning tool that seeks to create opportunities for growth and provide a range of land use options to encourage economic investment and promote other City policy objectives. Given these different purposes, it is reasonable to expect variations in the growth forecasts between the two.

For development projects that seek to utilize the CEQA streamlining allowed under SB 375 and other related legislation, it will be necessary to demonstrate project-level consistency with the MTP/SCS.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

See above under Impact 4.5-1.

Proposed Project

See above under Impact 4.5-1.

Summary of Impact Analysis

The City has structured the 2035 General Plan and 2035 CAP to provide a level of GHG emission reductions consistent with State reduction targets. However, neither the 2035 General Plan nor the 2035 CAP contains specific policy or implementation guidance to ensure that consistency with the MTP/SCS is achieved on a project basis for projects seeking to utilize available CEQA streamlining.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.5-2 – The 2035 General Plan should be amended to include the following new policy:

- **Policy 7.F.12. MTP/SCS Consistency**. For projects seeking to utilize available CEQA streamlining, determine project consistency with the MTP/SCS as a component of application review.

Summary of Impact after Mitigation

a. East Alternative–The impact is **less than significant with mitigation**.

b. South Alternative–The impact is **less than significant with mitigation**.

IMPACT 4.5-3 Develop Land Uses or Development Patterns that Cause Wasteful, Inefficient, or Unnecessary Consumption of Energy. *During construction and following buildout of the Proposed Project, energy would be consumed in the forms of fossil fuels and electricity. A large body of existing regulations would have the effect of reducing energy demand and would reduce potential adverse environmental effects associated with energy demand. The Proposed Project also includes many policies that promote additional energy conservation and savings and that would reduce peak demand and associated environmental effects. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Transportation-Related Energy Consumption

As noted previously, transportation is, by far, the largest energy consuming sector in California, accounting for approximately 39 percent of all energy use in the state (U.S. Energy Information Administration 2015). Since transportation accounts for more energy consumption than heating, cooling, and powering of buildings, powering industry, or any other use, the travel demand reducing features of the Proposed Project are important for consideration in an assessment of energy efficiency (Lawrence Berkeley National Laboratory 2013).

The Proposed Project plans for projects in the Planning Area, including new growth areas, as well as a focus on development in infill locations, such as areas with the Downtown Mixed Use and Corridor Mixed Use designations. The intent of the Proposed Project is to develop land uses in a pattern that will allow multi-modal access to new and existing land uses. Land uses developed in infill, mixed-use, and/or transit accessible areas would reduce vehicle miles traveled by allowing residents to use alternatives to vehicular travel, or reducing trip distances to access destinations and amenities. Even in new growth areas, policies in the Proposed Project call for "complete" communities where residents can fulfill their daily needs close to their residences, allowing access by pedestrian and cyclists and reducing trip distances and corresponding transportation energy use.

The Proposed Project plans for residential developments for households that may have one or more individuals that commute to jobs within or outside of Woodland. The Proposed Project also plans for employment-generating developments that would attract some vehicular trips by customers as well as employees that may commute from areas within or outside Woodland. However, the Proposed Project is designed to promote a range of housing opportunities and employment opportunities within the Planning Area so that more households would have the opportunity to reside near their workplace. The Proposed Project also emphasizes developing a workforce with the skills that are relevant for local businesses.

a. East Alternative–Implementation of the East Alternative would require approximately 505,253 megawatt hours per year (MWh/year) of electricity (for commercial, residential, and municipal use), along with 2,646,044 million British thermal units per year of natural gas (MMBtu/year), and 3,103,000 MMBtu/year of energy demand for transportation (Table 4.5-8). Converting all operational energy demand under the East Alternative to a single unit yields an estimate of 7,473,039 MMBtu/year compared to an existing demand in the Planning Area of 5,084,107 MMBtu. Overall energy efficiency under the East Alternative would improve on a per-service population basis compared to existing conditions by at least six percent.

Table 4.5-8. Energy Demand, East Alternative

End Use	Energy Demand
Communitywide	
Electricity	484,140 MWh/year
Commercial	294,097 MWh/year
Residential	190,043 MWh/year
Natural Gas	2,633,094 MMBtu/year
Commercial	1,590,441 MMBtu/year
Residential	1,042,652 MMBtu/year
Transportation	3,080,380 MMBtu/year
Municipal	
Electricity	6,635 MWh/year
Natural Gas	12,950 MMBtu/year
Water/Wastewater Electricity	14,478 MWh/year
Transportation	22,620 MMBtu/year

Note: This analysis assumes diesel (heat content) is 5.825 MMBtu/barrel, that for vehicular gasoline there are 5.218 MMBtu/barrel, that there are 42 gallons/barrel, that there are 10 therms/MMBtu, and an annualization factor of 347 days/year. These assumptions are consistent with guidance provided in the California Climate Action Registry (CCAR), 2009 General Reporting Protocol Version 3.1: Table C.3.
Source: Modeled by AECOM in 2016

b. South Alternative–Implementation of the South Alternative would require approximately 502,491 megawatt hours per year (MWh/year) of electricity (for commercial, residential, and municipal use), along with 2,631,108 million British thermal units per year of natural gas (MMBtu/year), and 3,081,406 MMBtu/year of energy demand for transportation (Table 4.5-8). Converting all operational energy demand under the South Alternative to a single unit yields an estimate of 7,427,086 MMBtu/year compared to an existing demand in the Planning Area of 5,084,107 MMBtu. Overall energy efficiency under the South Alternative would improve on a per-service population basis compared to existing conditions by at least five percent.

Table 4.5-9. Energy Demand, South Alternative	
End Use	Energy Demand
Communitywide	
Electricity	481,378 MWh/year
Commercial	291,335 MWh/year
Residential	190,043 MWh/year
Natural Gas	2,618,158 MMBtu/year
Commercial	1,575,506 MMBtu/year
Residential	1,042,652 MMBtu/year
Transportation	3,058,786 MMBtu/year
Municipal	
Electricity	6,635 MWh/year
Natural Gas	12,950 MMBtu/year
Water/Wastewater Electricity	14,478 MWh/year
Transportation	22,620 MMBtu/year
Note: This analysis assumes diesel (heat content) is 5.825 MMBtu/barrel, that for vehicular gasoline there are 5.218 MMBtu/barrel, that there are 42 gallons/barrel, that there are 10 therms/MMBtu, and an annualization factor of 347 days/year. These assumptions are consistent with guidance provided in the California Climate Action Registry (CCAR), 2009 General Reporting Protocol Version 3.1: Table C.3. Source: Modeled by AECOM in 2016	

Construction-Related Energy Consumption

Implementation of the Proposed Project would involve consumption of construction-related energy in the form of electricity, natural gas, and fossil fuels (e.g., gasoline, diesel fuel). This includes construction activities associated with development anticipated under the 2035 General Plan in addition to short-term emissions associated with equipment upgrades, renewable energy facility installations, energy efficiency building upgrades, tree planting, and other measures included in the City's 2035 CAP. The primary energy demands during construction would be associated with construction equipment and vehicle fueling. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on-site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site. The City does not anticipate unusual or project characteristics that would necessitate the use of construction equipment that would be less energy efficient.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Building Energy Consumption

Projects under the Proposed Project would be constructed to meet currently-applicable energy efficiency standards at the time of construction. As discussed in the Regulatory Framework, energy efficiency requirements have and will continue to become more stringent over time. As a result, new projects would be more energy

efficient than existing projects of the same type within the Planning Area that were constructed prior to the existence of energy efficiency standards or under previous less stringent energy efficiency standards. The 2035 CAP includes energy efficiency guidance, as well (see Section 4A in particular). In addition, older buildings tend to decrease in energy efficiency as infrastructure begins to degrade with time. Therefore, the space heating and cooling, lighting, and other operational-related energy uses under the Proposed Project would tend to reduce per-capita energy consumption in association with building energy needs during the planning horizon, as well as reducing peak energy use.

a. East Alternative–Implementation of the East Alternative would require approximately 505,253 megawatt hours per year (MWh/year) of electricity (for commercial, residential, and municipal use), along with 2,646,044 million British thermal units per year of natural gas (MMBtu/year).

b. South Alternative–Implementation of the South Alternative would require approximately 502,491 megawatt hours per year (MWh/year) of electricity (for commercial, residential, and municipal use), along with 2,631,108 million British thermal units per year of natural gas (MMBtu/year).

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Several existing regulations, as summarized in the Regulatory Framework subsection, which would apply to projects anticipated to be developed under the Proposed Project, would increase energy efficiency, reduce peak energy demand, and also address the actual physical adverse environmental effects associated with the use of energy. The EPA and NHTSA develop and issue rules over time with increasingly more stringent requirements for fuel economy and reduce GHG emissions for motor vehicles. The federal Renewable Fuel Standard Program (RFS) established requirements for volumes of renewable fuel used to replace petroleum-based fuels. The State of California has added GHG emissions standards to California's existing standards for motor vehicle emissions. Executive Order S-1-07 acknowledges that the transportation sector is the main source of GHG emissions in California. The order established a goal of reducing the carbon intensity of fuels for mobile, stationary and portable emissions sources sold in California by a minimum of 10 percent by 2020. ARB adopted the Low Carbon Fuel Standard on April 23, 2009. SB 350 (2015) increased the renewable portfolio standard for investor-owned utilities, such as PG&E for the Woodland area, to 50 percent by 2030.

Energy Conservation Standards for new residential and commercial buildings were originally adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2013 (Title 24 CCR Part 6). In general, Title 24 requires the design of building shells and building components to conserve energy.[2] The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.

The California Energy Commission adopted changes to the 2008 Building Energy Efficiency Standards contained in Title 24 CCR Part 6 (also known as the California Energy Code), and associated administrative regulations in Part 1 (collectively referred to here as the Standards). The 2013 Building Energy Efficiency Standards are 25 percent more efficient than previous standards for residential construction and 30 percent better for nonresidential

[2] These new energy efficiency standards were developed in response to the State's energy crisis, as well as AB 970 (Chapter 329, Statutes of 2000), the California Energy and Reliability Act of 2000.

construction (CEC 2012). The standards offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. Projects planned for development under the Proposed Project will be required to comply with current Title 24 regulations related to energy efficiency.

In addition to the Building Energy Efficiency Standards (Title 24, Part 6), the 2010 California Green Building Code (Part 11, Title 24) standards became effective on January 1, 2011. This code was developed to enhance the design and construction of buildings and sustainable construction practices through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality. It is the intent of this code to achieve more than a 15 percent reduction in energy use when compared to existing standards, to reduce indoor potable water demand by 20 percent, to reduce landscape water usage by 50 percent, and to reduce construction waste by 50 percent. It also requires separate water meters for nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects, and mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies (CEC 2009).

The 2012 Appliance Efficiency Regulations (Title 20 CCR Sections 1601-1608), dated October 2012, were adopted by the California Energy Commission on January 12, 2012, and were effective as of February 1, 2013. The regulations include standards for both federally-regulated appliances and non-federally regulated appliances. While these regulations are now often seen as "business as usual" in California, they do exceed the standards imposed by any other state and reduce energy demand.

Projects planned under the Proposed Project would be required to comply with the current energy performance standards found in Title 24 of the California Code of Regulations, resulting in reductions in energy demand, including the 2010 California Green Building Code (Part 11 of Title 24), 2012 Appliance Efficiency Regulations, and revised 2013 Building Energy Efficiency Standards. In addition, construction of the proposed project will be required to reduce construction waste and demolition debris by 50 percent per the 2010 California Green Building Code requirements.

Another update to the energy efficiency standards for 2016 will become effective January 1, 2017. The 2016 update to the Building Energy Efficiency Standards will improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards include improvements for attics, walls, water heating, and lighting. The new standards address non-residential development, as well, and build on the energy efficiency progress made within previous iterations.

Proposed Project

Policies and strategies in the 2035 General Plan and 2035 CAP would also increase the efficiency of, and decrease peak demand for energy use for transportation, building energy, and water, which would reduce the actual potential environmental effects associated with the use of energy.

- **Goal 2.A Growth and Change.** Support sustainable growth through orderly, well planned development that provides for economic growth, strong social ties, protection of the environment, an enhanced quality of life, and preservation of Woodland's community character and agricultural heritage.

- **Policy 2.A.5 Complete and Well-Designed Neighborhoods.** Promote the development of complete neighborhoods with a physical layout and land use mix that: put residents in close proximity to services and amenities; promotes walking, biking, and transit use; fosters community pride; enhances neighborhood identity; ensures public safety; and meets the needs of all ages and abilities.

- **Policy 2.A.6 Infill Development.** Encourage infill development, adaptive reuse, and the restoration of historic buildings in existing urbanized areas to enhance community character, promote pedestrian- and bicycle-friendly neighborhoods, increase housing diversity, ensure integrity of historic districts, optimize city investment in infrastructure, support increased transit use, and enhance economic vitality.

- **Goal 2.C Smart Growth, Sustainability and Regional Coordination.** Promote Woodland as a leader in sustainable development and support statewide and regional efforts to encourage smart growth, reduce greenhouse gas emissions, fund transportation improvements, conserve resources, and maintain fiscal sustainability.

- **Policy 2.C.1 Compact Form.** Promote compact development patterns, mixed land use and higher-development intensities that conserve land resources, reduce vehicle trips, improve air quality, and facilitate walking, bicycling, and transit use. However, urban development and increased density, as supported by the City in this General Plan, may result in some less desirable impacts, such as increased traffic, greater noise, reduced private residential open space, and reduced privacy than in lower density areas. Where growth and increased density is allowed pursuant to this General Plan, these issues are acknowledged and accepted.

- **Policy 2.C.2 Consistency with the Climate Action Plan.** Ensure that new development is consistent with the objectives and targets of the City's Climate Action Plan.

- **Policy 2.C.3 Alternative Transportation.** Actively support and facilitate mixed-use retail, employment, schools, and residential development around existing and future transit stops, bike routes, and pedestrian paths.

- **Policy 2.C.4 Resource Efficiency.** Encourage and incentivize buildings to be constructed so that they consume less energy, water, and other resources; allow natural ventilation; use daylight effectively; reduce stormwater runoff; and facilitate the use of clean energy whenever possible.

- **Policy 2.D.1 Jobs/Housing Balance.** Promote and support the development of a balance of residential, commercial, and industrial development within the city. Encourage a variety of job and housing types to provide a range of employment and housing opportunities for all city residents.

- **Policy 2.I.2 Increase Density.** Within mixed-use corridors, encourage replacement of older low-scale, auto oriented development with well-designed, higher-density, new projects that offer pedestrian orientation, more efficient use of land, and continued, productive economic value.

- **Policy 2.I.3 Green Streets.** Provide continuous street trees along Woodland's key corridors to create a network of "green streets" and cultivate a distinctive sense of identity.

- **Goal 2.M Neighborhoods in New Specific Plan Areas.** Create distinctive and sustainable new neighborhoods.

- **Policy 2.M.1 Compact Form.** Promote the development of compact, complete neighborhoods that locate services and amenities within walking and biking distance of neighborhood residents, reducing the need to travel by car.

- **Policy 2.M.2 Mixed Uses.** Require neighborhood design that incorporates a mix of residential and non-residential development that addresses the basic daily needs of residents and employees. Each new growth area must incorporate some new employment generating uses.

- **Policy 2.M.3 Housing.** Design neighborhoods to include a mix of housing types at a range of densities and affordability levels that accommodate residents at all stages of life. Residential uses must achieve an overall minimum average density of eight dwelling units per gross acre across the Specific Plan.

- **Policy 2.M.4 Pedestrian and Bike Mobility.** Design streets to facilitate pedestrian and bicycle mobility in order to reduce automobile dependence and vehicle miles travelled. Utilize a traditional street grid with walkable blocks. Integrate a seamless greenbelt/trail system that provides recreational and transportation benefits.

- **Policy 2.M.5 Efficiency.** Strive for net zero energy development by encouraging buildings to be constructed so that they consume less energy, water, and other resources; allow natural ventilation; use daylight effectively; and facilitate the use of clean energy whenever possible.

- **Goal 3.E Comprehensive Pedestrian System.** Provide a comprehensive, and integrated pedestrian system that encourages walking and creates an enjoyable way to experience Woodland.

- **Policy 2.M.6 Green Building.** Encourage sustainable, "green" building practices and construction techniques so that structures are designed, built, and renovated in a sustainable and resource-efficient manner.

- **Policy 3.E.1 Pedestrian Promotion.** Promote walking by providing appropriate facilities, programs, and information. Support neighborhood walk-to-school efforts.

- **Policy 3.E.2 Safe and Comfortable Sidewalk Design.** Develop safe and pleasant sidewalks in compliance with adopted design standards to accommodate all users, including persons with disabilities, and complement the form and function of the land uses adjacent to each street segment.

- **Policy 3.E.3 Off-Street Pedestrian Paths.** Continue to develop off-street pedestrian paths for access to schools, recreation facilities, and neighborhood services in existing and future neighborhoods in the city.

- **Policy 3.E.4 Interconnected Network.** Require new development to create complete pedestrian networks with linkages such as walkways, paseos, and shared-use paths that interconnect pedestrian facilities.

- **Policy 3.E.5 Walkable Downtown.** Continue to enhance the pedestrian experience in the Downtown and continue to make streetscape improvements in the Downtown such as street trees, street furniture, public art, and bulb-outs to encourage walking. Evaluate, and when appropriate implement, all-way stops on Main Street in the Downtown.

- **Goal 3.F Comprehensive Bicycle System.** Provide a comprehensive and integrated bicycle system that facilitates bicycling as a viable mode of travel.

- **Policy 3.F.1 Bikeway Master Plan.** Maintain a Bikeway Master Plan (BMP) to reflect current best practices for bike facilities and programs as well as bikeway changes to accommodate the cycling public. Figure 3-3 represents the planned routes in the BMP at the time of this General Plan update, but any future update to the BMP is considered the City's official bikeway plan. In the future, transition the BMP to an Active Transportation Plan that considers all forms of active transportation.

- **Policy 3.F.2 Bikeway Network.** Promote the development of a comprehensive and safe system of recreational and commuter bicycle routes that provide safe and convenient connections between the city's major employment and housing areas; existing and planned bikeways; and schools, parks, retail shopping, and residential neighborhoods.

- **Policy 3.F.3 Bicycle Parking.** Encourage the development of convenient and secure bicycle parking and establish minimum parking standards at employment centers, schools, recreational facilities, transit terminals, commercial businesses, the Downtown core area, and other locations where people congregate.

- **Policy 3.F.4 Bicycle Facilities.** Require residential, commercial and industrial developments to include bicycle lanes or pathways in accordance with the Bikeway Master Plan or Specific Plans when constructing new roadways or upgrading existing streets.

- **Policy 3.F.6 Bicycle and Transit Integration.** Work with YCTD to integrate public transportation systems and facilities with bike networks and accommodations.

- **Policy 3.F.8 Woodland-Davis Bikeway.** Work with Davis and Yolo County to implement the Woodland-Davis Bikeway project and pursue grant funding.

- **Policy 3.K.3 Bicycle Facilities.** Utilize grant monies, license fees, development impact fees and fines, along with capital improvement monies to help fund the development and installation of bikeways and bicycle parking facilities.

- **Policy 3.G.1 Transit Services.** Work with YCTD to plan and implement transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

- **Policy 3.G.5 YCTD Service Planning.** Coordinate with YCTD in the bus service planning process to ensure that routes serve areas with greatest demand and that intercity and inter-regional bus service is responsive to local needs.

- **Policy 3.K.4 Transit Infrastructure.** Require new development to pay a fair share of capital improvements related to transit service.

- **Policy 3.G.8 Transit in Downtown.** Continue to emphasize the central role of Downtown in transit planning including establishing a transit hub in or near Downtown, consistent with the 2016 YCTD Woodland Transit Study.

- **Policy 4.E.2 Workforce Development.** Strive to cultivate a skilled, educated, and well-trained workforce by increasing educational attainment and the relevant job skill levels in order to appeal to existing and future businesses.

- **Policy 5.G.5 Recycled Water.** Expand the recycled water system as feasible and in accordance with a Recycled Water System Master Plan, which should provide an evaluation of potential recycled water uses, facilities planning, distribution service areas, recommended recycled water system, financial modeling, implementation strategies, and the feasibility of forming a recycled water utility.

- **Policy 5.H.9 Reduce Demand.** Reduce wastewater system demand through efficient water use by requiring water-conserving design and equipment in new construction; encouraging retrofitting with water-conserving devices; and designing, constructing, and repairing wastewater systems to minimize inflow and infiltration to the extent economically feasible.

- **Policy 5.J.3 New Techniques.** Collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities. Encourage members of the Woodland community to engage in responsible buying and consumption practices to reduce unnecessary packaging and recycling.

- **Policy 5.J.5 Cleanup and Nuisance Abatement.** Enhance nuisance abatement efforts and services that discourage illegal dumping.

- **Policy 5.J.6 Recycling Facilities.** Allow and encourage the development of regional and community-based recycling facilities and secondary resource businesses in areas designated for Regional Commercial and Industrial uses on the General Plan Land Use Diagram.

- **Policy 5.J.7 Promote Waste Reduction.** Promote solid waste reduction, recycling, and composting to Woodland residents and business as an important way to conserve limited natural resources. Encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.

- **Goal 7.F Improve Air Quality and Reduce Greenhouse Gas Emissions.** Protect and improve air quality in the Woodland area with the goal of attaining State and Federal health-based air quality standards.

- **Policy 7.F.4 Landscaping to Improve Air Quality.** Promote the increase of community-wide tree canopy and the use of plants and trees that are efficient pollutant absorbers.

- **Policy 7.F.5 Electric and Natural Gas Powered Equipment.** Promote inclusion of exterior electrical outlets and natural gas hookups in new residential development to encourage the use of electric, rather than gas-powered, equipment.

- **Policy 7.F.7 Inventory of Greenhouse Gas Emissions.** Continue to maintain inventories of community-wide greenhouse gas emissions and greenhouse gas emissions from City operations and track related solid waste,

energy, economic, and environmental data. Update the inventories periodically as additional data and methodologies become available.

- **Policy 7.F.8 Reduce Vehicle Miles Travelled**. Continue to work in conjunction with the YSAQMD and other agencies to establish and implement additional transportation control measures that will reduce vehicle travel and improve air quality.

- **Policy 7.F.9 Climate Action Plan.** Implement the Climate Action Plan to achieve the city's greenhouse gas reduction targets by 2020, 2035, and 2050.

a. East Alternative – The following policy is specific to the East Alternative.

- **Policy 2.L.5 Specific Plan-2.** Encourage SP-2 to develop as a sustainable "complete neighborhood" with a town center so that most daily needs can be met within the Specific Plan area. Promote the use of renewable energy sources and water conservation tools to achieve zero net energy buildings. Identify a new receiving site for processing waste from the Pacific Coast Producers tomato processing plant prior to adoption of a Specific Plan for SP-2. If development occurs within the boundary of the odor buffer depicted in Figure 7-6, the Developer must bear all costs associated with odor mitigations. A Specific Plan for SP-2 may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria.

b. South Alternative – There are no applicable policies specific to the South Alternative.

2035 CAP

In addition to General Plan policies, the City has developed GHG reduction strategies as a part of the CAP. The CAP strategies are organized into the following focus areas:

- Energy
- Transportation and Land Use
- Urban Forest and Open Space
- Water and Waste
- Public Involvement
- Municipal Operations

Each focus area includes overarching objectives, strategies for achieving each objective, and a list of implementation actions associated with each strategy.

The objectives and strategies are shown below. Please refer to the CAP for the implementation actions.

Energy

Objective 1: Reduce Building Energy Use

- **Strategy E-1: Lighting Efficiency Upgrades**. Installation of high-efficiency lighting. One-fourth of residential electricity use and one-third of commercial electricity use typically go toward lighting.
  - Compact fluorescent lamps (CFLs) and light-emitting diode (LED) bulbs provide the same amount of light (lumens) as incandescent bulbs for as little as 25% the energy use.
  - Solar tubes draw on sunlight to light rooms, using no energy.
  - Switching from T-12 to T-8 fluorescent tubes and using occupancy/vacancy sensors on light switches can provide significant energy savings in commercial applications.
- **Strategy E-2: Appliance/Office Equipment Upgrades**. Replacement of appliances and office equipment with Energy Star-rated models. Energy Star is the federal government-backed symbol for identifying energy-efficient products. For products to be given the Energy Star rating, they must contribute to significant energy savings that are verifiable through testing. If they cost more than conventional, less energy-efficient counterparts, it must be shown that consumers can recover the additional costs through utility bill savings in a reasonable period of time. Examples of items that may be replaced with Energy Star models, listed from highest to lowest in terms of typical GHG reductions, are: water heater, vending machine, copier, refrigerator, printer, dishwasher, water cooler, computer, clothes washer, and monitor.
- **Strategy E-3: Comprehensive Building Efficiency**. Improvements of overall building performance through energy-efficient retrofits, and new construction incorporating advanced energy-efficiency features. All new buildings in California must meet the energy-efficiency standards in Title 24, Part 6 of the California Code of Regulations, including CalGreen standards for energy efficiency and water conservation. Typical elements in building energy-efficiency are:
  - Building air sealing
  - Duct sealing and duct replacement
  - Ensuring that appropriate types of attic, wall and/or floor insulation are used
  - Upgrading and/or insulating water heaters
  - Ensuring proper functioning and efficiency of heating and air conditioning systems
  - Reducing heat loss through and around windows
- **Strategy E-4: Improved Building Temperature Controls**. Improvements to climate control in residences and businesses through measures including:
  - Installing reflective roofing (cool roofs)
  - Replacing heating and cooling equipment with more energy-efficient systems and models
  - Optimizing building temperature controls

- Using natural factors in new buildings to maintain comfortable conditions

- **Strategy E-5: Energy Conservation Education**. Educational efforts to induce permanent energy use reduction through conservation. Examples are:

  - Adjusting thermostats a few degrees down in the winter and up in summer
  - Keeping shades closed in summer to reduce indoor heat
  - Using less hot water for showers, laundry, and washing dishes
  - Turning off lights that aren't being used
  - Unplugging "vampire" equipment that isn't being used (i.e., electronic equipment that consumes electricity even when not in use)
  - Using low-flow showerheads and faucets to help reduce hot water use
  - Using ceiling fans
  - Maintaining clean air filters to ensure heating and cooling systems run efficiently

- **Objective 2**: Increase Renewable Energy Use

- **Strategy E-6: Renewable Energy Generation and Procurement**. Production or procurement of electricity for residential or business use through solar PV, wind, and geothermal systems. The following major renewable energy options are currently available:

  - Individual solar PV installations – Rooftop PV systems and PV parking shade structures are within reach of more community members as PV technologies have improved, costs have reduced significantly, and more accessible options for up-front financing have become available.
  - Community solar – A PG&E-administered program that allows businesses and individuals to buy shares in renewable energy developments and receive credit on their electric bills for the use of the renewable energy they generate. Community solar was developed through SB 43 (2013) to allow renters and property owners who are unable to install solar on their own properties to obtain renewable energy through PG&E and the other major utilities.
  - Green Certificates, or Renewable Energy Certificates – These are tradable commodities that represent the environmental value of renewable energy generated by one party that may be sold to another party.
  - Community Choice Aggregation (CCA) – CCA enables California cities and counties to supply electricity to the customers within their borders. A CCA is responsible for providing the energy, which it either generates or procures from other sources, but does not own the transmission and delivery systems. Because CCAs can choose the sources of their power mix, many communities look to CCA as a mechanism for increasing the amount of renewable energy they use.

Transportation and Land Use

- **Objective 1**: Implement Land Use Policies to Support Reduced Motor Vehicle Use

- **Strategy T/LU-1**: Complete Streets Program. Infrastructure designs and measures that provide for safe, convenient walking, bicycling, and transit use.

  "Complete streets" is a planning term for the practice of providing for a combination of elements in roadways that enhance convenient walking, bicycling, and public transit use in addition to passenger vehicle travel. Elements considered may include, for example:

  - Streets that include sidewalks
  - Bike lanes or wide paved shoulders
  - Comfortable and accessible public transportation stops
  - Frequent and safe crossing opportunities
  - Median islands
  - Accessible pedestrian signals
  - Curb extensions
  - Narrower travel lanes

- **Strategy T/LU-2: Infill Development, Redevelopment, and Repurposing**. Adoption and implementation of land use policies and zoning that promote infill development, mixed use of commercial areas, and other techniques to reduce motor vehicle travel by locating housing near services, transit stops, safe pedestrian and bicycle facilities, and other amenities.

- **Strategy T/LU-3: Smart Growth in New Development**. Adoption and implementation of land use policies and zoning that promote new development that typically includes:

  - Higher-density development
  - Mixed residential and commercial uses
  - Essential services within short travel distances
  - Transit-oriented, walkable, and bicycle-friendly land uses
  - The "smart growth" concept may include transit-oriented development (TOD), which consists of a mixed-use residential and commercial areas designed to maximize access to, and encourage the use of, public transport. TOD often centers around a transit station or stop that is within one-quarter to one-half mile from the surrounding housing.

- **Objective 2**: Reduce Vehicle Trip Mileage and Equipment Idling Emissions

- **Strategy T/LU-4: Reduced Motor Vehicle Trips**. Shortening or elimination of total passenger and delivery vehicle trips by:

  - Reducing work commute trips
  - Increasing carpooling and car sharing
  - Increasing opportunities for residents to shop in Woodland
  - Increasing local markets for locally produced goods

  Reducing vehicle trips can also improve quality of life by reducing traffic congestion, air pollution and associated health effects, and travel-related costs.

- **Strategy T/LU-5: Increased Mass Transit Use, Walking, and Bicycling**. Reductions in motor vehicle trips through increased incentives and opportunities for mass transit use and safe bicycle and pedestrian travel as alternatives to automobile use.

- **Strategy T/LU-6: Reduced Emissions from Vehicle Idling and Other Equipment**. Measures to reduce the use of small gas-powered equipment and to reduce vehicle idling, including compliance with state law restricting idling times for trucks and heavy equipment.

- **Objective 3:** Replace Gas and Diesel Vehicles with Alternative-Fuel Vehicles

- **Strategy T/LU-7: Increased Use of Alternative-Fuel Vehicles.** Replacement of gasoline- and diesel-fueled vehicles with others that run on alternative fuels that have reduced-GHG or zero-GHG emissions:

  - Flexible fuel vehicle – uses gasoline or E85, a mixture of 85% ethanol and 15% gasoline
  - Hybrid or plug-in hybrid electric vehicle (PHEV) – powered with electricity and gasoline
  - Electric vehicle (EV) – runs on electricity alone
  - Compressed natural gas (CNG) vehicle – runs on compressed natural gas
  - Fuel cell vehicle (FCV) – uses pressurized hydrogen to power a fuel cell, which then generates electricity to run the vehicle

Urban Forest and Open Space

- **Objective 1**: Increase Tree Canopy

- **Strategy UF-1: Urban Forest Management Plan**. Development and adoption of a policy framework and comprehensive approach to planting and managing City trees.

- An urban forest management plan will establish a systematic approach to preserving and enhancing Woodland's more than 13,000 trees. A healthy tree population needs species and age diversity and requires proactive maintenance and appropriate planning. The objectives for establishing and managing trees in an urban setting are diverse and may include:

    - Improving aesthetic appeal of streetscapes
    - Eliminating public safety hazards
    - Preventing disease and pest infestations
    - Reducing conflicts with utilities and damage to sidewalks and streets
    - Enhancing recreational and educational opportunities
    - Providing energy savings
    - Increasing carbon sequestration and improving air quality

  Priorities may vary for downtown, parking lot, median, park, open space, heritage, and residential street trees.

  An urban forest management plan typically provides a comprehensive program that addresses these objectives and establishes numerical goals, planting and maintenance techniques and schedules, management responsibilities, monitoring needs, budget and personnel needs, relationship of the plan to other planning documents and ordinances, and strategies for adjusting priorities based on changing needs or resource constraints.

  Plan establishment and implementation will be critical to optimizing the potential GHG reductions associated with tree planting and maintenance. However, to avoid double-counting these benefits, they are quantified only under Strategy UF-2.

- **Strategy UF-2: Increased Tree Planting**. Actions to increase tree canopy through planting new trees to increase building shade, increase carbon sequestration, and reduce heat-island effects. The City and the Woodland Tree Foundation have planted an average of 300 trees per year since 2005.

- **Strategy UF-3: Maintenance of Existing Trees**. Actions to implement best practices in tree care and maintenance to:

    - Sustain the benefits of existing mature trees
    - Expand the canopy of existing young trees
    - Maintain the health of future plantings

  Appropriate tree care begins with adequate staking, irrigation, training, and pest management of trees in the first years of their establishment. Maintenance throughout the life of a tree includes cyclical pruning and

inspection to eliminate hazards, remove diseased or insect-infested wood, maintain stronger branch structure, and prevent obstructions of street signs and interference with utility lines.

According to the 2010 study of Woodland's urban forest resources by Davey Resource Group, the existing urban forest annually captures and stores about 600 metric tons of CO_2

- **Strategy UF-4: Public Education**. Efforts to increase overall appreciation of and care for Woodland's trees. Public awareness of the benefits and maintenance needs of trees is essential to expanding and sustaining tree canopy. Enhancing public appreciation may embody education and outreach on:
  - Environmental benefits
  - Economic benefits
  - Tree species identification
  - Planting and care
  - Appropriate species selection
  - Diagnosis and treatment of pests and diseases
  - Heritage trees and historical significance
- **Objective 2**: Maintain and Enhance Open Space Environmental Values
- **Strategy UF-5: Open Space Preservation**. Maintenance of environmental benefits and enhancement of community appreciation of open space areas to minimize the potential for development sprawl.

  Managed open space areas include the East Detention Pond at County Road 102 and Farmers Central Road, the alkali grasslands preserve lands east of County Road 102, and the old City of Woodland landfill and regional park site.

Water and Waste

- **Objective 1:** Reduce Per Capita Water Demand
- **Strategy W/W-1: Increased Water Conservation**. Actions to promote reductions in water use through water conservation awareness and techniques and the use of water-efficient fixtures. Water conservation includes:
  - Making behavioral changes to prevent water waste, such as taking shorter showers
  - Improving water-use efficiency, for example by adjusting sprinklers to ensure water is going where it is needed
  - Upgrading appliances to more water-efficient models

- Reducing demand by replacing landscape plants that have high water needs with drought-tolerant plants

- Making the best use of all available water, for example by capturing rainwater and using it for outdoor watering

- **Objective 2**: Achieve 75% Landfill Waste Diversion

- **Strategy W/W-2: Waste Diversion and Recycling**. Methods to reduce landfilled waste through reduction, reuse, recycling, and composting.

  State law requires each local jurisdiction to divert at least 50% of its waste from landfills through reuse, recycling, and composting. Legislation passed in 2013 directed the state to achieve a 75% diversion rate for trash by 2020. The main methods for reducing waste are:

  - Reduce – minimize waste

  - Reuse – repurpose used materials

  - Recycle – separate materials to be processed into new products

  - Rot – compost organic waste

Public Involvement Strategies

- **Objective 1**: Build Community Engagement in CAP Implementation

- **Strategy PI-1: Citizen-Led Outreach**. Establishment of a citizen-led outreach effort that will spearhead public education efforts on climate change and CAP implementation strategies.

  A multidimensional outreach effort will be needed to help Woodland's diverse population realize the benefits of implementing the CAP strategies. Outreach and education activities can be most successful when they arise from within diverse community segments and reflect the perspectives and focuses of those segments. This strategy emphasizes the development of a network of residents, community organizations, and businesses that will be committed to helping inspire others to take actions to improve overall community quality of life through CAP implementation. Participants may include:

  - Business associations

  - School districts

  - Faith-based groups

  - Youth organizations

  - Civic and community service groups

  - Non-profit environmental organizations

- **Strategy PI-2: Outreach Materials and Activities**. Creation and dissemination of materials that provide an overview of climate change, GHG-reduction guidance, and CAP implementation information.
    - Relevant background may include information from the following, among others:
    - Intergovernmental Panel on Climate Change
    - National Climate Assessment
    - California Climate Change Portal
    - Governor's Office of Planning and Research
    - Institute for Local Government Sustainable Communities program
    - City of Woodland CAP web pages
- **Strategy PI-3: Recognition of Business Sustainability Efforts**. Recognition of efforts by businesses to implement best sustainability practices.

  Businesses can greatly influence community awareness and acceptance of climate action goals, strategies, and benefits by setting an example through their own practices. Activities helping to promote CAP implementation may take many forms, including:

    - Implementing actions to reduce transportation emissions, energy use, water consumption, or waste generation
    - Providing incentives, such as low-interest loans or product discounts, for others to implement conservation and GHG-reduction measures
    - Investing in the development of new technologies and energy-efficiency measures
    - Conducting facility tours or providing support for other educational activities that demonstrate resource conservation
    - Conducting employee education
    - Developing or participating in certification programs to highlight environmentally sustainable practices
- **Objective 2**: Measure CAP Implementation Progress and Adjust Actions as Needed
- **Strategy PI-4: Mid-Point Check and Recommendations**. Evaluation and adjustment of CAP implementation actions as needed.

  Important elements of a planning process are assessing progress toward plan goals and adapting implementation actions as needed. Implementation strategies may need to be adjusted because of a lack of

progress toward one or more objectives or to account for changing conditions or opportunities. Elements of an evaluation of plan progress typically include:

- Using consistent methods for monitoring plan implementation over time
- Setting benchmarks, or yardsticks, for measuring progress toward objectives
- Establishing an agreed-upon course for determining the overall success of implementation
- Identifying the schedule and approach for plan adjustments or for verification that adjustments are not needed

Municipal Operations

- **Objective 1**: Incorporate Sustainable Practices into All City Operations.
- **Strategy MO-1: Internal Policies**. Integration of CAP implementation into City operations.

  Although municipal operations constitute only a small proportion of the total community-wide GHG emissions, the City has a responsibility to lead by example and to commit to reducing GHGs in all aspects of its operations. Integrating CAP strategies into all municipal activities and policies will be important to the success of CAP implementation.

- **Strategy MO-2: Purchasing and Contracting**. Integration of CAP goals into purchasing and contracting procedures.

  Many of the City's regular operation and maintenance functions, in addition to capital improvement projects, are carried out by companies under contract to the City. These functions include waste collection and disposal, custodial services, and parks maintenance. Integrating GHG-reduction measures into City operations includes ensuring that contracts with all service, consulting, and construction firms also incorporate, where feasible, measures to advance the City's CAP implementation.

- **Objective 2**: Reduce Emissions from Municipal Electricity Use by 80% or More
- **Strategy MO-3: Increased Energy Efficiency and Use of Renewable Energy**. Implementation of energy-efficiency measures, energy-efficient technologies, and renewable energy projects.
- Wastewater processing and water production are the highest energy uses in municipal operations, followed by building operations, particularly at the Community and Senior Center and the Police Station, and both facility and outdoor lighting. Methods of reducing GHGs from energy use in municipal operations may include:

  - Improving water and wastewater production processes
  - Improving building performance (climate controls)
  - Upgrading lighting, especially streetlights
  - Replacing equipment and appliances with more energy-efficient models

  - Reducing energy demand through awareness and changes in behavior
  - Using renewable energy

- **Objective 3**: Reduce Vehicle and Equipment Emissions
- **Strategy MO-4: Increased Use of Alternative-Fuel and Fuel-Efficient Vehicles**. Partial conversion of the City fleet to vehicles with lower GHG emissions, and adherence to vehicle idling regulations.

  Alternative-fuel vehicles that have reduced GHG or zero GHG emissions include:

  - Flexible fuel vehicle – uses gasoline or E85, a mixture of 85% ethanol and 15% gasoline
  - Hybrid or plug-in hybrid electric vehicle (PHEV) – powered with electricity and gasoline
  - Electric vehicle (EV) – runs on electricity alone
  - Compressed natural gas (CNG) vehicle – runs on compressed natural gas
  - Fuel cell vehicle (FCV) – uses pressurized hydrogen to power a fuel cell, which then generates electricity to run the vehicle

- **Strategy MO-5: Reduced Motor Vehicle Use**. Measures to reduce employee commute and work trips.

Please see the CAP, provided under a separate cover, for more details. The CAP is meant to be a guide to an evolving, rather than a static, plan of action. The specific activities needed to successfully achieve the community's GHG reduction target may change with the availability of new technologies and as the City changes.

Summary of Impact Analysis

With implementation of policies in the 2035 General Plan and reduction strategies in the 2035 CAP, combined with current laws, regulations, and policies, the impact related to the use of energy would be reduced.

The environmental effects associated with the use of energy in the transportation sector, as well as for building energy use and construction, are evaluated in this section, as well as Section 4.3 of this EIR, "Air Quality" and Section 4.11 of this EIR, "Noise and Vibration." Section 4.13 of this EIR, "Transportation and Circulation," summarizes the traffic analysis prepared to support this EIR.

The extensive body of regulatory requirements would increase energy efficiency, reduce peak energy demand, and therefore reduce actual environmental effects associated with energy use. In addition, the Proposed Project contains several policies that would promote energy efficiency and reduce peak energy demand in new development. Policies throughout the General Plan would reduce travel demand and therefore reduce actual environmental effects associated with transportation, such as air quality, GHG emissions, and traffic noise related impacts. Policies throughout the Proposed Project would also reduce the demand for energy for other uses, such as building energy and pumping water. The City's CAP would further reduce potential energy use and associated environmental impacts. Adverse physical environmental effects are addressed in sections of this EIR related to air quality, GHG emissions, transportation, and environmental-topic-specific sections. The South Alternative would

not result in wasteful, inefficient, and unnecessary energy consumption – there are no significant effects associated with the use of energy that are not already addressed in this EIR.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.5-4 Require or Result in the Construction of New or Expanded Energy Production or Transmission Facilities, the Construction of which Could Cause Significant Environmental Effects. *Implementation of the Proposed Project would increases energy demand and would result in the need to extend services and infrastructure to new users in the Planning Area. Policies and implementation programs in the Proposed Project, as well as existing regulations would reduce potential impacts. Construction of facilities would occur within the assumed development footprint of the Proposed Project and impacts are considered throughout this EIR. There are no additional significant effects that are not already addressed. The impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Implementation of the Proposed Project would lead to increased population, housing, non-residential development, and jobs in the Planning Area. This land use change would, in turn, increase the need for energy infrastructure. Energy demand would be anticipated to increase during implementation of the Proposed Project. Energy is consumed for heating, cooling, and electricity in homes and businesses; for public infrastructure and service operations; and for industry, commercial, and a variety of other uses.

PG&E, the utility that currently supplies the Planning Area with electricity and natural gas services, periodically updates its "load" forecasts to ensure the reliability of its electricity and gas services. As implementation of the Proposed Project would occur between present and 2035, the projected incremental electric and gas demand would be incorporated into PG&E's forecasts.

The Planning Area is currently served by PG&E using overhead electric transmission and distribution lines for electricity. For natural gas, PG&E operates various distribution pipelines throughout the Planning Area. It is anticipated that during implementation of the Proposed Project, PG&E could be required to construct new transmission facilities and infrastructure.

It is not possible to know the exact location or extent of additional energy transmission facilities and infrastructure that would be required to serve the proposed land uses, but new or extended facilities are anticipated to occur within the assumed footprint of development analyzed throughout this EIR. PG&E would also be involved with

new developments and projects proposing to construct additional natural gas infrastructure as necessary to meet demand pursuant to implementation of the Proposed Project. Individual development projects, particularly in the specific plan areas, will be required to coordinate with the City to ensure that PG&E has sufficient natural gas supplies and infrastructure to meet demand. Gas mains and distribution pipelines would be required in order to serve the needs of new development.

Typically, energy transmission facilities are constructed within public roadways or utility rights-of-way. In infill areas, such as the areas designated Downtown Mixed Use and Corridor Mixed Use, any new facilities or extended facilities would be expected to locate in existing disturbed areas, and normally in existing rights of way. As noted in the City's Downtown Area Specific Plan, there may be aesthetic benefits associated with development and infrastructure projects as overhead lines are undergrounded. The 2003 Downtown Specific Plan states, "…in some areas, the undergrounding of overhead utility lines will be a prerequisite to landscaping in the public right of way." In infill areas and new growth areas, there may be the need for electrical vaults, substations, transformers, and similar facilities, which would also be anticipated to occur within the assumed footprint of development analyzed throughout this EIR.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

Policies and implementation programs that address potential adverse air quality, biological resources, cultural resources, and other impacts analyzed throughout this EIR would also apply to infrastructure improvement portions of projects under the Proposed Project.

For policies addressing aesthetic and visual resource impacts, please see Section 4.1.2.11 of this EIR. For policies addressing agricultural resources impacts, please see Section 4.2.2.11 of this EIR. For policies and programs addressing air quality impacts, please see Section 4.3.2.11 of this EIR. For policies and programs addressing biological resources impacts, please see Section 4.4.2.11 of this EIR. For policies and programs addressing cultural resources, please see Section 4.6.2.11 of this EIR. For policies and programs addressing geologic and soils impacts, please see Section 4.7.2.11 of this EIR. For policies addressing hazardous materials and toxics, please see Section 4.8.2.11 of this EIR. For policies and programs addressing hydrology and water quality, please see Section 4.9.2.11 of this EIR. For policies and programs addressing noise and vibration, please see Section 4.11.2.11 of this EIR. In addition, Policy 7.D.1 relates to safety for natural gas wells:

- **Policy 7.D.1 Natural Gas.** Encourage the County to consider compatibility with land uses planned in the City's General Plan when considering applications for natural gas wells within the Planning Area.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The policies and programs referenced above would help to avoid impacts associated with energy facilities required to serve the Proposed Project. Federal, state, and local regulations and policies would be implemented and would ensure that sufficient energy supplies are available to serve the needs of the Planning Area. The development and operation of energy facilities would be subject to Proposed Project policies and implementation programs intended to reduce aesthetics, air quality, biological, cultural, noise, hydrology, geology and soils, and other impact areas would also apply to new construction, expansion, and extension of local energy facilities. Technical sections of this EIR evaluate the effects of construction activities relative to specific environmental issue areas, such as biological resources, air quality, etc., at a programmatic level of detail, as is appropriate for a general plan. These sections comprehensively address direct impacts of Proposed Project implementation, as well as indirect effects related to changes needed to support Proposed Project implementation, such as the construction and operation of new energy facilities. The Proposed Project includes mitigating policies and implementation programs, where necessary, to reduce or avoid impacts. Please refer to the topic-specific subsections of Chapter 4 of this EIR for more information.

The policies and implementation programs referenced throughout this EIR would reduce impacts associated with construction and operation of needed energy facilities. By adhering to the policies proposed in the Proposed Project, as well as all applicable State and federal requirements pertaining to energy facilities construction and operation, impacts associated with construction and operation of energy facilities to meet Proposed Project demands would be reduced. There are no other known significant impacts associated with energy facilities beyond that already analyzed throughout this EIR.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measure

No mitigation is required.

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4.6 CULTURAL RESOURCES

4.6.1 INTRODUCTION

Section 4.6 of this EIR serves as an analysis of the potential impacts to cultural resources attributable to the Proposed Project. The regulatory framework for the Proposed Project is presented, as are some of the incentives and tools that are available for the preservation of important historical resources. An understanding of this historical character and context is important to informing policies and implementation programs that promote infill development and community revitalization, consistent with the City's context. This section identifies potential impacts by examining the baseline sensitivity for cultural resources and comparing this sensitivity to the areas where development is planned under the Proposed Project. This section provides an overview of the prehistory and history of the Planning Area, including its natural environment and physical development. The overview helps to define the prehistoric, ethnographic, and historic character and contexts of the community that are important in terms of establishing cultural and historical significance and developing specific preservation goals and activities. Other sections include discussion of previously recorded archaeological and ethnographic resources and an overview of the City's historical resources inventory. Paleontological resources, and potential impacts, are included in Section 4.7 of this EIR, "Geology, Soils, Mineral Resources, and Paleontological Resources."

Information regarding the location and nature of previously recorded archaeological and ethnographic resources was primarily obtained through a records search requested of the California Historic Resources Information System (CHRIS) at the Northwest Information Center (NWIC) in Rohnert Park, California. CHRIS Information Centers recommend that a records search should be updated if the earlier search was conducted over five years ago since it would be possible for new records to appear. The records search for this General Plan Update was conducted in 2013, and, as such, no supplemental records search was necessary.

There were no responses to the City's NOP that relate to cultural resources, apart from requests from tribes for consultation. Tribal consultation was included as a part of the General Plan Update process. Please see Section 1.8 of this EIR.

4.6.2 ENVIRONMENTAL SETTING

The natural and geographical settings of the City's Planning Area are detailed in other sections of this EIR, particularly Section 4.4 of this EIR, "Biological Resources," and Section 4.7 of this EIR, "Geology, Soils, Mineral Resources, and Paleontological Resources." The reader is referred to these sections for a more in-depth description of those aspects of the environment that were instrumental in the settlement patterns of this region.

Following is a discussion intended to provide a broad context for prehistoric and historic resources that could be relevant for the City's Planning Area. While some of the material relates to other portions of northern California and the Central Valley, available information on Yolo County and the Woodland area is provided, as available.

4.6.2.1 PREHISTORIC SETTING

In the early 1970s, Fredrickson (1973, 1974) proposed a sequence of cultural manifestations or patterns ("Patterns") for the central districts of the North Coast Ranges, placing them within a framework of cultural

periods he believed were applicable to California as a whole.[1] These different cultural modes could be characterized by:

a) similar technological skills and devices (specific cultural items);

b) similar economic modes (production, distribution, consumption), including participation in trade networks and practices surrounding wealth (often inferential); and,

c) similar mortuary and ceremonial practices (Fredrickson 1973:118).

All three of these criteria can be examined through the study of archaeological materials.[2]

Paleo-Indian Period (12,000 to 8000 before Present [B.P.])

This period saw the first demonstrated entry and spread of humans into California, with most known sites being situated along lakeshores. A developed milling tool technology may have been present at this time although evidence of this technology is scarce. The social units were not heavily dependent upon the exchange of resources, with trading activities occurring on an ad hoc, individual basis.

The Post Pattern represents the earliest known occupation of the North Coast Ranges. This Pattern is documented only at the Borax Lake site, and perhaps at the Mostin site (Moratto 1984:497). Characteristic artifacts noted in the lithic assemblages include fluted projectile points and flaked crescents. Though the artifacts representative of this Pattern have never been found within a single site in the Yolo County region, numerous occurrences of its distinctive artifacts are reported and can be affiliated with better-documented assemblages elsewhere in California and throughout North America.

Lower Archaic Period (8000 to 5000 B.P.)

The beginning of this period coincides with that of the middle Holocene climatic shift to more arid conditions that brought about the drying up of the pluvial lakes located in northern and southern California and elsewhere in the Great Basin. Subsistence appears to have been focused more on plant foods although hunting clearly still provided for important food and raw material sources. Settlement was semi-sedentary with emphasis on material wealth. Most tools were manufactured of local materials, and exchange remained on an individual basis. Distinctive artifact types include large projectile points, milling slabs, and handstones.

Middle Archaic Period (5000 to 3000 B.P.)

This period begins at the end of mid-Holocene climatic conditions when weather patterns became similar to those of the present day. Discernible cultural change was likely brought about, in part, in response to these changes in

[1] The idea of cultural patterns was different from the concepts of previous researchers (Beardsley 1954, Meighan 1955) who tended to emphasize assemblages of material goods as the basis for their classifications. Fredrickson took a much broader view of archaeological material culture and defined the term pattern as "…an adaptive mode shared in general outline by a number of analytically separable cultures over an appreciable period of time within an appreciable geographic space" (Fredrickson 1973:117).

[2] Fredrickson also recognized that the economic/cultural component of each pattern could be manifest in neighboring geographic regions according to the presence of stylistically different artifact assemblages. He introduced the term Aspect as a cultural subset of the pattern, defining it as a set of historically related technological and stylistic cultural assemblages. Fredrickson also argued that these temporal periods should be kept separate from the dating and definition of particular patterns given the coexistence of more than one cultural pattern operating at any given point in time in California prehistory (Fredrickson 1974:46). This integrative framework provides the means for discussing temporally equivalent cultural patterns across a broad geographic space.

climate and accompanying variation in available floral and faunal resources. Economic systems were more diversified and likely included the introduction of acorn processing technology. Hunting remained an important source of food and raw materials, although reliance on plant foods appears to have dominated the subsistence system. Sedentism seems to have been fully developed, and there was an overall growth in population and a general expansion in settlement activity. Little evidence is present for development of regularized exchange relations. Typologically and technologically important artifacts characteristic of this period include the bowl, mortar and pestle, and the continued use of large projectile points.

The Middle Archaic Mendocino Pattern assemblages originate in this period and are known to persist through the Upper Archaic and possibly into the Emergent Period. The Hultman Aspect identified in the Clear Lake Basin is the southernmost of two identified cultural divisions while the Windmiller Pattern is present to the north. The two share such basic material traits as basalt core tools, shaped unifaces, heavily worked bifaces, and thin, finely-flaked obsidian knives. The Hultman Aspect is distinguished by the presence of ovate scrapers, numerous simple tools, incised or drilled steatite plummets (charmstones), and the use of local and non-local obsidian for the manufacture of projectile points.

The Windmiller Pattern is the earliest identified cultural pattern in the Central Valley. It has been identified at several sites along the Cosumnes and Mokelumne rivers in the Delta region. Its rich artifact assemblage is distinguished by the unique burial practice of ventrally extended interments oriented primarily to the west. Burials often include items, such as charmstones, quartz crystals, red ochre, asbestos splinters, biotite and Haliotis ornaments, rectangular Olivella shell beads, and large projectile points of various materials including chert, slate, and obsidian. Other items in the material assemblage include bone fish hooks, gorge hooks, fish spears, mortars and pestles, milling slabs and handstones, baked clay balls, and bone tubes, awls, and pins.

Also associated with this period is the Berkeley Pattern, which appears to have originated in the San Francisco Bay region during the Lower Archaic Period. However, the majority of identified components date to the Middle Archaic and continue into the Upper Archaic. This pattern has been noted at numerous sites in the Central Valley, Bay, and North Coast Range regions. Mortuary practices are characterized by tightly flexed burials with no apparent patterning in orientation and fewer artifact associations, compared to the elaborate practices evidenced in Windmiller Pattern burials. Grave associations include numerous Olivella saucer and saddle beads and Haliotis ornaments. The artifact assemblage is distinguished by a highly developed bone tool industry represented by bone needles, bird and mammal bone whistles, serrated scapula saws, bone hairpins and spatulae, mammal and birdbone tubes, and other types of flaked, ground, and polished bone artifacts. Mortars and pestles dominate the milling tool assemblage with only infrequent occurrences of milling slabs and handstones. Non-stemmed obsidian projectile points and knives are abundant. Midden deposits contain large accumulations of oyster, clam, and salt-water mussel shells in the Bay Area, while freshwater mussel predominates in Central Valley sites.

Upper Archaic Period (3000 to 1500 B.P.)

A dramatic expansion of sociopolitical complexity marks this period with the development of status distinctions based upon material wealth being well documented. Group-oriented religions emerge and may be the origins of the Kuksu religious system that arises at the end of the period. There was a greater complexity of trade systems with evidence for regular, sustained exchanges between groups. Shell beads gained in significance as possible indicators of personal status and as important trade items. This period retained the large projectile points in

different forms, but the milling stone and handstone were replaced throughout most of California by the bowl mortar and pestle.

During this period, the Mendocino Pattern is present in the central and northern portions of the North Coast Ranges, and the Berkeley Pattern persisted in the Central Valley, Bay, and southern portion of the North Coast Ranges, including Woodland.

Emergent Period (1500 to 150 B.P.)

This period is distinguished by the advent of several technological and social changes. The bow and arrow were introduced, ultimately replacing the atlatl. Territorial boundaries between groups became well established and were well documented in early historic accounts. It became increasingly common for distinctions in an individual's social status to have been linked to acquired wealth. The exchange of goods between groups became more regularized with more raw materials, along with finished products, entering into the exchange networks. In the latter portion of this period (450 B.P. to 150 B.P.), exchange relations became highly regularized and sophisticated. The clam disk bead became a monetary unit of exchange, and increasing quantities of goods are transported over greater distances. Specialists arose to govern various aspects of production and exchange.

During this period, the Augustine Pattern becomes the predominant economic/cultural manifestation in the Central Valley, Bay, and southern North Coast Ranges, with numerous regional aspects having been identified in the archaeological record. Cultural traits that distinguish this pattern include pre-interment grave-pit burning, tightly flexed burials, and cremation. Artifact assemblages include clam and Olivella tubes and flanged steatite pipes. The mortar and pestle were the predominant milling implements, and small arrow points replaced the larger projectile point forms more commonly associated with atlatls. Also found in the tool assemblages were implements, such as harpoons, bone fish hooks, and gorge hooks.

4.6.2.2 ETHNOGRAPHIC SETTING

When Europeans first entered central California, the area west of the Sacramento River and north of Suisun Bay, which includes Woodland, was occupied by linguistically and culturally related groups or "tribelets" that appeared to lack political unity or collective identity. However, because of their linguistic similarities, Powers (1976) referred to them as Patwin, the term each group used to identify themselves.

While there is some disagreement, the majority of researchers (Johnson 1978:351, Kroeber 1932, Levy 1978:398, and Bennyhoff 1977) indicate that the Patwin resided throughout Yolo County. They, along with their neighbors the Nomlake and Wintu are speakers of the Wintuan language, which is part of the larger Penutian language family that also includes Miwok, Maidu, Costanoan, and Yokuts, speakers. The Patwin occupied a strip of land about 60 kilometers wide that extended approximately 150 kilometers along the lower Sacramento River and the eastern foothills of the North Coast Range, terminating at San Pablo and Suisun Bays to the south.

The Patwin were organized into tribelets consisting of a primary village and several smaller associated villages. Each village was under the direction of a chief, who attained his office through paternal descent. However, if the chief had no son, or the son was determined incompetent, a new chief was chosen by the village elders.

The village chief was responsible for organizing economic and ceremonial activities. Economic activities involved the organization of communal groups, such as those related to hunting, and the allocation of nut, fruit,

and seed gathering areas. Ceremonial activities were also under the direction of the chief who decided on "what ceremony should be held, what days should open and close the event, and what guests would be invited" (McKern 1922:246). Social structure was divided into three groups: the paternal family, the family social group, and the household. Whereas, the paternal family group included the patriarch and his brothers and sisters, sons, and daughters, married sisters and married men were not included in the social group, since they were included within other social groups. The household consisted of the family that lived under one roof and typically included a man, his wife, unmarried offspring, and married daughters and their husbands and children, who had not yet acquired sufficient wealth to establish their own household.

Settlement size was generally large, with villages usually located along river or stream banks, or the borders of seasonal lakes. In the vicinity of Woodland, the nearest mapped village location (*Churup*) was located along Cache Creek, less than three miles northwest of the city (Johnson 1978:350; Kroeber 1925, 1932).

Villages were usually organized with the chief's house at the center with a dance house at the northern or southern margin. A sweat house was either west or east of the dance house, with its door facing the dance house. A menstrual house was situated at the extreme opposite side of the dance house, and residential dwellings were located in between without any particular grouping (McKern 1923).

Permanent houses were erected within the village, and less substantial structures were located at remote locations near exploitable resource patches. Permanent houses usually provided shelter for more than one household and were semi-subterranean, and greater than 20 feet in diameter. The door faced either east or west with a fire pit in the center between two main support beams under a smoke hole in the earthen roof. Seasonally occupied temporary shelters were brush-covered, with four corner posts, and a flat roof (McKern 1923).

Diet was varied and, dependent upon seasonal rounds, augmented by resources obtained through trade. Tule elk, deer, antelope, bear, ducks, geese, quail, turtle, fish, and other various small birds and mammals were hunted. Acorns represented a staple food item that was supplemented with seeds, nuts, berries, and fruit (Johnson 1978:355). The association of flaked stone tools and milling equipment with vernal pools appears to indicate that these features were also associated with Patwin subsistence, apparently as a result of faunal and botanical species drawn to these features.

Euro-American contact with the Patwin began with Spanish missionaries and explorers in the late 1700s. By the middle of the 19th century, many Patwin had been relocated to mission settlements, local ranches, or small reservations (Johnson 1978:351). Three missions drew in Patwin peoples from the surrounding landscape: Mission Dolores, San José, and Sonoma.

Old World diseases decimated much of the Patwin population at this time, and it is estimated that as much as 75 percent of the Native American population in this area died from the 1833 malaria epidemic, most likely introduced by the John Work expedition, and the 1837 smallpox outbreak (Cook 1955). Euro-American influences within Patwin territory increased dramatically as ranching and farming became popular in the area. Euro-American settlers, especially within the Sacramento Valley, quickly made inroads into lands occupied by Native Americans. Conflicts increased, and Patwin populations continued to decline from military skirmishes, vigilante raids, and other causes.

In 1972, the Bureau of Indian Affairs listed only 11 remaining Patwin descendants (Johnson 1978:352). Despite the massive decline in population, the Patwin still reside in Yolo County, and many intermarried with the Wintu (Johnson 1978:352).

4.6.2.3 HISTORIC SETTING

Woodland has many significant historic buildings, districts, and artifacts that relate to the development of the community. Public awareness of historic preservation has increased remarkably in recent years. The Woodland community has shown a concern for preserving its heritage of architecturally and historically significant buildings, believing these buildings are an essential part of the City's overall identity.

City History

Settlement

During the Spanish and Mexican periods, development in the area was sparse. No land grants were made by the Spanish, and there were originally 11 Mexican land grants in Yolo County, of which only five were confirmed after the United States gained possession of the region. These were the Rancho Canada de Capay, Rancho Jimeno, Rancho Quesesosi, Rancho Rio de Jesus Maria, and Rancho Rio de Los Putos (Yolo County 2009). Of these, the Rancho Rio de Jesus Maria was located immediately north of Woodland's modern boundaries.

Among other distinguishing features, Woodland is known for its large stock of historic residences and was called the "City of Homes" as far back as the early 1900s. Factors contributing to Woodland's prosperity have been a rich soil and good climatic conditions, the relocation of the County Seat to Woodland in the 1860s, and the establishment of good transportation systems. A brief history of Woodland helps in understanding the natural and man-made influences that created the unique character of the City.

In the winter of 1853, Henry Wyckoff settled in a dense grove of oak trees and opened a small dry goods store in Yolo City (now Woodland) near Court and Sixth Streets. Within a couple of years, other businesses were established in the area. The favorable soil attracted other settlers who found farming a profitable venture.

Among the early settlers was Major F.S. Freeman, who also opened a store. Later, Major Freeman offered free lots to persons who would clear the land and build a home. Before long, the settlement of Yolo City grew around what is now Main Street. In 1861, Major Freeman gained permission for a Federal Post Office to be built in the town, and Yolo City was officially renamed Woodland by his wife, Gertrude Freeman in honor of the Valley Oak that filled the valley (Historical Resource Associates 2015).

In 1862, the Yolo County Seat was transferred due to flooding from Washington (now a neighborhood within the City of West Sacramento) to Woodland. The courthouse was first located in Henry Wyckoff's store. In 1862, a combination courthouse and jail was built. This was damaged by an earthquake in 1902. A new courthouse was completed in 1918, and the structure still stands today.

On June 25, 1863, Major Freeman recorded the first plat of the city. The northern portion of present-day Woodland was divided into blocks, lots, and streets, and this plat was the basis for future locations of buildings and streets. Sixth Street was designated as the eastern boundary; College Street was the western; North Street was the northern border and South Street (now Main Street) was the southern City limit. By 1870, the population of

Woodland was estimated to be 1,600 residents, but most of the oaks for which the town was named had disappeared. The City was incorporated in 1871.

Wood was the primary building material until approximately 1870. Two local brickyards began production of a soft brick in the mid-1860s. This resulted in a changeover of major building materials from lumber to brick as builders found it less expensive to use than imported lumber.

By 1854, the Union Church building had been built in the cemetery. Little is known about this building except that it served as a meeting place for several churches and schools. The Christian Church, which organized in 1854, met in the Union Church until it dedicated the first church within the City limits in 1866. A Roman Catholic Church was consecrated in 1869.

The Union Church building also served from 1855 to 1858 as the first public school. In 1858, a permanent school was built near the Southern Pacific Depot. The upper story of the school served as the Masonic Hall. In 1871, a new six-room brick school was started where Freeman Park now stands. The high school was located in the Hesperian College building until 1912 when a bond issue was passed to build a new high school. The Holy Rosary Academy was founded in 1884 and served as a boarding and a day school for girls in the primary and secondary grades.

Founders of the Christian Church also established Hesperian College in 1860. It was originally located south of Main Street on what is now Bush Street then later moved to a new facility near the northeast corner of College Street and Marshall Avenue. In its prime, it was a highly regarded institution of higher learning. The school, today known as Chapman College, is located in southern California.

California Pacific Railroad

In September 1869, the California Pacific Railroad Company completed the construction of a rail line between Davisville and Marysville with a Woodland station in the vicinity of College Street and Lincoln Avenue. The rail line was later moved to its present location along East Street and became a part of the Southern Pacific Railroad System (now Union Pacific).

Sacramento Northern Electric Railroad

The Sacramento Northern Electric Railroad Company began direct freight and passenger service to Sacramento from Woodland in 1912. In the 1920s, this line was acquired by Western Pacific. The depot was located at the corner of Main and Second Streets until it was demolished in the 1960s. The building was replicated in 1987. Through mergers and acquisitions, today, the Union Pacific and Sierra Northern provide freight service to the industrial areas of Woodland and the Sacramento River Train provides tourist excursions.

Infrastructure Development

The period between 1880 and 1890 saw the initiation of facility and utility improvements. The construction of an electric lighting plant and the installation of a locally-run telephone system occurred during this decade. Five gas lights were installed along Main Street, and an official grade for streets and sidewalks was adopted to provide for level streets within the city. A contract was negotiated with R.H. Beamer for the construction of a municipal building to be used for City offices, the Fire Department, and a jail. The City Hall, located at First and Court

Streets, was completed in 1891. The building was reconstructed in 1936, enlarged in 1960 and 1975, and still serves the City.

The City of Woodland acquired the water works system and built a sewer system in 1891. In the mid-1950s, sewer capacity was reached. This resulted in a moratorium on all new building from 1957 to 1958. A bond issue was passed in 1959, which extended the sanitary and storm sewer system to serve the southern portion of the city. A similar bond issue was approved in 1963 to serve the northern part of Woodland.

The first City library in Yolo County was built with funds from the Carnegie Foundation. The library, which was privately organized in 1874, was given to the City in 1891. The present library, designed by George A. Dodge and J. Walter Dolliver, was built in 1905 with Carnegie Funds, with subsequent additions in 1915, 1927, and 1988.

1890s

The 1890s began with the worst storm the City had experienced in 30 years. This started a series of misfortunes. In 1892, a fire destroyed two business blocks, including the Opera House, the Exchange Hotel, and one block of homes. The property loss amounted to $200,000. In the early 1890s, some local businessmen felt a streetcar line along Main Street to carry those who disliked the muddy street would be profitable. The system was one-mile long, and the streetcars were drawn by horses. The operation failed in 1896. A depression occurred between 1894 and 1896, causing other business failures and bringing the start of a railroad strike. This depression contributed to a decline in population from 4,523 to 4,392. By 1910, the population had climbed to 4,589.

During 1896, a new Opera House was opened on the same street as the one that was destroyed by fire in 1892. This turn-of-the-century valley theater was the source of great local pride and became the center for recreation and culture in the Woodland area.

Early 1900s to Present

The early 1900s were years of unusual building activity. In 1916, a building to house both the Bank of Woodland and the Yolo County Savings Bank was built at the northwest corner of College and Main Streets. This building, with its Italian marble entry still stands, but now houses a restaurant. Between 1909 and 1911, it has been estimated that about 200 homes were built in Woodland. A number of commercial and community buildings were also built. The Roth Building and St. Luke's Episcopal Church were constructed. The Physician's Building at Main and First Streets and the First National Bank Building were remodeled. The First National Bank was demolished in 1970 and is on the site of the present Opera House addition and Opera House Intermission Garden.

After the filing of a personal injury suit in 1913, the Opera House was closed and stood dormant for almost 60 years. It was purchased by the Yolo County Historical Society and reopened in 1971, serving as a part-time community center and theater. From 1980 to 1983, the Opera House went through partial restoration. It has since reopened and operates on a temporary basis providing local community theater. The final phase of restoration, completed in 1989 has enabled the theater to attract varying types of performing groups, from local as well as regular resources. It is now a part of the State Park System and is maintained and operated by the Woodland Opera House Board of Trustees.

Agriculture and Farming Equipment

Woodland has benefited greatly from the success of the agricultural industry by serving as a center for banking, shops, education, and in some instances by housing farmers and their workers.

Another important impact on the community and industry has been the invention and manufacturing of farming equipment. Local inventions included the centrifugal pump in the late 1800s and the Marvin Landplane in 1936 (Knights Landing). The Best Tractor was developed by the Best family who lived in Woodland although the tractor was actually manufactured in Oakland. Today, several farm equipment dealers are located within Woodland and provide employment and tax revenues for the City, while serving the outlying farms.

Irrigation was and still is a major contributor to the agricultural success of the area. The first irrigation canal was developed by James Moore in 1856 who owned exclusive water rights to Cache Creek.

Money earned in the gold fields of California financed the purchase of much of the farmland around Woodland. A variety of crops were grown. These included tobacco, peanuts, grapes, rice, sugar beets, various grains and row crops. Several wineries were located in the county producing wine, vinegar, and brandy. The livestock industry also had an important role in the area. The Woodland Creamery was organized in the 1880s by citizens who recognized the local need for dairy products.

The opportunity for farming brought many nationalities to the area. The native Patwin Indian provided the first labor on the farms. They were replaced by Chinese laborers, who came to Woodland in the 1860s during the building of the transcontinental railroads. After work on the railroads stopped, the Chinese labored on levee construction, fence building, and truck farming. Some Chinese settled in Woodland and became prominent in the culinary and laundry services. Dead Cat Alley became the site of the Chinese community's homes and businesses. By the early 1900s, employment opportunities for the Chinese began to disappear, and the Chinese population declined.

Japanese workers were first brought to Byron Jackson's Yolano Ranch in the late 19th century as farm laborers, but eventually both Japanese men and women were employed as laborers throughout the county. Some Japanese people started businesses in town, such as barber shops and secondhand stores, but laws and public attitudes made it difficult for them to own land or become citizens. Land was acquired by some Japanese individuals and families who purchased it in their children's names. World War II saw the internment of Japanese families and their land leased to other people. For some Japanese individuals, many years passed before they returned to Yolo County. Others never returned.

Filipinos also provided farm labor, and later the Bracero Program brought many Mexican Nationals into the area to work on the farms. Today, the Hispanic population has grown to approximately 47 percent of the City's residents (SACOG 2012).

4.6.3 REGULATORY FRAMEWORK

4.6.3.1 FEDERAL

National Historic Preservation Act, Public Law 89-665; 54 U.S.C. 300101 et seq.

The National Historic Preservation Act (NHPA) established the National Register of Historic Places (NRHP) as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (Title 36, Section 60.2 of the Code of Federal Regulations). The NRHP recognizes buildings, structures, sites (including both historic-era and prehistoric archaeological sites), districts, and objects that are significant at the national, state, or local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Historic properties of potential significance must meet one of the following four established criteria:

A. Are associated with events that have made a significant contribution to the broad patterns of our history;

B. Are associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for NRHP listing. There are seven Criteria Considerations (Criteria Considerations A-G) that deal with properties usually excluded from listing in the NRHP, including: moved buildings; cemeteries; religious properties; birthplaces and graves; reconstructed properties; commemorative properties; and, properties that have achieved significance within the past 50 years (i.e., Criteria Consideration G).

In addition to meeting one of the four evaluation criteria, a historic property must retain integrity in order to convey its significance. The NRHP defines integrity using seven aspects: location, design, setting, materials, workmanship, feeling, and association.

4.6.3.2 STATE

California Environmental Quality Act Guidelines, CEQA Guidelines Section 15064.5(b)

Under the provisions of the California Environmental Quality Act (CEQA), "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (CEQA Guidelines Section 15064.5[b]).

CEQA defines a "historical resource" as a resource which meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources;
- Listed in a local register of historical resources (as defined at Public Resources Code Section 5020.1[k]);

- Identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code; or

- Determined to be a historical resource by a project's lead agency (CEQA Guidelines Section 15064.5[a]).

A historical resource consists of any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (CEQA Guidelines Section 15064.5[a][3]).

CEQA requires consideration of historical and archaeological resource impacts (CEQA Guidelines Section 15064.5; Public Resources Code Section 21083.2). If feasible, adverse effects to the significance of historical resources must be avoided, or the effects mitigated (CEQA Guidelines Section 15064.5[b][4]).3

California Register of Historical Resources, California Public Resources Code Section 5024.1

The California Register of Historic Resources (CRHR) is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code Section 5024.1[a]). The criteria for eligibility to the California Register of Historic Resources are consistent with the National Register of Historic Places (NRHP) criteria (California Public Resources Code Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register of Historic Resources, including California properties that are formally determined eligible for or listed in the NRHP.

To be eligible for the California Register of Historic Resources, an historical resource must be significant at the local, state, and/or federal level under one or more of the following criteria:

(1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(2) is associated with the lives of persons important in our past;

(3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(4) has yielded, or may be likely to yield, information important in prehistory or history (California Public Resources Code Section 5024.1[c]).

[3] The significance of an historical resource is impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for the California Register of Historical Resources. If there is a substantial adverse change in the significance of a historical resource, the preparation of an environmental impact report may be required (CEQA Guidelines Section 15065[a]).

For a resource to be eligible to the California Register of Historic Resources, it also must retain enough integrity to be recognizable as a historical resource and to convey its significance. The seven aspects or qualities of integrity are defined as location, design, setting, materials, workmanship, feeling, and association.

Forty-five years is the recommended standard-age threshold used by the Office of Historic Preservation (OHP) for determining potential historical significance, unless it is determined that a property has exceptional significance despite its age (OHP 1995). As such, any property located on the project site built before 1971 could be eligible for listing in the California Register of Historic Resources if it meets any one of the four criteria listed above and retains sufficient integrity to convey its historical significance.

Assembly Bill AB 52, Public Resources Code Section 21074

With the adoption of Assembly Bill (AB) 52 (effective 2015), impacts to tribal cultural resources must also be addressed under CEQA. As defined in Public Resources Code Section 21074, a tribal cultural resource is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a "California Native American tribe," that is either on, or eligible for inclusion in, the California Register of Historic Resources or a local historic register, or is a resource that the lead agency (in this case the City of Woodland), at its discretion and supported by substantial evidence, determines should be treated as a tribal cultural resource. Assembly Bill (AB) 52 also provides both federal and non-federally recognized tribes the right to formal consultation with project lead agencies. AB 52 does not apply to the 2035 General Plan because the process was initiated in 2013. However, future projects that implement the 2035 General Plan may be subject to the requirements.

Health and Safety Code, Health and Safety Code Section 7050 through 7052

Section 7052 of the Health and Safety Code states that disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC) in accordance with the Public Resources Code 5097 (see below).

California Native American Graves Protection and Repatriation Act, Health and Safety Code Section 8010 through 8030

In the California Health and Safety Code, Division 7, Part 2, Chapter 5 broad provisions are made for the protection of Native American cultural resources. The Act sets the state policy to ensure that all California Native American human remains and cultural items are treated with due respect and dignity. The Act also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the Act outlines the mechanism with which California Native American tribes not recognized by the federal government may file claims to human remains and cultural items held in agencies or museums.

Native American Historic Resource Protection Act, Public Resources Code 5097

Section 5097 of the Public Resources Code addresses archaeological resources. Archaeological resources that are not "historical resources" may be "unique archaeological resources" as defined in Public Resources Code Section 21083.2, which also generally provides that "non-unique archaeological resources" are not analyzed under CEQA. Public Resources Code Section 21083.2, subdivision (g), defines "unique archaeological resource" as an

archaeological artifact, object, or site that does not merely add to the current body of knowledge, but has a high probability of meeting any of the criteria identified in this section. If an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on that resource will not be considered a significant effect on the environment. It is sufficient that the resource and the effects on it be noted in an EIR, but the resource need not be considered further in the CEQA process.

Additional applicable sections of the Public Resources Code include:

- **Section 5097.5:** Provides that any unauthorized removal or destruction of archaeological or paleontological resources on sites located on public lands is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the State, or any city, county, district, authority, or public corporation, or any agency thereof.

- **Section 5097.98:** Prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn, and sets penalties for such acts.

State Senate Bill 18, Chapter 905, Statutes of 2004

California State Senate Bill 18 (SB18), signed into law in September 2004 and implemented March 1, 2005, requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting Traditional Tribal Cultural Places (also referred to as Traditional Cultural Properties). This law directed an amendment to the General Plan Guidelines to require consultation with, and advice from California Native American Tribes. According to the Tribal Consultation Guidelines, SB 18 "requires local governments to involve California Native Americans in early stages of land use planning, extends to both public and private lands, and includes both federally recognized and non-federally recognized tribes."

Assembly Bill 2641, Public Resources Code Sections 5097.91 and 5097.98

This bill provides procedures for private land owners to follow upon discovering Native American human remains. Landowners are encouraged to consider culturally appropriate measures if they discover Native American human remains as set forth in California Public Resources Code Section 5097.98. AB 2641 further clarifies how the landowner should protect the site both immediately after discovery and into the future.

4.6.3.3 REGIONAL

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. Yolo County General Plan policies require the identification and safeguarding of important cultural resources, including the preservation and rehabilitation of historic properties. The General Plan also promotes avoidance of impacts to Native American archaeological and cultural resources and compliance with State and Federal cultural resource protection laws. Key policies include:

- **Policy CO-4.1** Identify and safeguard important cultural resources.

- **Policy CO-4.11** Honor and respect local tribal heritage.

- **Policy CO-4.12** Work with culturally affiliated tribes to identify and appropriately address cultural resources and tribal sacred sites through the development review process.

- **Policy CO-4.13** Avoid or mitigate to the maximum extent feasible the impacts of development on Native American archaeological and cultural resources.

4.6.3.4 LOCAL

City of Woodland 2002 General Plan

The 2002 General Plan included goals, policies, and implementation programs to protect the impressive stock of historic homes and structures, which is a source of civic pride and community identity. The General Plan encourages the preservation and rehabilitation of historically-significant buildings and promotes an understanding and appreciation of Woodland's history, architecture, and cultural resources. Key policies include:

- **6.A.4.** The City shall require that environmental review be conducted on demolition permit applications for buildings designated as, or potentially eligible for designation as, historic structures. The City shall follow the guidelines of the California Environmental Quality Act (CEQA) in reviewing demolition requests for such structures and shall prohibit demolition without a structural and architectural analysis of the structure's ability to be rehabilitated and/or relocated.

- **6.F.1**. The City shall refer development proposals that may adversely affect archaeological sites to the California Archaeological Inventory, Northwest Information Center, at Sonoma State University.

- **6.F.2.** The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without first consulting the Archaeological Inventory, Northwest Information Center, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendations of a qualified archaeologist. City implementation of this policy shall be guided by Appendix K of the CEQA Guidelines.

City of Woodland Municipal Code, Chapter 12A

Chapter 12A of the City of Woodland's Code (Code) is intended to preserve areas and the physical representations of its cultural, social, economic, political, and architectural history. Further, the City's Code is intended to promote use for education, encourage tourism, and provide construction code allowances and financing aids when buildings have designated historical landmark status or lie within a designated historical district. In addition to describing the makeup and responsibilities of the Woodland Historical Preservation Commission, the Code also outlines the criteria for identification of locally recognized historic resources, which are outlined below.

Historical Importance

In order to be eligible for the local register, the building, structure, object, particular place, vegetation, or geology, has character, interest of value, as part of the development, heritage or cultural characteristics of the city, state or nation; or is the site of an historic event with an effect upon society; or is identified with a person or group of persons who had some influence on society; or exemplifies the cultural, political, economic, social or historic heritage of the community (Sec. 12A-3-1 [a][1]).

Architectural Significance

In order to be eligible for the local register , the building, structure, object, or particular place exemplifies the environment of a group of people in an era of history characterized by distinctive architectural style; or embodies those distinguishing characteristics of an architectural type specimen; or is the work of an architect or master builder whose individual work has influenced the development of the area; or contains elements of architectural design, detail, materials, or craftsmanship that represent a significant innovation (Sec. 12A-3-1 [a][2]).

Additionally, sections of the Code allow for an area to be designated as an historical district when it includes at least two designated historical landmarks. Such districts may include structures and sites that individually do not meet criteria for landmark status, but nevertheless have some identified historic relationship (Sec. 12A-3-1 [b]).

Designation Process

The Code stipulates that the City Council shall approve and maintain a formal historical resources list. Further, a building, structure, or object may be included on the list as a historical resource if, in the determination of the City Council, it satisfies the Historical Preservation Commission's historical resources inventory study list evaluation criteria (Sec. 12A-3-1 [c]).

The Code also outlines the processes for designation of historical landmarks, historical districts, and historical resources. The Historical Preservation Commission by resolution may recommend to the City Council designation of a landmark or historical district, or an addition to the historical resources list, upon compliance using prescribed procedures. Upon receipt of the recommendation from the Historical Preservation Commission, the City Council shall approve, modify, or disapprove the recommendation upon compliance under prescribed procedures (Sec. 12A-3-2 [a] and [b]).

The Code also stipulates that no person shall demolish, remove, move, or make alterations which affect the exterior appearance of a designated historical landmark or structure of a designated historical district, without first obtaining approval from the Historical Preservation Commission (Commission), unless the chief building official certifies that such demolition is required for the public safety due to an unsafe or dangerous condition. A property owner who desires to construct, alter, move, remove, or demolish a designated historical landmark or any structure within a designated historical district, or who desires to demolish a designated historical resource, shall file an application with the community development department upon a form prescribed by the city. When the application is filed, it shall be referred to the Commission for an appropriate level of review to be conducted pursuant to the California Environmental Quality Act ("CEQA"). After such review has been completed, the secretary of the Commission shall set the matter for hearing and shall give written notice to the applicant and shall cause publication of notice in a newspaper of general circulation in the city of the date, time, and place of the hearing. The Commission shall hold a public hearing and shall make its decision within six months from the date the application is filed with the community development department if an Environmental Impact Report (EIR) is required or within three months if a negative declaration is required or if the proposal is determined to be exempt from CEQA. Approval of the application shall require an affirmative vote of a majority of the Commission members present. If the Commission fails to act within the foregoing time periods, the application shall be considered approved unless the applicant and the Commission agree to an extension of time. At the conclusion of the hearing, the Commission shall makes its decision and shall file a certificate of approval with the building official, or deny the application. No person may do any work upon a designated historical landmark or any structure within a designated historical district, or proceed to demolish a designated historical resource, which is

the subject of an application, and the building official may not issue a building permit, until the Commission files a certificate of approval (Sec. 12A-4-1[a]-[b], 12A-4-2 and 12A-4-3 [a]-[b]).

4.6.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.6.4.1 METHODOLOGY

As described previously, information regarding the location and nature of previously recorded archaeological, ethnographic, and historic architectural resources was obtained primarily through a records search completed in 2013 by the staff at the NWIC. Potential impact to both known cultural resources (as identified in the records search data) as well as to currently unknown resources (i.e., those found in currently un-surveyed areas or to be inadvertently exposed during construction) in the Planning Area as a result of implementation of the East Alternative and the South Alternative of the Proposed Project were identified and assessed.

Section 1.8 in Chapter 1 of this EIR, "Introduction" contains a detailed summary of Native American consultation.

Results

Archaeological Resources

The records search did not identify any previously recorded archaeological resources within the Planning Area. A total of 41 previously conducted investigations were noted within the Planning Area, and methods employed primarily included record searches and reconnaissance-level surveys. Subsurface excavations were limited and were primarily restricted to excavations at the Woodland Opera House. Although the excavations were intended to gain more information regarding the Chinese laundry structure on site, no site record for this work was submitted to the NWIC.

Although no archaeological sites have been identified in the Planning Area, and a records search conducted at the NWIC did not identify any prehistoric archaeological resources within 0.5-mile of the Planning Area, numerous archaeological sites associated with the Native American inhabitation of the region have been identified along waterways and drainages, particularly within the Cache Creek drainage. Such sites include habitation sites, temporary camps, milling stations, quarries, rock art sites, and rock features. Woodland's proximity to Cache Creek and within three miles of a recorded ethnographic village (Johnson 1978), suggest that there remains a moderate sensitivity for previously unrecorded prehistoric archaeological resources to be present. Given that little of the Planning Area has been subjected to archaeological inventory and testing, it is not surprising that there is a lack of recorded archaeological sites in the vicinity.

Because of the age of the community and the number of historic built-environment resources within the Planning Area, there is a high potential to encounter subsurface historical archaeological deposits associated with those resources. Although there is no record for the Chinese Laundry, its presence beneath later developed land suggests that more unrecorded properties in the vicinity are possible, if not likely. In Woodland, such sites could represent historical urban development, and ranching or agricultural activities, and cultural deposits would likely be located along historic transportation routes and within known historical neighborhoods.

Historic Architectural Resources

Woodland has many significant historic buildings, districts, events and artifacts which relate to the development of the community. Of architectural significance is a wide range of structures built between 1860 and 1940 that exhibit styles ranging from Classical Revival farmhouses to high-style Queen Anne buildings from the nineteenth century, to the Modem and International styles popular in the twentieth century. Woodland also contains numerous places of cultural significance, such as the Opera House, schools, museums and religious structures. In 1971, the City adopted an ordinance providing for the creation of a Historic Landmark Advisory Committee and Historic District Zoning. In 1981, the City obtained a federal grant through the California Office of Historic Preservation to prepare a historical resources inventory of structures in Woodland built prior to 1940. The inventory was completed in 1982 and 1,000 sites were surveyed, and photographed. From this survey, 507 "buildings of merit" were identified and adopted by City Council as the City's Official Historical Register.

An updated survey was conducted between 1993 and 1996 funded by Redevelopment Agency funds, and completed in January 1998. In January 1998 the City Council Resolution 4030 approved list of historical properties within the city's redevelopment area. In July 29, 1998 Donald S. Napoli submitted a National Register of Historic Places (NRHP) nomination form for the Downtown Woodland Historic District, which included 59 contributing and 34 non-contributing buildings. The historic district was officially listed on the NRHP and on July 13, 1999 (NRIS # 99000471). Today, the Historic Preservation Commission is composed of five members appointed by the City Council. The primary function of the Commission is to update and maintain a comprehensive inventory of historic resources. The Commission advises and recommends to the City Council the designation of historical landmarks and districts, along with methods to ensure their preservation and protection. Based on information obtained from the City, Woodland has:

6 City of Woodland Historic Landmarks:

Identifier	Address / Location	CHR Status Code
Coleman House	611 North Street	5
Jackson Apartments	426 1st Street	5
Traughber House	163 2nd Street	5
St. Luke's Episcopal Church	515 2nd Street	5
Woodland Cemetery	800 West Street	5
Library Block Palm Trees	First Street	5

3 City of Woodland Historic Districts:

Identifier	Address / Location	CHR Status Code
Gibson Mansion Historic Museum Property	512 Gibson Road	5
Woodland Opera House Property	320 2nd Street	5
Yolo County Courthouse Block	725 Court Street	5

2 City of Woodland Honorary Historic Neighborhood Districts:

Identifier	Address / Location	Res. No.
Beamer-Motroni Neighborhood (See Appendix D, Figure D-2)	Roughly bound by College Street on the west, Beamer Street to the South, Jackson Street to the east, and Woodland Avenue to the north	4899
Unnamed (See Appendix D, Figure D-3)	south of Lincoln Avenue, north of Marshall Avenue, east of Walnut and west of Fourth Street	4376

241 properties that are recognized by the City of Woodland as historically significant (see Appendix D for full list of California Historical Resources Status Code 5S2, Individual property that is eligible for local listing or designation. 12 are Contributors to the NRHP Downtown Woodland Historic District).

2 California Historical Landmarks:

Identifier	Address / Location	Landmark #
Gable Mansion	659 1st Street	864
Woodland Opera House	320 2nd Street	851

3 California Points of Historical Interest:

Identifier	Address / Location	Landmark #
Woodland Congregational Church, First Church of Christ Scientists	450 1st Street	SPHI-YOL-004
Gibson House / Yolo County Museum	512 Gibson Road	SPHI-YOL-008
Yolo County Courthouse	725 Court Street	SPHI-YOL-007

11 individually listed NRHP properties:

Identifier	Address / Location	CHR Status Code
William B. Gibson House (NRIS # 76000542)	512 Gibson Road	1S
I.O.O.F. Building (NRIS # 82002284)	723 Main Street	1S
Porter Building (NRIS # 78000828)	511 Main Street	1S
Woodland Opera House (NRIS # 71000212)	320 2nd Street	1S
Woodland Public Library (NRIS #81000183)	250 1st Street	1S
Yolo County Courthouse (NRIS # 86003660)	725 Court Street	1S
R.H. Beamer House (NRIS # 82002283)	19 3rd Street	1S
Hotel Woodland (NRIS # 94001225)	436 Main Street	1S
Walnut Street School (NRIS # 06000144)	175 Walnut Street	1S
Nelson Ranch (NRIS # 72000266)	CA 18C between CA 113 and 102	1S
James Moore House (NRIS # 78000827)	SW of Woodland	1S

1 NRHP Historic District, the Downtown Woodland Historic District with 56 contributing buildings (see Appendix D for full list and figures, resources with * are Contributors to the Downtown Woodland Historic District):

Identifier	Address / Location	CHR Status Code
Downtown Woodland Historic District (NRIS #99000471)	Main Street from Elm St to Third St	1S

1 property determined individually eligible for the NR and as a contributor to a district determined eligible for the NRHP:

Identifier	Address / Location	CHR Status Code
Woodland Cemetery and St. Joseph's	800 West Street	3B

25 properties that appear eligible for listing in the NRHP:

Identifier	Address / Location	CHR Status Code
Thomas Stevens	525 1st Street	3S
Hunt House	546 1st Street	3S
Nicholson Cranston	610 1st Street	3S
Blevins House	618 1st Street	3S
Laugenour-Walker	627 1st Street	3S
Merritt-Campbell, Stokes	632 1st Street	3S
Spaulding-Whiteside Residence	638 1st Street	3S
Gable Mansion	659 1st Street	3S
Stephens House	756 1st Street	3S
Porter House	810 1st Street	3S
E. E. Leake, Miller House	547 2nd Street	3S
Rhodes, Miller, McGrath Residence	704 2nd Street	3S
Casa Pobreza / Newman Residence	816 2nd Street	3S
Morris Pritchard House	930 2nd Street	3S
Alvarez House	609 3rd Street	3S
Stephens-Cahn, Rinker House	708 College Street	3S
Gaddis Harness Building	734 College Street	3S
1059 Court Street	1059 Court Street	3S
Geer House	704 Elm Street	3S
Francis M. Brown Residence	422 Lincoln Avenue	3S
924 Main Street	924 Main Street	3S
Park House	125 Oak Avenue	3S
Bottlob Mast House, Robert Past House	206 Pendegast Street	3S
Baird Residence	55 Pershing Avenue	3S
Hansen House	279 SR 113	3S

18 properties that appear eligible for the NR as a contributor to the Palm Avenue Block NRHP eligible district:

Identifier	Address / Location	CHR Status Code
2 Palm Avenue		3D

6 Palm Avenue		3D
Woodland Park Entrance Gate	9 Palm Avenue	3D
9 Palm Avenue		3D
10 Palm Avenue		3D
15 Palm Avenue		3D
18 Palm Avenue		3D
19 Palm Avenue		3D
22 Palm Avenue		3D
25 Palm Avenue		3D
Wodeman House	26 Palm Avenue	3D
31 Palm Avenue		3D
32 Palm Avenue		3D
Kidder House	36 Palm Avenue	3D
41 Palm Avenue		3D
Ernst House	43 Palm Avenue	3D
50 Palm Avenue		3D
53 Palm Avenue		3D

In addition, the City of Woodland has an approved list of potential historical resources that is included on the State's inventory. Figures and maps depicting the location of these historic architectural resources, as well as a listing of the resources are included in Appendix D of this EIR.

In addition, as part of the NWIC search, three additional historic-period resources within the Planning Area were identified that were not included on the City's listings discussed above. These included a discontiguous historic landscape P-57-132H (Valley Oak Groves, Valley Oak Trees, and Mixed Vegetation) that was inventoried as part of the Yolo County Historic Resource Survey. In 1986, 48 groves of native valley oak trees were identified throughout Yolo County and were found eligible for listing in the local register. Two historic architectural resources located southeast of the City of Woodland on County Roads 101 and 102, P-57-478 (the historic Huttman Residence), and P-57-479 (Huttman Field airstrip) were both evaluated and found to ineligible for listing in the NRHP, CRHR, or local register.

4.6.4.2 THRESHOLDS OF SIGNIFICANCE

In accordance with Section 15065 and Appendix G of the CEQA Guidelines, impacts to cultural resources would be considered significant if the implementation of the Proposed Project would:

- cause a substantial adverse change in the significance of historic resource as defined in Section 15064.5;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- disturb any human remains, including those interred outside formal cemeteries.
- eliminate important examples of the major periods of California history or prehistory

Section 15064.5 of the State CEQA Guidelines defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. The significance of a historical resource is materially impaired when a project results in demolition or material alteration in an adverse manner of those physical characteristics of a resource that:

- convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historic Resources;
- account for its inclusion in a local register of historical resources pursuant to Public Resources Code 5020.1(k) or its identification in a historical resources survey meeting the requirements of Public Resources Code 5024.1(g), unless the public agency reviewing the effects of the proposed project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- convey its historical significance and that justify its eligibility for inclusion in the California Register of Historic Resources, as determined by a lead agency for purposes of CEQA.

4.6.4.3 ISSUES NOT DISCUSSED FURTHER

As noted previously, paleontological resources and potential impacts, are included in Section 4.7 of this EIR, "Geology, Soils, Mineral Resources, and Paleontological Resources." Analysis of tribal cultural resources pursuant to AB 52 (Statutes of 2015) is not addressed herein because this project was initiated in 2013 prior to the enactment of that law. Impacts related to cultural resources are discussed in detail below.

4.6.4.4 IMPACT ANALYSIS

IMPACT 4.6-1 Cause a Substantial Adverse Change in the Significance of Archaeological or Historical Resources as defined in CEQA Guidelines Section 15064.5. *The Proposed Project plans for the construction of new buildings and structures. Modification of existing buildings and structures could also occur in the Planning Area. Although there are no previously recorded archaeological resources within the Planning Area, future projects involving intensive grading, trenching, excavation, soil stockpiling, and other earthmoving activities could impact previously unrecorded cultural resources. Implementation of the Proposed Project has the potential to damage or destroy archaeological and historic architectural resources that qualify as historical resources or unique archaeological resources under CEQA. The significance of such resources could be materially impaired because their ability to convey significance could be destroyed or diminished. This impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The update of the General Plan was initiated prior to the implementation of AB 52, and there are no California Register of Historical Resources eligible or otherwise resources within the Planning Area. Similarly, an NAHC review of the Sacred Lands File resulted in no identified resources of concern within the Planning Area.

The Proposed Project would facilitate development activity and infrastructure improvements throughout the Planning Area. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

This future development could result in significant impacts to historical resources and archaeological resources through either direct physical impacts or by changes to the setting. Direct physical impacts would result from activity such as excavation, demolition, grading, or ground compaction required for construction of new land uses. For resources that qualify as historical resources, unique archaeological resources, or historic properties, such damage would be significant if it diminished the qualities that contribute to the significance of these resources. Changes to the setting would occur where new land uses and built environment features are placed on rural, undeveloped land. Changes to the setting could result in significant impacts where the natural or undeveloped setting forms part of the significance or integrity of a resource. Though record searches did not identify known archaeological resources in the Planning Area, the broader vicinity does have an elevated sensitivity for archaeological resources, due to the long-standing Native American inhabitation and past historical agricultural and settlement uses. It is reasonable to assume that many of these resources are historical resources or unique archaeological resources under CEQA.

Ground-disturbing construction would result from buildout of property in areas where the City anticipates infill development will happen during the planning horizon, as well as in the Specific Plan Areas. Development and infrastructure improvements within the developed portion of the city would involve grading, trenching, excavation, soil stockpiling, and other earthmoving activities that could impact previously unknown archaeological resources. Specific Plan Areas are primarily used for agricultural purposes, consisting of relatively large, rural, open, and minimally developed parcels and agricultural fields. In these areas, the Proposed Project would involve development of a mix of uses, including research and technology facilities, industrial and warehousing, residential and commercial uses, public facilities (schools, libraries, parks, etc.), other types of developed uses, and preserved open space that may also include some habitat restoration activities. There is a moderate likelihood that cultural resources may be impacted by the construction and development of the Proposed Project. The Proposed Project has the potential to affect unidentified cultural resources, like barns and residences located on rural properties that may presently or in the future have cultural significance, as well as prehistoric habitation sites, temporary camps, or milling stations, through demolition of existing properties and ground-disturbing activities.

When projects occur in existing developed areas, depending on the context, this could add incompatible architectural elements; diminish the historic integrity of a cultural resources setting, feeling, or association; or destroy the historic character of a property. The City has numerous buildings and structures that are either individually significant or contributors to a historic district as well as buildings, structures, and infrastructure that could represent historic resources. These properties are representative of numerous development patterns, property types (residential, civic/cultural, commercial), and architectural styles important to the City's past, and are listed in or eligible for listing in a federal, State, or local register. Please refer to General Plan Figure 2-14, "Historical Architectural Resources" for more detail.

Although the resources have a different character, if preservation-oriented policies are not in place, new development could also diminish the historic integrity of a cultural resources setting, feeling, or association, or destroy the historic character of a property in a greenfield setting.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing regulations will reduce potential impacts associated with implementation of the Proposed Project. For example, the Public Resources Code defines and addresses archaeological resources, historical resources, and unique archaeological resources as they are considered in the environmental review process. Chapter 12A of the City's Municipal Code is designed to preserve historic resources.

Proposed Project

In addition, to preserve and enhance the historical and cultural resources, the 2035 General Plan has included the following goals and policies aimed at preserving cultural resources.

- **Goal 2.G Traditional Neighborhoods.** Recognize, maintain and celebrate the unique qualities of Woodland's traditional residential neighborhoods.
- **Policy 2.G.3. Neighborhood Preservation Zone.** Maintain the Neighborhood Preservation zoning district to foster sensitively designed development at an appropriate scale in existing older neighborhood districts.
- **Policy 2.G.1. Distinctive Characteristics.** Maintain the distinctive characteristics of neighborhoods developed in different eras, including those developed prior to WWII, post war, and in more recent decades.
- **Policy 2.G.2. Sensitive New Development.** Require new construction, additions, renovations, and infill to be sensitive to neighborhood context, historic development patterns, and building form and scale.
- **Goal 2.H Historic Downtown Center.** Promote Downtown Woodland as a premier urban location in the region with a dynamic mix of uses including shopping, dining, entertainment, living, and employment ranging from innovative businesses to traditional government functions. Encourage architecturally interesting buildings and inviting pedestrian streetscapes that complement the city's historic character while celebrating the ingenuity of the present.
- **Policy 2.H.8. Woodland Opera House.** Continue to encourage the preservation and use of the Woodland Opera House for entertainment and civic events.
- **Policy 2.J.1. Enhanced Design Character**. Encourage renovation, infill, and reuse of existing commercial centers to utilize unused space in parking lots, make the centers more pedestrian friendly, and enhance the definition and character of the street frontage and associated streetscape.
- **Goal 2.O Preservation and Adaptive Reuse.** Preserve community character and historic buildings while attracting new infill development and investment in existing neighborhoods.

- **Policy 2.O.1. Neighborhood Preservation Overlay District.** Preserve the Neighborhood Preservation Overlay zoning district to ensure that new development in historic neighborhoods is well designed and appropriately scaled.

- **Policy 2.O.3. Relocation of Historic Buildings.** Where feasible and appropriate, encourage the relocation of reusable historic buildings within or into historic neighborhoods as a means of historic preservation. Relocation is only permitted with reuse provisions and timing agreements in place.

- **Goal 2.P Historic Programs and Requirements.** Preserve, maintain, and celebrate sites and structures that serve as significant, visible reminders of the city's social, architectural and agricultural history through adherence to federal, state and local programs and requirements.

- **Policy 2.P.1. Historic Resources Inventory.** Maintain and regularly update an inventory of the City's Historic Resources that includes all historically and architecturally significant buildings, sites, landscapes, signs, and features within the city limits.

- **Policy 2.P.2. Environmental Review.** Require that environmental review be conducted for buildings designated as, or potentially eligible for designation as, historic structures as required by Chapter 12A of the Municipal Code and CEQA regulations.

- **Policy 2.P.3. Historic Neighborhood Design Criteria.** Ensure that new residential construction, additions, repairs, and remodels in historic neighborhoods preserve the historic nature of the structure and neighborhood.

- **Policy 2.P.4. California Historical Building Code.** Train local building officials to use the California Historical Building Code as a tool to foster appropriate and efficient rehabilitation of historic buildings.

- **Policy 2.P.5. Certified Local Government Program.** Apply for a federal grant through the Certified Local Government Program to assist historic preservation programs in Woodland.

- **Goal 2.Q Historic Education and Awareness.** Promote community awareness and appreciation of Woodland's history and architecture.

- **Policy 2.Q.2. Historic Markers.** Continue to promote the Woodland Historic Landmarks program and develop a model for historic markers and signs for historic sites and buildings.

- **Policy 2.Q.3. Awards.** Continue to formally recognize private and public quality rehabilitation and restoration work through ceremonies (e.g., Heritage Home awards and Certificates of Appreciation for commercial and public building rehabilitation work).

- **Goal 7.E Preserve Prehistoric, Cultural, and Archaeological Resources.** Preserve and protect areas and sites of prehistoric, cultural, and archaeological significance.

- **Policy 7.E.1. Potentially Significant Sites.** Ensure that development avoids potential impacts to sites suspected of being archeologically, paleontologically, or culturally significant.

- **Policy 7.E.2. Discovery of Resources.** If cultural, archaeological, or paleontological resources are discovered during construction, ensure their evaluation and protection, as appropriate, in accordance with applicable federal and State laws and regulations.

    a. East Alternative–There are no applicable policies specific to the East Alternative.

    b. South Alternative– There are no applicable policies specific to the South Alternative.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on cultural resources would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.6-1a – The 2035 General Plan should be amended to include the following modified policy:

- **Policy 2.O.3. Relocation of Historic Buildings.** Where feasible and appropriate, encourage the relocation of reusable historic buildings within or into historic neighborhoods as a means of historic preservation. Relocation is only permitted ~~with reuse provisions and timing agreements in place.~~ Upon execution of an agreement covering reuse provisions and approval of a replacement project.

- **Policy 2.P.2. Environmental Review.** Require that environmental review be conducted for alterations and/or demolition of buildings designated as, or potentially eligible for designation as, historic structures as required by Chapter 12A of the Municipal Code and CEQA regulations.

Mitigation Measure 4.6-1b – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 1)

Projects that could have significant adverse impacts to potentially significant archaeological resources shall be required to assess impacts and provide feasible mitigation. The following steps, or those deemed equally effective by the City, will be followed:

a. Request information from the California Native American Heritage Commission to obtain a review of the Sacred Lands File and a list of local Native American groups and individuals that may have specific knowledge of cultural resources in the area that could be affected by project implementation. Each Native American group and individual identified by the Native American Heritage Commission will be contacted to obtain any available information on cultural resources in the project area. Additional consultation with relevant tribal representatives may be appropriate depending on the relatively level of cultural sensitivity.

b. Request updated information from the Northwest Information Center of the California Historical Resources Information System to determine whether the project area has been previously surveyed and whether archaeological resources were identified. In the event the records indicate that no previous survey has been conducted or existing survey data is greater than five years old, the applicant will retain the services of a qualified archaeologist to assess the adequacy of the existing data (if any) and assess the archaeological sensitivity of the project area. If the survey did not meet current professional standards or regulatory guidelines, or relies on outdated information, a qualified archaeologist will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources.

c. If a survey is warranted, it will include all necessary background research in addition to an archaeological pedestrian survey. Based on findings of the survey, additional technical studies may be required, such as geoarchaeological sensitivity analysis, or other analysis scaled according to the nature of the individual project. A report will document the results of the survey and provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California Department of Parks and Recreation site record forms and cultural resources reports.

d. Management recommendations may include, but are not limited to additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist to be sensitive for subsurface cultural resource deposits.

e. Once approved by the City, provide the Northwest Information Center with appropriate California Department of Parks and Recreation site record forms and cultural resources reports for any resources identified. Any subsequent reports completed as a result of additional technical work will likewise be submitted to the Northwest Information Center.

f. If no archeological resources are identified that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources. The exception would be in the event of the discovery of a previously unknown archaeological site inadvertently exposed during project implementation. In such an event, a qualified archaeologist will be retained to assess the discovery and provide management recommendations as necessary.

g. When a project will impact a known archaeological site, and avoidance is not a feasible option, a qualified archaeologist shall evaluate the eligibility of the site for listing in the California Register of Historic Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment which could include preservation in place or data recovery.

h. If a site to be tested is prehistoric, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. Appropriate mitigation may include curation of artifacts removed during subsurface testing.

i. If significant archaeological resources that meet the definition of historical or unique archaeological resources are identified in the project area, the preferred mitigation of impacts is preservation in

place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not limited to actions, such as data recovery excavations. If only part of a site will be impacted by a project, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the Northwest Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code.

Mitigation Measure 4.6-1c – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 2)

For projects that could adversely affect a potential historic resources:

a. Consult the City's Historic Resources Inventory and, as necessary, seek updated information from the North Central Information Center or other applicable data repositories to determine whether the project area has been surveyed, and whether historic built environment resources were identified.

b. If a survey of the property or the area in which the property is located has not been conducted, a qualified architectural historian shall conduct a study of the project area for the presence of historic built environment resources.

c. If a study is required, it will evaluate the significance of built environment resources greater than 50 years in age that may be directly or indirectly impacted by project activities. The study may include a field survey; background, archival and historic research; and consultation with local historical societies, museums or other interested parties; as necessary.

d. If necessary, the qualified architectural historian's study will recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources on appropriate California Department of Parks and Recreation (DPR) series 523 forms. Recommended treatment for historical resources identified in the report shall be implemented.

e. If no significant historic built environment resources are identified in the study or prior survey of the project area that may be directly or indirectly impacted by project activities, there is no adverse change to documented historical built environment resources and no further action is required.

f. If a significant historic built environment resource could be directly or indirectly impacted by project activities, avoidance shall be considered the primary mitigation option. If avoidance is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties will reduce impacts to an acceptable level. If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required.

g. If avoidance is not feasible and minimizing impacts through adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties is not feasible, documentation is required using, as appropriate, Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and/or Historic American Landscapes Survey (HALS) guidelines.

Mitigation Measure 4.6-1d – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 3)

a. During ground-disturbing activities necessary to implement proposed development and infrastructure projects, if any prehistoric or historic subsurface resources are discovered, all work within 100 feet of the resources shall be halted and a qualified archaeologist[4] shall be consulted within 24 hours to assess the significance of the find, according to CEQA Guidelines Section 15064.5, and implement, as applicable, CEQA Guidelines Sections 15064.5(d), (e), and (f).

b. If any find is determined to be a historical resource according to CEQA Guidelines Section 15064.5, representatives from the City and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Cultural resources shall be recorded on appropriate Department of Parks and Recreation forms, and all significant cultural materials recovered shall be, as necessary and at the discretion of the qualified archaeologist and in consultation with the local Native American community if the discovery is prehistoric in age, subject to scientific analysis, professional curation, and documentation according to professional standards. If it is determined that the proposed development or infrastructure project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with Section 21083.2 of the California Public Resources Code and CEQA Guidelines Section 15126.4, with a preference for preservation in place. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out. Preservation in place may be accomplished by planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

c. If avoidance is not feasible, the qualified archaeologist shall develop and oversee the execution of a treatment plan. The treatment plan shall include, but shall not be limited to, data recovery procedures based on location and type of archaeological resources discovered and a preparation and submittal of report of findings to the Northwest Information Center of the California Historical Resources Information System. Data recovery shall be designed to recover the significant information the archaeological resource is expected to contain, based on the scientific/historical research questions that are applicable to the resource, what data classes the resource is expected to possess, and how the

[4] The California Office of Historic preservation utilizes the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation as found in Code of Federal Regulations, 36 CFR Part 61. The minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or closely related field plus: 1. At least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management; 2. At least four months of supervised field and analytic experience in general North American archeology; and 3. Demonstrated ability to carry research to completion. In addition to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

expected data classes would address the applicable resource questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by project proponents' actions. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

The policies and implementation programs summarized above establish appropriate review procedures and consultation requirements, while also addressing the need for qualified personnel to undertake technical analysis, where necessary. The policies and implementation programs provide for the identification and evaluation of cultural resources, as well as for the assessment of potential impacts to such resources and the development of mitigation strategies. Additionally, CEQA review and local regulatory review provide additional levels of protection for known resources, and address the identification of unidentified cultural resources.

Although the policies and implementation programs will minimize the severity of significant impacts associated with such change, impacts may occur that cannot be reduced to a less-than-significant level through mitigation. Applicants for entitlements requiring General Plan consistency findings will need to comply with the policies described above. These policies and implementation programs will help ensure new development is designed to maintain important elements of the historic setting, where this is important; preserve and rehabilitate historic structures in a way that preserves their integrity; relocate structures as method of historic preservation; and avoid impacts to archaeological and historic resources. While the Proposed Project policies and implementation programs will reduce potential effects, the potential remains for residual effects.

Beyond existing regulations that protect cultural resources and these proposed policies and implementation programs, no further mitigation is available.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable.**

b. South Alternative–The impact is considered **significant and unavoidable**.

IMPACT 4.6-2 Disturb Human Remains, including those Interred Outside of Formal Cemeteries. *The Proposed Project would result in development and infrastructure improvement projects throughout the Planning Area that would involve earthmoving activities that could impact human remains. There is the potential for discovery of human remains during construction. This impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project plans for development and infrastructure improvement projects throughout the Planning Area that would involve grading, trenching, excavation, soil stockpiling, and other earthmoving activities that could impact human remains. Although there is presently no indication that any particular area in the Planning Area has been used for human burial purposes outside of designated cemeteries in the recent or distant past, there is nonetheless the potential for discovery during construction of development and infrastructure projects facilitated under the Proposed Project. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Relevant Policies and Implementation Programs of the Proposed Plan

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing regulations will reduce potential impacts associated with implementation of the Proposed Project. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and Section 7052 and California Public Resources Code Section 5097. In accordance with California law and policies described above, if human remains are uncovered during future ground-disturbing activities, the contractor and/or developer would be required to halt potentially damaging excavation in the area of the burial and notify the County Coroner and a professional archaeologist to determine the nature of the remains. The coroner would be required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, they must contact the NAHC by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]). The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code 5097.9. Following the coroner's findings, the property owner, contractor or project proponent, an archaeologist, and the NAHC-designated most likely descendant will determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed.

Proposed Project

The 2035 General Plan includes goals and policies to reduce this potential impact.

- **Goal 7.E Preserve Prehistoric, Cultural, and Archaeological Resources.** Preserve and protect areas and sites of prehistoric, cultural, and archaeological significance.

- **Policy 7.E.1. Potentially Significant Sites.** Ensure that development avoids potential impacts to sites suspected of being archeologically, paleontologically, or culturally significant.

- **Policy 7.E.2. Discovery of Resources.** If cultural, archaeological, or paleontological resources are discovered during construction, ensure their evaluation and protection, as appropriate, in accordance with applicable federal and State laws and regulations.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Existing regulations will reduce potential impacts associated with implementation of the Proposed Project by requiring a stop to potentially damaging excavation and appropriate actions. Policies in the Proposed Project would further enforce these existing requirements, further reducing the potential for an impact. However, human remains can occur below ground with little or no surface manifestation.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.6-2 – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Cultural 4)

a. Consistent with Health and Safety Code, Section 7050 through 7052 and Health and Safety Code Section 8010 through 8030, in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery during construction, the City and contractor/s shall take the following steps:

(1) No further excavation or disturbance of the project site or any nearby area reasonably suspected to overlie adjacent human remains will occur until:

(A) the coroner of Yolo County has been contacted to determine that no investigation of the cause of death is required, and

(B) if the coroner determines the remains to be Native American:

1. the coroner shall contact the Native American Heritage Commission within 24 hours;

2. the Native American Heritage Commission shall identify the person or persons it believes to be the most likely descendant from the deceased Native American; and

3. the most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Section 5097.98 of the Public Resources Code; or

(2) Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:

(A) the Native American Heritage Commission is unable to identify a most likely descendant or the most likely descendant fails to make a recommendation within 24 hours after being notified by the commission;

(B) the most likely descendant identified fails to make a recommendation; or

(C) the landowner or his or her authorized representative rejects the recommendation of the most likely descendant, and mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

Because prehistoric and historic archaeological sites that contain human remains can occur below ground with little or no surface manifestation it may not be feasible to entirely avoid impacts to interred human remains during buildout of the General Plan, despite implementation of the City's proposed policies and mitigation measure. If buried human remains are encountered during construction without prior discovery they may be inadvertently damaged or destroyed.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative– The impact is considered **significant and unavoidable**.

4.7 GEOLOGY, SOILS, MINERAL RESOURCES, AND PALEONTOLOGICAL RESOURCES

4.7.1 INTRODUCTION

This section contains an analysis of impacts related to geology, soils, mineral resources, and paleontological resources in the Planning Area. The section provides a description of existing soils, geologic and seismic conditions, as well as a brief analysis of regulations and plans pertinent to the implementation of the 2035 General Plan. The analysis describes seismic hazards, soil conditions, and other geotechnical considerations that could affect people and structures on the project site. The Proposed Project is evaluated relative to its potential to affect regionally significant mineral deposits or paleontologically sensitive geologic formations. Impacts related to inundation by seiche, tsunami, or mudflow are discussed in Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality."

The baseline year for this section is 2013. Geology, soils, mineral resource, and paleontological information change at very slow rates, and so this data is still considered valid.

There were no responses to the NOP that pertain to geology, soils constraints, mineral resources, or paleontological resources.

4.7.2 ENVIRONMENTAL SETTING

4.7.2.1 REGIONAL GEOLOGY

Woodland is located in the Sacramento Valley, which, together with the San Joaquin Valley, comprise the Great Valley geomorphic province. The Great Valley is composed of thousands of feet of sedimentary deposits that have undergone periods of subsidence and uplift over millions of years. During the Jurassic (approximately 206 million years Before Present [B.P.]) and Cretaceous (approximately 144 million years B.P.) periods of the Mesozoic era, the Great Valley existed in the form of an ancient ocean. By the end of the Mesozoic era, the northern portion of the Great Valley began to fill with sediment as tectonic forces caused uplift of the basin. Geologic evidence suggests that the Sacramento Valley and San Joaquin Valley gradually separated into two separate water bodies as uplift and sedimentation continued. By the time of the Miocene epoch (approximately 24 million years B.P.), sediments deposited in the Sacramento Valley were mostly of terrestrial origin. In contrast, the San Joaquin Valley continued to be inundated with water for another 20 million years, as indicated by marine sediments dated to the late Pliocene epoch (approximately 5 million years B.P.). Most of the surface of the Great Valley is covered with Holocene (i.e., 11,700 years Before Present [B.P.] to present day) and Pleistocene (i.e., 2.6 million–11,700 years B.P.) alluvium. This alluvium is composed of sediments from the Sierra Nevada to the east and the Coast Range to the west that were carried by water and deposited on the valley floor.

4.7.2.2 LOCAL GEOLOGY

Woodland is located within gently sloping to level alluvial plains. In general, the Planning Area topography is gently sloping from west to east, following the overall Sacramento Valley topography. Elevations in the Woodland area range from 30 to 75 feet above mean sea level (msl).

Geologic units that are exposed at the surface in the Woodland area consist of levee, channel, and basin deposits, and the Modesto and Riverbank Formations (see Exhibit 4.7-1). These deposits are underlain by the Pleistocene-age Red Bluff Formation, and the Plio-Pleistocene-age Tehama Formation. Collectively, the thickness of the Holocene deposits and the Modesto, Riverbank, and Red Bluff Formations is approximately 100–200 feet (City of Woodland 2011: Appendix C). Below the Pleistocene formations, older Tertiary formations deposited on top of the Great Valley sequence are present.

Levee, Channel, and Basin Deposits

These Holocene-age (i.e., occurring within the last 11,700 years) alluvial deposits consist of poorly sorted stream and basin deposits, ranging in size and composition from clay to boulders (Wagner et al. 1987).

Modesto Formation

In the Sacramento Valley, the Modesto Formation forms alluvial terraces, and some alluvial fans and abandoned channel ridges, of major rivers such as the Sacramento and can be divided into upper and lower members. The upper member is composed primarily of unconsolidated, unweathered, coarse sand and sandy silt. The age of this member has been placed at approximately 12,000–26,000 years B.P. (Helley and Harwood 1985). The lower member of the Modesto Formation is composed of consolidated, slightly weathered, well-sorted silt and fine sand, silty sand, and sandy silt. Age estimates for the lower member range from 29,000 to 42,000 year B.P. (Marchand and Allwardt 1981).

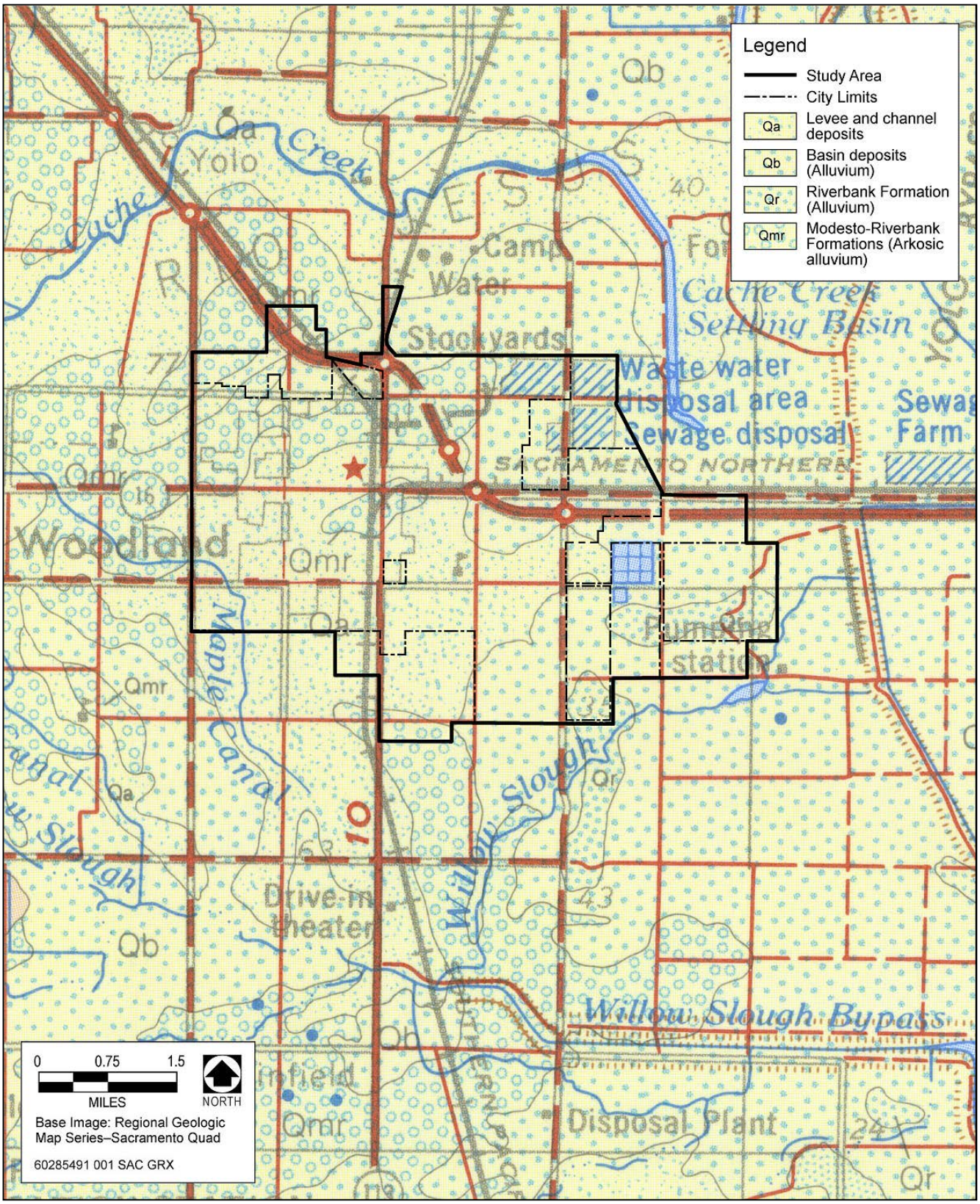
Riverbank Formation

Sediments in the Riverbank Formation consist of weathered reddish gravel, sand, and silt that form alluvial terraces and fans. The Riverbank Formation is Pleistocene in age, but is considerably older than the Modesto Formation; estimates place the age of the Riverbank between 130,000 and 450,000 years B.P. The Riverbank forms alluvial fans and terraces of major rivers, such as the Sacramento. The Riverbank fans and terraces are higher in elevation and generally have a more striking topography than those formed by the Modesto Formation (Helley and Harwood 1985).

4.7.2.3 Regional Seismicity and Fault Zones

Measuring Earthquakes

Earthquakes can be measured in several ways. Earthquakes create certain types of waves with different velocities, which can be recorded on instruments called seismometers. The Richter Scale measures earthquake magnitude by plotting the amplitude (length and width) of the seismic waves, taking into consideration the distance from the seismometer. The scale is logarithmic so that a recording of magnitude 7, for example, indicates a disturbance with ground motion 10 times as large as a recording of magnitude 6. The Moment Magnitude scale measures the magnitude of the earthquake based on the physical size of the fault rupture and slip displacement as well as the amount of energy released. The Moment Magnitude scale was developed to provide a better way of measuring large magnitude earthquakes. The Modified Mercalli scale is a subjective measure of earthquake intensity; it does not have a mathematical basis. It was developed as a way of relating the intensity of ground shaking at any



Note: This exhibit is included only to show geologic formations in the Planning Area and some historic features on this map are no longer accurate.
Source: Wagner et al. 1987

Exhibit 4.7-1. **Geologic Formations**

particular location to the physical effects that people experience. This scale is composed of 12 increasing levels of intensity that range from imperceptible shaking (Scale I) to catastrophic destruction (Scale XII). Table 4.7-1 provides a description of the Modified Mercalli Intensity (MMI) scale.

Table 4.7-1. Modified Mercalli Index

Intensity	Effect
I	Not felt. Marginal and long period effects of large earthquakes.
II	Felt by persons at rest, on upper floors, or favorably placed.
III	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
IV	Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frame creak.
V	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.
VI	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle).
VII	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
VIII	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
IX	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations.) Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters.
X	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
XI	Rails bent greatly. Underground pipelines completely out of service.
XII	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Notes: Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.

Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

Source: Wood and Neumann 1931

Faults

There are no known fault traces within or adjacent to the Planning Area. However, segments 3 and 4 of the Great Valley Fault Zone (GVFZ), which is a blind-thrust fault belt located along the margin between the Central Valley and the Coast Ranges, is located approximately 6 miles to the west. A blind-thrust fault is located beneath the earth's surface. The 1983 earthquake in Coalinga (magnitude 6.4) and the 1985 earthquake in the Kettleman Hills (magnitude 6.1) were likely caused by movement along this fault zone. The GVFZ may also have been the source of the Vacaville-Winters earthquake of 1892 (estimated magnitude of 6.75). In addition, the Dunnigan Hills Fault, approximately 5 miles to the northwest (near Zamora), has exhibited evidence of activity during Holocene time. Information related to regionally active faults is presented in Table 4.7-2.

The Planning Area could experience effects such as those described in Table 4.7-2 from an earthquake along any one of the regional faults located within 50 miles of Woodland. Potential seismic hazards resulting from an earthquake consist of surface fault rupture, ground shaking, liquefaction, landslides, and subsidence.

Table 4.7-2. Regionals Faults with Evidence of Activity During Holocene Time

Fault Zone	Distance and Direction from Woodland	Historical Seismicity	Slip Rate (mm/yr)[1]	Projected Maximum Moment Magnitude
Dunnigan Hills Fault	5 miles NW	Holocene displacement	N/A	6.8
Great Valley Fault Zone, segments 3 and 4	6 miles W	Coalinga: M 6.4 (1983) Kettleman Hills: M 6.1 (1985)	1.25	6.6–6.8
Concord-Green Valley Fault	30 miles SW	Concord: M 5.4 (1955)	4.6	6.8
Hunting Creek-Berryessa Fault	31 miles NW	Holocene displacement	6.0	7.1
West Napa Fault	37 miles SW	Napa: M 4.1 (2015) Yountville: M 5.0 (2000)	1.0	6.7
Marsh Creek-Greenville Fault	48 miles SW	Livermore: M 5.8 (1980)	2.0	7.0
Maacama Fault	49 miles W	Willits: M 4.8 (1977)	9.0	7.4
Hayward-Rodgers Creek Fault	50 miles SW	Hayward: M 6.8 (1868), M 7.0 (1838), Many <M 5.5	9.0	7.7 (Rodgers Creek)

Notes: mm/yr = millimeters per year; M = magnitude

[1] Slip Rate = the speed with which one side of a fault moves with respect to the other; in California, 1–2 mm/yr is considered average, and anything over 10 mm/yr is considered "rapid." Slip rates are averages of the total slip along a fault over a long period of time. In general, the faster the slip rate, the more likely it is that the fault may generate an earthquake.

Sources: Jennings 1994, 2007 Working Group on California Earthquake Probabilities 2008

Surface Fault Rupture

Surface rupture is the actual cracking or breaking of the ground surface along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. However, surface ground rupture along a fault generally is limited to a linear zone that is only a few yards wide. The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (see the "Regulatory Framework" section below) was created to help reduce the loss of life and property from an earthquake by prohibiting the construction of structures designed for human occupancy across the traces of active faults. The Planning Area is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone (California Geological Survey [CGS] 2015). The nearest fault zoned under

the Alquist-Priolo Act is the Green Valley Fault Zone, in the Howell Mountains (also called the Mt. George Range), approximately 29.5 miles to the southwest.

Seismic Ground Shaking

Ground shaking—motion that occurs as a result of energy released during faulting—could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. Other important factors to be considered are the characteristics of the underlying soil and rock and, where structures exist, the building materials used and the workmanship of the structures.

Ground motions from seismic activity can be estimated using a computer model. The CGS Probabilistic Seismic Hazards Assessment Model (CGS 2008) indicates that a minimum peak horizontal acceleration of 0.26 *g* (where *g* is the percentage of gravity) could be expected. This means there is a 1-in-10 probability that an earthquake will occur within 50 years that would result in a peak horizontal ground acceleration exceeding 0.26 *g* in the Planning Area. This calculation indicates that a moderate level of seismic ground shaking could occur.

Liquefaction

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and become fluid, similar to quicksand. The liquefaction potential depends on the type of soil, the level and duration of seismic ground motions, and the depth to groundwater. Loose sands and peat deposits, as well as uncompacted fill and other Holocene materials deposited by sedimentation in rivers and lakes, as well as debris or deposits from recently eroded material, are more susceptible to liquefaction. The locations that are most susceptible to liquefaction-induced damage have loose, water-saturated, granular sediment that is within 40 feet of the ground surface.

Liquefaction poses a hazard to engineered structures such as buildings, bridges, and underground utility pipelines, because the loss of soil strength can result in bearing capacity insufficient to support foundation loads and increased lateral pressure on retaining walls. Therefore, buildings and other structures can sink downwards, tilt sideways, and either partially or completely collapse. In addition, pipelines can rupture. Where gentle slopes are present along stream banks, liquefaction may also cause landslides from lateral spreading. Whole buildings can be moved downslope by this type of ground failure. However, where this condition is known to exist, proper structural and foundation design can usually minimize or eliminate liquefaction hazards to new construction.

Groundwater elevations in the Woodland area have varied over time depending on the amount of precipitation and the amount of groundwater pumping. Historically, groundwater elevations in the region have ranged from approximately 20 feet to 50 feet mean sea level (msl) (City of Woodland 2011). Furthermore, portions of the Planning Area are composed of unconsolidated Holocene-age alluvial deposits, and an active seismic source (the GFVZ) is located nearby. Therefore, portions of the Planning Area could be subject to liquefaction in the event of a large magnitude earthquake.

Landslides

Landslide susceptibility is based on various combinations of factors such as rainfall, rock and soil types, slope, vegetation, seismic conditions, and human construction activities. Generally, landslides are expected to occur

most often on slopes steeper than 15 percent, in areas with a history of landslides, and in areas underlain by geologic units that are weakly cemented. Because the Planning Area consists of generally level ground, landslides would not represent a hazard.

Seismic Seiches

Earthquakes may affect open bodies of water by creating seismic sea waves and seiches. Seismic sea waves (often called "tidal waves") are caused by abrupt ground movements (usually vertical) on the ocean floor in connection with a major earthquake. Because of the Planning Area's long distance from the Pacific Ocean, seismic sea waves would not represent a hazard. A seiche is a sloshing of water in an enclosed or restricted water body, such as a basin, river, or lake, which is caused by earthquake motion; the sloshing can occur for a few minutes or several hours. Although an 1868 earthquake along the Hayward fault in the San Francisco Bay Area is known to have generated a seiche along the Sacramento River, the affected area was located in the Sacramento–San Joaquin Delta. The Sacramento River is located approximately 2.5 miles east of the Planning Area (measured from the closest point). The city is protected by levees on both the east and west sides of the Yolo Bypass (which lies between the city and the river), as well as levees on the west side of the Sacramento River. The levees were designed and engineered to withstand seismic activity, including the potential for seiches.

4.7.2.4 VOLCANIC ACTIVITY

There are several regions of known volcanic activity in northern California. The Clear Lake volcanic field is located approximately 50 miles northwest of the Planning Area. The field contains lava domes and cinder cones that range in age from approximately 2 million to 10,000 years B.P. Mount Konocti, with an elevation of 4,305 feet, is the largest volcanic feature. Steam in The Geysers vapor-dominated field, which is located on the southwest margin of the volcanic field, is harnessed by the Calpine Corporation for geothermal power production. The volcanic history of the Clear Lake field is episodic, i.e., long periods of no activity separated by shorter intervals of frequent eruptions. At present, geologists believe the field appears to be in a period of no activity following a volcanically active stretch between 60,000 and 10,000 years B.P., which averaged 1 eruption every 1,800 years. Because of long pauses in the volcanic activity near Clear Lake, it is currently uncertain what stage of volcanism the region might be undergoing. Intermittent seismic activity and the presence of heat at depth indicate that the system is still active and eruptions may occur in the future. The U.S. Geological Survey (USGS), in cooperation with Calpine, maintains a real-time network of monitoring stations throughout the system that measure seismic activity, ground deformation, and volcanic gases (USGS 2016).

The Lassen Volcanic National Park area is located approximately 120 miles north of the Planning Area. Three episodes of volcanism have occurred in the vicinity of the Lassen volcanic center in the past 1,100 years. These eruptions occurred at Chaos Crags, Cinder Cone, and lastly at Lassen Peak in 1914–1917. An ash plume from the 1915 eruption rose more than 5.5 miles above the peak, and the prevailing winds scattered the ash across Nevada as far as 300 miles to the east (USGS 2001). The prevailing wind direction in that area is towards the east; thus, it is unlikely that the Planning Area would be affected by volcanic activity in the Lassen area.

4.7.2.5 SOILS

The U.S. National Resources Conservation Service (NRCS) provides soils surveys and reports for Yolo County, which include the city of Woodland. Exhibit 4.7-2 shows the general soil units in the Planning Area (NRCS 2015).

Soil Properties

Soil properties influence the development of building sites, including the engineering design, construction techniques, and site maintenance. The U.S. Natural Resources Conservation Service (NRCS) soil database provides an indication of the limitations of soils for dwellings without basements, small commercial buildings, and local roads and streets. The rating system indicates the extent to which the soils are limited by all of the soil features that affect building site development. Soils designated as having "No Limitations" possess features that are favorable for the specified use.

Two soils within Planning Area have no limitations with respect to dwellings, small commercial buildings, and local roads and streets: Reiff very fine sandy loam and Reiff gravelly loam. All of the other soils in the Planning Area have some limitations regarding construction of these structures and roads. NRCS soil limitations are based on the soil properties that affect the capacity of the soil to support a load without movement, and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity consist of depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. The properties that affect the ease and amount of excavation consist of flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

In general, soils throughout the Planning Area are rated with a low wind erosion hazard, and a slight to moderate water erosion hazard (NRCS 2015).

Most soils can be categorized into hydrologic soil groups (which apply only to surface soil layers) based on runoff-producing characteristics. Hydrologic soil groups are factored into calculations of erosion and stormwater runoff potential when drainage plans are prepared for new development. Soils are assigned to groups A, B, C, or D. Group D soils have a very slow water infiltration rate and therefore have a high stormwater runoff potential. The Clear Lake clay, Merritt silty clay loam, Pescadero silty clay, Ritz loam, and Willows clay soils are all assigned to Hydrologic Group D (NRCS 2015).

Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Because of this shrink-swell effect, structural foundations may rise during the rainy season and fall during the dry season. If this expansive movement varies beneath different parts of a structure, the foundation may crack and portions of the structure may become distorted. Retaining walls and underground utilities may be damaged for the same reasons. Exhibit 4.7-3 illustrates the shrink-swell potential of Planning Area soils. Proper foundation design can generally eliminate the problems caused by expansive soils.

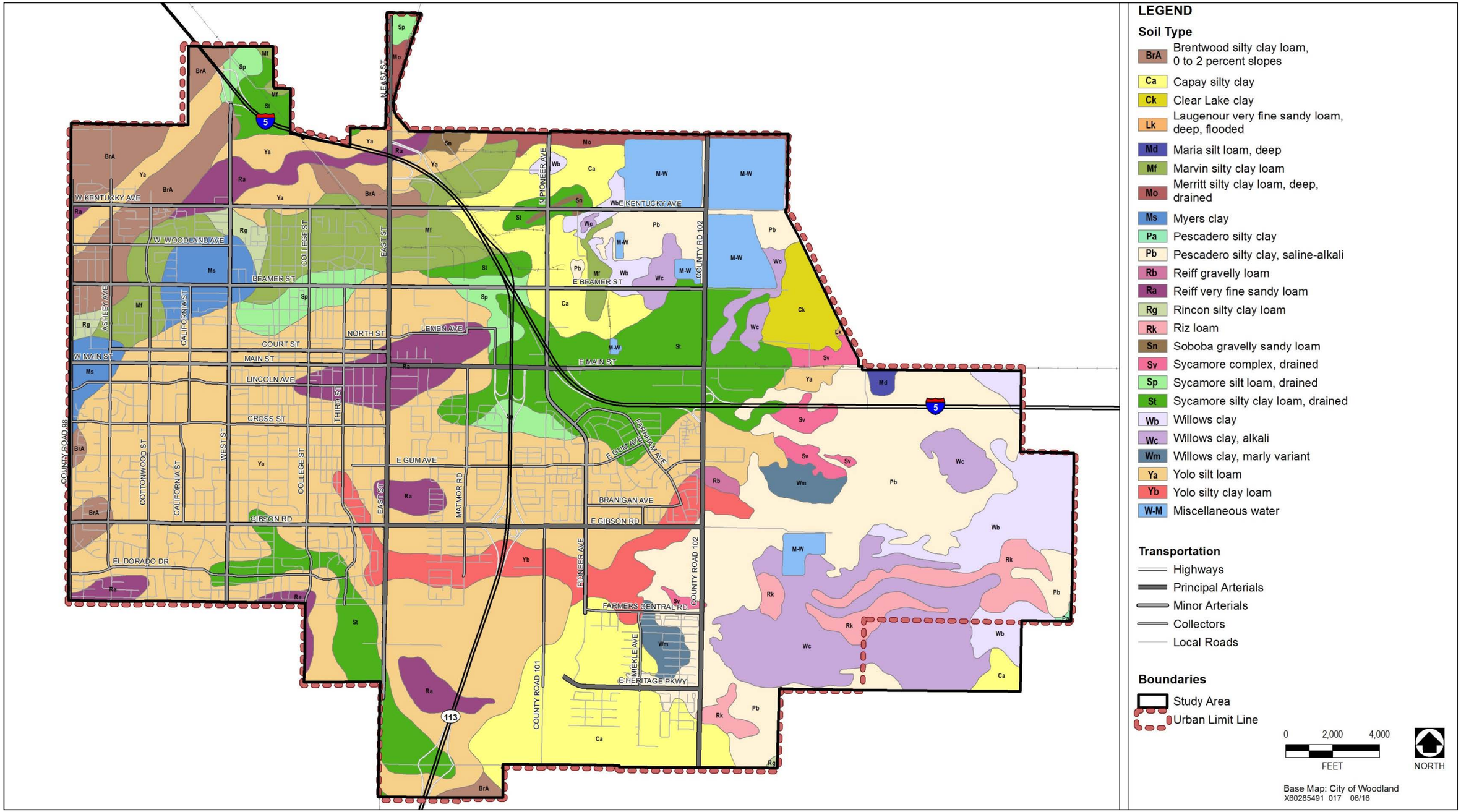


Exhibit 4.7-2. **Soil Types**

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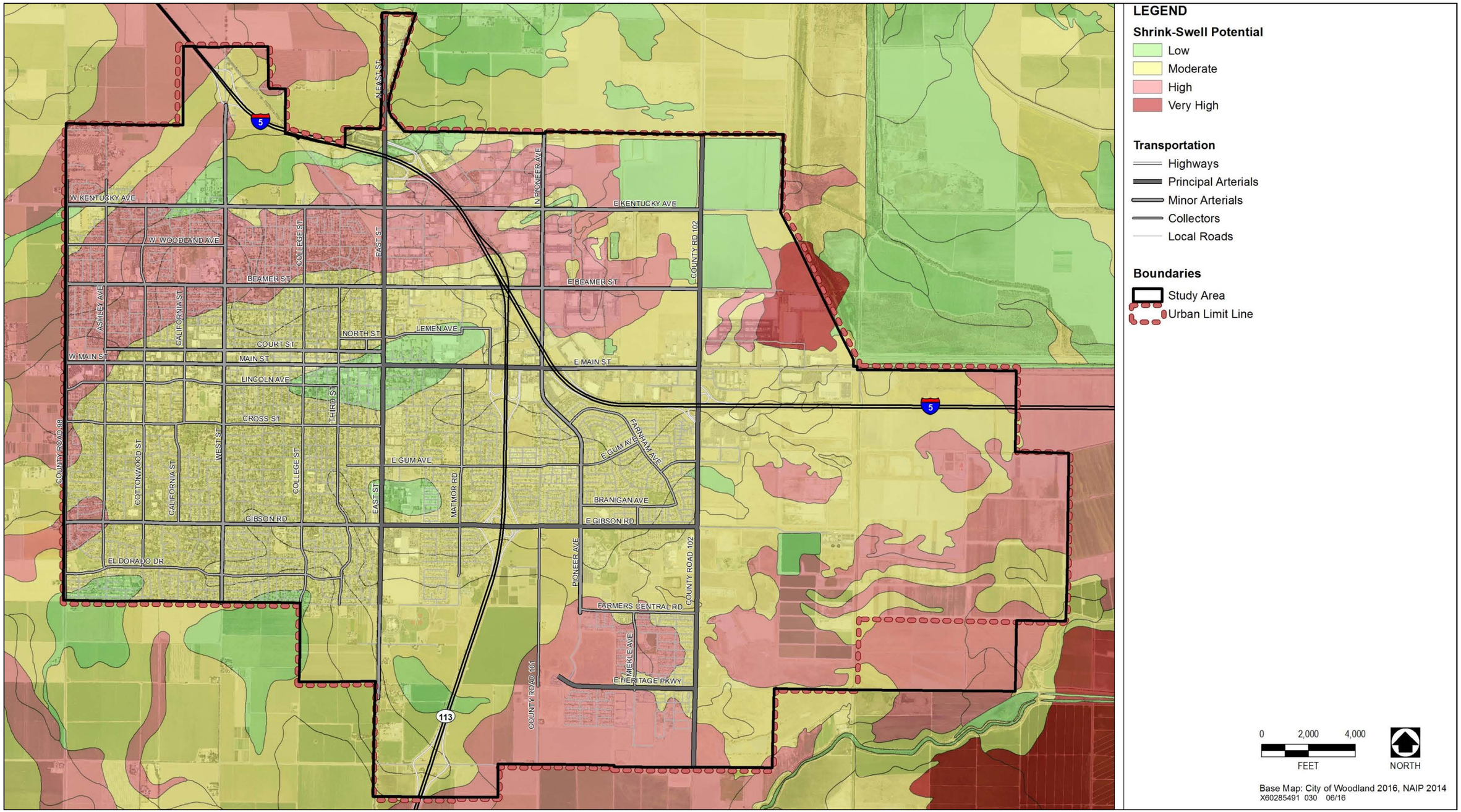

Exhibit 4.7-3. **Shrink-Swell Potential**

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For a conventional septic system to function properly, soils must percolate (or "perc") appropriately—that is, a certain volume of water must flow through the soil in a certain time period, as determined by a licensed civil of geotechnical engineer. Wastewater is "treated" as soil bacteria feed on the waste material and in the process, break down the material into more basic elements that are dispersed into the lower layers of the soil horizon. If wastewater percolates through the soil too quickly, the bacteria do not have enough time to digest the material. On the other hand, if wastewater percolates through the soil too slowly, the bacteria are killed by the lack of oxygen.

Based on a review of NRCS (2015) soil data, the soils in the Planning Area are rated as very limited for conventional septic systems because of slow water movement and generally shallow depths to a water-saturated zone. However, these limitations can be overcome by proper engineering and design following a site-specific analysis by a geotechnical engineer. Further, development under the 2035 General Plan would use municipal sewer systems and would not involve new construction of septic systems.

4.7.2.6 MINERAL RESOURCES

Under the Surface Mining and Reclamation Act (SMARA), the State Mining and Geology Board may designate certain mineral deposits as being regionally significant to satisfy future needs. The Board's decision to designate an area is based on a classification report prepared by CGS and on input from agencies and the public. The Planning Area lies within the designated Sacramento-Fairfield Production-Consumption Region for Portland cement concrete (PCC) aggregate.

The largest and one of the most important mineral resource sectors within the Sacramento-Fairfield Production-Consumption Region is located along Cache Creek between the towns of Capay and Yolo. Cache Creek flows eastward out of the Coast Ranges and discharges into the Cache Creek Settling Basin north of Woodland. From there, it flows into the Yolo Bypass. Cache Creek has long served as a regional source for aggregate. Aggregate mining within the creek dates back to at least the turn of the century, when sand and gravel were removed and shipped by rail to be used in the reconstruction of San Francisco after the 1906 earthquake. Many of the early excavations were small and scattered along a wide expanse, meeting both local needs, as well as large public projects, such as the Golden Gate Bridge. Broad scale aggregate mining operations along the lower stretch of the creek began in the 1950s, and are ongoing today. It has been estimated that approximately 31 million tons of material were extracted by local mining operations between 1982 and 1996, leaving resources of approximately 807 million tons (Yolo County 1996). The Cache Creek aggregate deposits consist of alluvium derived from the Coast Ranges to the northwest. This alluvium is composed of interbedded lenses of metamorphic and sedimentary rock fragments. All of the PCC-grade aggregate mined from these deposits comes from Pleistocene and Holocene river channel deposits. In general, the closer the aggregate deposit is to the active Cache Creek channel, the younger the aggregate is and the more probable that the rock clasts have not been subjected to extensive in-place weathering (which would lower the quality) (Dupras 1988). Mining and other environmental resource issues for this area are guided by the Cache Creek Resources Management Plan (Yolo County 2002) and the Off-Channel Mining Plan (Yolo County 1996). The City's Urban Limit Line is approximately 0.25 mile (1,300 feet) southeast of the Cache Creek resource sector and the Cache Creek Resources Management Plan boundaries (see Exhibit 4.7-4).

Most of the Planning Area has been classified in a Mineral Resources Zone described in SMARA Mineral Land Classification Special Report 156 (Dupras 1988). The classification system is intended to ensure state statewide or regionally significant mineral deposits are considered in planning and development administration. These mineral

designations are intended to prevent incompatible land use development on areas determined to have significant mineral resource deposits. Permitted uses within a mineral resource zone consist of mining, uses that support mining such as smelting and storage of materials, or uses that will not hinder future mining such as grazing, agriculture, large-lot rural development, recreation, and open space.

The most important zone with respect to the presence of resources is MRZ-2, which is defined as "areas where adequate information indicates that significant mineral (aggregate) deposits are present or where it is judged that there is a high likelihood for their presence." This zone is applied to known mineral deposits or where well-developed lines of reasoning, based on economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high. The Cache Creek mineral resources sector is classified as MRZ-2.

MRZ-3 zones suggest the potential for aggregate deposits. This zone is less definitive than MRZ-2 and is defined as "areas containing mineral deposits the significance of which cannot be evaluated from available data." As shown in Exhibit 4.7-4, most of the Planning Area has been classified as MRZ-3.

The southeastern portion of the Planning Area, as well as a few small areas to the northeast and north, are outside of the area classified for mineral resources by CGS. Although these areas contain the same types of rock units as those present in and around the Cache Creek resource sector designated by CGS, the potential presence of aggregate resources is unknown. In general, the farther away an aggregate deposit is from the active Cache Creek channel, the older the aggregate is and the more probable that weathering processes have substantially diminished the quality (Dupras 1988).

4.7.2.7 PALEONTOLOGICAL RESOURCES

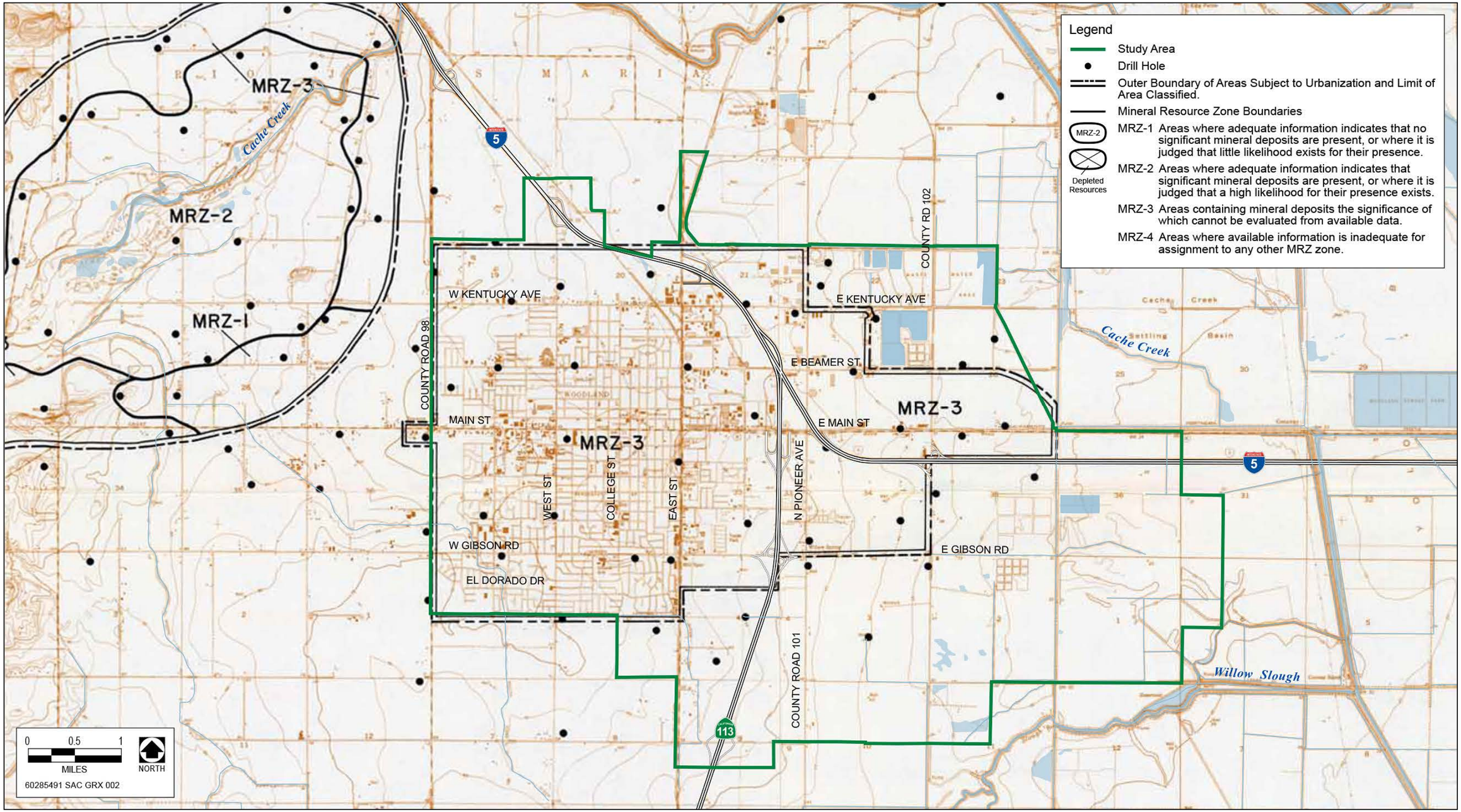
Paleontological resources are fossils, the remains of prehistoric plants and animals, which are important scientific and educational resources because of their usefulness in (1) documenting the presence and evolutionary history of particular groups of extinct and extant organisms; (2) reconstructing the environments in which these organisms lived; and (3) determining the relative ages of the strata in which they occur and the geologic events that resulted in the deposition of the sediments that formed these strata.

Paleontological Resource Inventory

Levee, Channel, and Basin Deposits

Although CEQA does not define what is "a unique paleontological resource or site," Public Resources Code Section 21083.2 defines "unique archaeological resources" as:

> "…any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: [It] contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; it has a special and particular quality such as being the oldest of its type or the best available example of its type; [It] is directly associated with a scientifically recognized important prehistoric or historic event."



Source: Dupras 1988

Exhibit 4.7-4. **Mineral Resource Zones**

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Holocene deposits contain only the remains of extant, modern taxa (if any resources are present). Therefore, this formation is not considered to be paleontologically sensitive.

Modesto and Riverbank Formations

A records search of the University of California Museum of Paleontology (UCMP) collections database yielded information regarding a number of vertebrate fossil localities referable to either the Modesto or the Riverbank Formations (UCMP 2016). UCMP localities V-91247, V-91204, and V-76199 yielded specimens of Pleistocene-age mammoth in the vicinity of Cache Creek, from mixed sediments containing both the Modesto and Riverbank Formations. UCMP locality V-96015 near Willow Slough (approximately 1 mile south of the Planning Area) yielded 7 rodent specimens and 1 snake specimen from the Modesto Formation. UCMP Locality V-65241, east of Woodland, yielded one specimen of *Cervus* (red deer) in sediments referable to either the Riverbank or Modesto Formations. UCMP Locality V-5430 near Davis yielded one specimen of saber-toothed cat also from mixed sediments containing both the Modesto and the Riverbank Formations.

UCMP Localities V-6846, V-68141, V-74086, V-69129, V-6747, V-69129, and V-75126, all in Sacramento, yielded specimens of bison, camel, coyote, horse, Harlan's ground sloth, mammoth, packrat or woodrat, Sacramento blackfish, mole, garter snake, and gopher from sediments of the Riverbank Formation. In addition, fossil specimens recovered from excavation activities in the North Natomas area of the city of Sacramento in the Riverbank Formation included specimens of Harlan's ground sloth, bison, coyote, horse, camel, squirrel, antelope or deer, mammoth, and several types of plants (Hilton, Dailey, and McDonald 2000). Pleistocene-age mammoth remains were discovered during excavation of a Sacramento Municipal Utility District trench in Elk Grove (Kolber 2004). Mammoth remains recovered from that site consisted of a tusk, ribs, teeth, and portions of a shoulder blade.

Jefferson (1991) lists 6 known fossil localities in Yolo County, including UCMP V-3402 from Woodland. At this locality, a specimen of *Equus* (horse) was recovered. Although recorded from the Red Bluff Formation, Jefferson questions whether this is correct. Given the depth below the ground surface of the Red Bluff formation (i.e., 100–200 feet), and the fact that the UCMP database indicates that no other fossils have been recorded from the Red Bluff Formation, it is more likely that this fossil was recovered from the Modesto or Riverbank Formations. Jefferson (1991) also lists hundreds of sites throughout the Central Valley that have yielded vertebrate fossils recovered from Pleistocene-age sediments referable to the Riverbank and Modesto Formations.

Because of the number of vertebrate fossils that have been recovered from the Modesto and Riverbank Formations, they are considered to be of high paleontological sensitivity.

4.7.3 REGULATORY FRAMEWORK

4.7.3.1 FEDERAL

Earthquake Hazards Reduction Act, Public Law 95–124

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was substantially amended in November 1990 by the

National Earthquake Hazards Reduction Program Act (NEHRPA), which refined the description of agency responsibilities, program goals, and objectives.

The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and USGS.

4.7.3.2 STATE

Alquist-Priolo Earthquake Fault Zoning Act, California Public Resources Code Sections 2621–2630

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (California Public Resources Code Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting on structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act, California Public Resources Code Sections 2690–2699.6

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

EPA Administered Permit Programs: The National Pollutant Discharge Elimination System, Code of Federal Regulations Title 40 at Part 122

In California, the State Water Resources Control Board (SWRCB) administers regulations promulgated by the U.S. Environmental Protection Agency (55 Code of Federal Regulations 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the SWRCB's jurisdiction is administered through nine regional water quality control boards. Under these Federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. The general permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a storm water pollution prevention plan

(SWPPP) that addresses control of water pollution, including sediment, in runoff during construction. (See Section 4.9 of this EIR, "Hydrology and Water Quality," for more information about the NPDES and SWPPPs.)

California Building Standards Code, California Code of Regulations Title 24

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The State of California provides minimum standards for building design through the California Building Standards Code (CBC) (California Code of Regulations Title 24). Where no other building codes apply, Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC requires an evaluation of seismic design that falls into Categories A–F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires mitigation measures to be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix Chapter J of the CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

Surface Mining and Reclamation Act, California Public Resources Code Section 2710 et seq.

The Surface Mining and Reclamation Act (SMARA) (California Public Resources Code Section 2710 et seq.) was enacted by the California Legislature in 1975 to regulate activities related to mineral resource extraction. The act requires the prevention of adverse environmental effects caused by mining, the reclamation of mined lands for alternative land uses, and the elimination of hazards to public health and safety from the effects of mining

activities. At the same time, SMARA encourages both the conservation and the production of extractive mineral resources, requiring the State Geologist to identify and attach levels of significance to the state's varied extractive resource deposits. Under SMARA, the mining industry in California must plan adequately for the reclamation of mined sites for beneficial uses and provide financial assurances to guarantee that the approved reclamation will actually be implemented. The requirements of SMARA must be implemented by the local lead agency with permitting responsibility for the proposed mining project.

4.7.3.3 REGIONAL

Yolo County Cache Creek Area Plan

The Off-Channel Mining Plan for Lower Cache Creek (OCMP) together with the Cache Creek Resources Management Plan for Lower Cache Creek (CCRMP) comprise the Cache Creek Area Plan (CCAP). The CCAP describes approaches for managing riparian habitats along Cache Creek from the Capay Dam to Interstate 5 (I-5), in particular, for restoring habitats, reducing erosion, maintaining flood capacity, and improving water quality. Among the goals of the plan is to promote coordination of local, state, and federal regulation of activities within Cache Creek. The OCMP was established as a comprehensive and integrated planning framework for regulating and protecting the Cache Creek area. The OCMP accommodates gravel mining on the creek terraces (but not in-channel) while emphasizing habitat restoration, open space, and reclamation of mined lands to agricultural use. The OCMP describes a future groundwater recharge and storage program and allows for future recreation opportunities along the creek. The CCRMP is a comprehensive creek management plan that included agreements to discontinue commercial in-channel aggregate mining, established an improvement program for ongoing projects to improve channel stability, and guides future restoration of riparian habitat along creek banks.

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The General Plan contains numerous goals, policies, and actions to protect from impacts related to geology, soils, seismicity, and mineral resources. Policies in the General Plan encourage the use of resources while balancing impacts on the environment. In addition, the County promotes land development regulations that avoid unreasonable exposure to geologic hazards and requires a geotechnical analysis for construction in areas with potential geological hazards. Key policies are:.

- Policy CO-3.1 Encourage the production and conservation of mineral resources, balanced by the consideration of important social values, including recreation, water, wildlife, agriculture, aesthetics, flood control, and other environmental factors.

- Policy CO-3.2 Ensure that mineral extraction and reclamation operations are compatible with land uses both on-site and within the surrounding area, and are performed in a manner that does not adversely affect the environment.

- Policy CO-3.5 Preserve and protect the County's unique geologic and physical features, which include geologic or soil "type localities", and formations or outcrops of special interest.

4.7.3.4 LOCAL

City of Woodland 2002 General Plan

The 2002 General Plan included goals, policies, and implementation programs to protect Woodland residents, businesses, and visitors from the harmful effects of natural and man-made hazards. Policies related to geology, soils, minerals, and paleontological resources included requiring the preparation of technical reports and investigations in areas prone to geological or seismic hazards, complying with modern building construction codes, and designing new buildings and facilities to withstand seismic and geologic hazards.

- Policy 8.A.1. The City shall require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., groundshaking, liquefaction, expansive soils).
- Policy 8.A.2. The City shall require submission of a preliminary soils report, prepared by a registered civil (geotechnical) engineer and based upon adequate test borings, for every major subdivision.
- Policy 8.A.3. The City shall require that new structures intended for human occupancy be designed and constructed to minimize risk to the safety of occupants due to groundshaking.
- Policy 8.A.4. City shall continue to support scientific geologic investigations which refine, enlarge, and improve the body of knowledge on active fault zones, unstable areas, severe groundshaking, and other hazardous conditions in the Woodland area.
- Policy 8.A.5. The City shall require that new structures and alterations to existing structures comply with the current edition of the Uniform Building Code and the City Security Ordinance.
- Policy 8.A.6. The City shall support ways to improve the structural safety and stability of older structures of designated historic significance while maintaining their historical character through the use of the State Historic Building Code.
- Policy 8.A.7. The City shall continue to implement the Uniform Code for the Abatement of Dangerous Buildings to address older buildings that may at risk for seismic or geologic hazards.
- Policy 8.A.8. The City shall avoid siting of structures across soil materials of substantially different expansive properties.
- Policy 8.A.9. The City shall require the use of special bending-resistant designs where foundations must be slab-on-grade in areas with expansive soil.

City of Woodland Building Code, Woodland Municipal Code Chapter 6

The City of Woodland Building Division implements the 2013 California Building Standards Code and will implement future versions of the California Building Standards Code, as applicable (City of Woodland 2016). See the heading above, “California Building Standards Code.”

City of Woodland Grading Ordinance, Woodland Municipal Code Chapter 6, Article III

The purposes of the City's Grading Ordinance (Woodland Municipal Code Chapter 6, Article III) are to (1) establish standards and procedures for grading and excavation, and (2) ensure that projects will be free from harmful effects of runoff, including inundation and erosion, and that neighboring and downstream property will be protected from drainage problems resulting from new development. A grading permit is required for construction projects throughout the city. The permit application process includes submittal of grading plans, copies of any necessary state or federal permits, description and quantity of work, and dates when the work will be performed.

City of Woodland Subdivision Ordinance and Standard Specifications and Details, Woodland Municipal Code Chapter 21

The City's Subdivision Ordinance regulates the subdivision of property, requiring applicants to submit exhibits and improvement plans for all street work, drainage channels, structures, and underground utilities that demonstrate, among other items, consistency with the City's Standard Specifications and Details, also known as Engineering Standards: Design Standards, Standard Details and Construction Specifications. These standards apply to transportation, storm drainage, sewer, wastewater pumping, water distribution, graywater distribution, underground pipelines, and other improvements, and are designed, in part to avoid impacts related to geologic and seismic constraints.

City of Woodland Urban Storm Water Quality Management and Discharge Control Ordinance, Woodland Municipal Code Chapter 23D

Chapter 23D of the City's Municipal Code regulates discharges into the municipal storm drain system including compliance with applicable provisions of construction NPDES permit requirements.

4.7.4 Environmental Impacts and Mitigation Measures

4.7.4.1 Methodology

The analysis prepared for this EIR relied on published geologic literature and maps, NRCS soil survey data ("Web Soil Survey"), and University of California Museum of Paleontology (UCMP) data. The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the thresholds of significance presented in this section. Impacts associated with geology, soils, paleontological, and mineral resources that could result from construction and operational activities were evaluated based on existing conditions; expected construction practices; and the materials, locations, and duration of potential construction and related activities.

4.7.4.2 Thresholds of Significance

Geology, Soils, and Minerals

The basis for determining the significance of impacts for this analysis is based on the environmental checklist in Appendix G of the State CEQA Guidelines. The Proposed Project would result in a significant impact related to geology, soils, or mineral resources if it would do any of the following:

- expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death involving:
    - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
    - strong seismic ground shaking;
    - seismic-related ground failure, including liquefaction; or
    - landslides;
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property;
- have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;
- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state;
- result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan; or
- result in inundation by seiche, tsunami, or mudflow.

Note: Although the Appendix G checklist includes impacts related to inundation by seiche, tsunami, or mudflow under geologic, soils, and mineral resources, this EIR addresses those impacts in Section 4.9, "Hydrology, Flooding, and Water Quality."

Paleontological Resources

A project would have a significant effect on paleontological resources if it would:

- directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

A "unique paleontological resource or site" is one that is considered significant under the professional paleontological standards described below (Society of Vertebrate Paleontology 2010).

An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets one of the following criteria:

- a type specimen (i.e., the individual from which a species or subspecies has been described);
- a member of a rare species;
- a species that is part of a diverse assemblage (i.e., a site where more than one fossil has been discovered) wherein other species are also identifiable, and important information regarding life history of individuals can be drawn;
- a skeletal element different from, or a specimen more complete than, those now available for its species; or
- a complete specimen (i.e., all or substantially all of the entire skeleton is present).

The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates are generally common; the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource. Identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare.

4.7.4.3 ISSUES NOT DISCUSSED FURTHER

Loss of Availability of Mineral Resources—There are no areas of known mineral resources within the Planning Area (i.e., areas that have been classified as MRZ-2 by the California Division of Mines and Geology). Therefore, implementation of the land use changes consistent with the Proposed Project would have no impact related to the loss of availability of mineral resources, and this impact is not addressed further in this EIR.

Landslide Hazards—Slopes within and immediately adjacent to the Planning Area are nearly flat, ranging from 0–4 percent. Therefore, landslides would not pose a hazard for the Planning Area, and this impact is not addressed further in this EIR.

4.7.4.4 IMPACT ANALYSIS

IMPACT 4.7-1 Seismic Hazards Related to Surface Fault Rupture, Strong Seismic Ground Shaking, and Liquefaction. *Development and land use change consistent with the Proposed Project could subject people and structures to hazards associated with strong seismic ground shaking and liquefaction. Implementation of the policies in the 2035 General Plan, and compliance with relevant laws and ordinances, would reduce the potential for loss or damage from seismic hazards. This impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

There are no known fault traces within or adjacent to the Planning Area; therefore, surface fault rupture is unlikely. However, segments 3 and 4 of the Great Valley Fault are located approximately 6 miles west of the Planning Area. The GVFZ is a blind-thrust fault, meaning that it ruptures deep underneath the ground, rather than at the earth's surface. The Great Valley Fault was the source of the magnitude 6.4 Coalinga earthquake in 1983 and the magnitude 6.1 Kettlemen Hills earthquake in 1985. The GVFZ may also have been the source of the Vacaville-

Winters earthquake of 1892 (estimated magnitude of 6.75). The 2007 Working Group on California Earthquake Probabilities (2008) has projected that segments 3 and 4 of the GVFZ could produce an earthquake with a maximum moment magnitude of 6.6–6.8. An earthquake of this magnitude along the GVFZ or any of the other active faults in the Coast Ranges would result in strong seismic ground shaking within the Planning Area. Damage from strong seismic ground shaking is most likely to occur in areas where older buildings that consist of unreinforced masonry are located.

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. The CBC requires a site-specific evaluation of the liquefaction hazard; however, general areas subject to liquefaction hazard can be determined based on a review of groundwater well data and geologic maps. Groundwater elevations in the Woodland area have varied over time depending on the amount of precipitation and the amount of groundwater pumping. Historically, there have been areas of shallow groundwater in the Planning Area, and given that much of the Planning Area is composed of unconsolidated Holocene-age alluvial deposits and an active seismic source (the GVFZ) is located close to the Planning Area, liquefaction could occur in parts of the Planning Area during a large magnitude earthquake. The CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690–2699.6) addresses earthquake hazards from nonsurface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

The State earthquake protection law (Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC, which has been adopted by the City, requires an evaluation of seismic design that falls into Categories A through F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires addressing mitigation measures to be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures, depending on the specific site context and the type of construction proposed. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix Chapter J of the 2010 CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

Proposed Project

In addition to the above described existing regulations that would reduce impacts associated with seismic risks for proposed developments, the 2035 General Plan includes goals and policies that would help to reduce impacts.

- **Goal 8.A Seismic and Geologic Hazards.** Minimize the loss of life, injury, and property damage due to seismic and geological hazards.

- **Policy 8.A.1. Minimize Seismic Risk.** Continue to maintain and enforce appropriate standards to ensure new development is designed to meet current safety standards associated with seismic activity. Require public and private development to be located, designed, and constructed to minimize the risk of loss of life and injury in the event of a major earthquake or other natural disaster.

- **Policy 8.A.2. Geologic-Seismic Analysis.** Require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., groundshaking, liquefaction, expansive soils).

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Development planned as a part of the Proposed Project could lead to an increase in the number of people and structures exposed to hazards associated with strong seismic ground shaking and liquefaction. Although there are

no faults present within the city of Woodland, people and structures within city boundaries could experience shaking or liquefaction as a result of earthquakes in the Sacramento Valley.

However, implementation of Policy 8.A.1 and Policy 8.A.2, in combination with compliance with existing geologic and seismic regulations and policies, would reduce the potential for adverse impacts to people or structures related to seismic shaking and liquefaction. The Proposed Project would enforce existing seismic safety standards by requiring development to be designed to minimize risk related to earthquakes, and would require preparation of site-specific geotechnical reports to identify methods to reduce hazards.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.7-2 Impacts Related to Soil Erosion. *Land use change under the Proposed Project would result in substantial grading, excavation, and movement of earth associated with site preparation activities. These activities would increase soil erosion, especially from wind and water, and the potential for siltation of local drainages. Implementation of the policies in the Proposed Project, combined with relevant laws and ordinances, would reduce the potential for soil erosion. This impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Land use change under the Proposed Project, including the use of land for renewable energy generation facilities as indicated in 2035 CAP Strategy E-6, would involve grading, excavation, and earth-moving activities associated with construction of infrastructure and building and road foundations. Although these activities would occur in soils that have a low erosion hazard (because of the relatively flat topography and the high soil clay content), construction would result in the temporary disturbance of soil and would expose disturbed areas to winter storm events. Rain of sufficient intensity could dislodge soil particles from the soil surface. If the storm is large enough to generate runoff, localized erosion could occur. In addition, soil disturbance during the summer as a result of construction activities could result in soil loss because of wind erosion. The CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Chapter 6, Article III of the City of Woodland Municipal Code addresses erosion and sediment control under the City's Grading Ordinance. Project applicants must obtain a grading permit that includes evidence of environmental documentation under CEQA, along with a soils engineering report and an engineering geology report as required by Appendix Chapter 33 of the CBC, Section 3309.

The City addresses stormwater requirements for development projects through the *City of Woodland Stormwater Management Program* (City of Woodland 2004). Development projects in the City must comply with the NPDES permit issued by the Central Valley RWQCB. In order to reduce the transport of sediments and pollutants in stormwater, all projects must incorporate best management practices (BMPs) during construction activities. In addition, all projects must incorporate site design and source control measures during project operation. Project applicants are required to comply with the *Technical Guidance Manual for Stormwater Quality Control Measures* (City of Woodland 2004), which includes BMPs for erosion and sediment control.

Projects that disturb more than 1 acre of land must comply with the requirements in the SWRCB *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, as amended). The SWRCB general permit contains a numeric, two-part, risk-based analysis process. It also identifies the need to address changes in the hydrograph, defined as hydrograph modification or hydromodification, which could result from urbanization of a watershed, and requires low impact development (LID) controls to more closely mimic the pre-developed hydrologic condition. The SWPPP must include a site map and a description of construction activities, and must identify the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants.

Proposed Project

In addition to the above described existing regulations that would reduce impacts associated with seismic risks for proposed developments, the 2035 General Plan includes goals and policies that would help to reduce impacts.

- **Goal 5.I Stormwater Management.** Maintain the City's storm drainage system and promote best management practices to protect from flooding, enhance water quality, prevent infrastructure deterioration, and comply with State and federal laws.

- **Policy 5.I.3. Overland Flow Requirements in New Development.** Require development to provide for the overland flow of stormwater meeting or exceeding the City's standard design capacity of the storm drainage system. Overland flow waters should be conveyed over public streets where possible and should be at least one foot below building pad elevations and contain provisions for removal of silt and other contaminants.

- **Policy 5.I.4. Low Impact Development.** Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code. Such features may include, but are not limited to:

    - Canopy trees or shrubs to absorb rainwater;

- Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;
- Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
- Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
- On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
- Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

► **Policy 5.I.5. Prohibiting Grading Activities in Rainy Season.** Prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of storm drainage facilities.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Land use changes as a result of the Proposed Project have the potential to cause an increase in soil erosion due to increased grading, excavation, movement of construction vehicles, and other development-related construction activities. However, compliance with existing land use, stormwater, grading, and erosion control regulations and implementation of policies in the Proposed Project will reduce the impact by requiring applicants to follow BMPs, develop and implement a SWPPP, and obtain a grading permit, all of which are specifically designed to minimize soil erosion to the maximum extent feasible.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.7-3 Geologic Hazards Related to Unstable Soils, Expansive Soils, and Soil Unsuitable for Septic Systems. *Land use change under the Proposed Project would result in the placement of buildings and infrastructure in areas of unstable soils, soils with high a shrink-swell potential, and in locations where the soil is not appropriate for use with septic systems. With adoption and implementation of policies and the implementation program in the Proposed Project, combined with current construction regulations, this impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Land use change under the Proposed Project would result in the placement of buildings and infrastructure in areas of unstable soils, soils with high a shrink-swell potential, and in locations where the soil is not appropriate for use with septic systems. The CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

A review of NRCS (2015) soil data indicates that Planning Area soils have been rated with moderate limitations for construction of buildings and roads because of low soil strength, subsidence potential, and ponding and soil saturation. Construction in unstable soils could result in structural damage to buildings, roads, and bridges.

Expansive soils shrink and swell as a result of moisture change. These volume changes can result in damage over time to building foundations, underground utilities, and other subsurface facilities and infrastructure if they are not designed and constructed appropriately to resist the damage associated with changing soil conditions. Based on a review of NRCS (2015) soil survey data, most of the soil types in the Planning Area have a moderate to very high shrink-swell potential, indicating that the soils are expansive.

Soils in the Planning Area have a low permeability rate and a high water holding capacity and thus tend to "perc" too slowly, rendering them unsuitable for conventional septic systems. Based on a review of NRCS (2015) soil data, the Planning Area is rated with a severe limitation because the soils are unsuitable for conventional septic systems.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The City has adopted the CBC. The CBC includes engineering practices that require special design and construction methods to reduce or eliminate hazards from construction in expansive soil. Compliance with the CBC ensures appropriate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage-related requirements to reduce seasonal fluctuations in soil moisture content. Construction in soils of low strength is also addressed in the CBC through implementation of soil engineering tests and amending and compacting soils.

Proposed Project

In addition to the above described existing regulations that would reduce impacts associated with unstable soils and on-site wastewater treatment for proposed developments, the 2035 General Plan contains goals and policies that would help to reduce impacts.

- **Goal 5.H Wastewater Collection, Treatment, Disposal, and Reuse.** Ensure that adequate wastewater collection, treatment, recycling and disposal facilities are provided in a timely fashion to serve existing and future needs.

- **Policy 5.H.6. Connection to Sewer System.** Require all sewage generators within its service area to connect to the City's system, except those areas where the City has determined a connection to the City's sewage collection system would be infeasible.

- **Goal 8.A Seismic and Geologic Hazards.** Minimize the loss of life, injury, and property damage due to seismic and geological hazards.

- **Policy 8.A.2. Geologic-Seismic Analysis.** Require the preparation of a soils engineering and geologic-seismic analysis prior to permitting development in areas prone to geological or seismic hazards (i.e., groundshaking, liquefaction, expansive soils).

- **Policy 8.A.3. Expansive Soils.** Evaluate and avoid siting of structures across soil materials of substantially different expansive properties. Require appropriate design specification including special slabs where foundations are in areas of expansive soils.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Buildings and structures constructed as a result of the Proposed Project could potentially be placed on unstable soils, expansive soils, or soils unsuitable for septic systems within the Planning Area. Based on a review of soil data, the Planning Area was found to contain unstable soils with low strength, subsidence potential, and ponding; expansive soils with high shrink-swell potential; and soils unsuitable for septic systems due to their low permeability rates.

Implementation of policies in the Proposed Project combined with current geologic and seismic laws, regulations, and policies would reduce impacts related to unstable and expansive soils by requiring construction follow seismic stability standards, prepare site-specific geotechnical reports to identify soil shrink-swell potential, and follow design specifications to prevent impacts associated with these limitations.

However, the Proposed Project does not contain policies which reduce impacts associated with placement of buildings and structures on soils unsuitable for septic systems. Policy 5.H.6 requires sewage generators to connect

to the municipal sewer system where possible; however, it does not ensure minimization of risk associated with soils unsuitable for septic systems in areas where connection to the municipal sewer system is not possible. Mitigation Measure 4.7-3a below adds an implementation program to the 2035 General Plan which ensures soils used for leach fields and septic systems/on-site wastewater treatment are analyzed and appropriate design measures are followed.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.7-3a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Soils 1)

- Where soils are proposed for use as leach fields associated with wastewater treatment, the City shall require a site-specific evaluation by a licensed geotechnical engineer regarding the soil suitability, including a perc test, as appropriate.

- All septic systems or other forms of on-site wastewater treatment and disposal facilities shall be designed by a licensed geotechnical or civil engineer. On-site wastewater treatment systems shall be designed to meet the following parameters:

  - provide available effective absorptive area in both primary and reserve disposal fields;

  - provide appropriate separation between the disposal field bottom and groundwater or a restrictive soil layer;

  - factor the ground slope in both the primary and reserve disposal field areas;

  - factor the influent wastewater strength and quantity in wastewater system design;

  - accommodate requirements for setbacks from wells, surface waters, and property boundaries; and

  - provide treatment of wastewater such that it does not adversely affect water quality or endanger public health.

With implementation of these changes, impacts would be reduced since the City's requirement for site-specific geotechnical reports will identify specific methods to reduce hazards from construction in unstable and expansive soils, and because on-site wastewater treatment systems would be appropriately designed and engineered.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation.**

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.7-4 Loss or Damage to Paleontological Resources During Earth-Moving Activities. *Paleontological resources could occur in the Planning Area and construction activities under the Proposed Project could result in damage to, or destruction of unknown subsurface paleontological resources. Paleontological resources could occur in Pleistocene-age sediments that underlie portions of the Planning Area. Construction activities in these areas could result in damage to, or destruction of unknown subsurface paleontological resources. With the policies and implementation program in the Proposed Project, this impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The Planning Area is underlain by Holocene- and Pleistocene-age alluvium. Holocene deposits contain only the remains of extant, modern taxa. The Pleistocene alluvium consists of the Modesto and Riverbank Formations.

a. East Alternative–These paleontological sensitive Modesto and Riverbank Formations exist in SP-3, the light industrial overlay area east of Interstate 5, SP-1A, and SP-2.

b. South Alternative– These paleontological sensitive Modesto and Riverbank Formations exist in the northern portion of the Planning Area, including SP-3, in the light industrial overlay area east of Interstate 5, SP-1A, and SP-1B.

Vertebrate fossils found in these alluvial deposits are representative of the Rancholabrean land mammal age from which many taxa are now extinct and include, but are not limited to bison, mammoth, ground sloths, saber-toothed cats, dire wolves, cave bears, rodents, birds, reptiles and amphibians (Jefferson 1991). A search of the UCMP database as well as other professional publications indicates that vertebrate fossil remains have been recovered from these rock formations throughout the Central Valley and in the vicinity of the City of Woodland. For example, UCMP localities V-91247, V-91204, and V-76199, near Cache Creek, yielded specimens of Pleistocene-age mammoth from mixed sediments containing both the Modesto and Riverbank Formations. UCMP locality V-96015 near Willow Slough (approximately 1 mile south of the city) yielded 7 rodent specimens and 1 snake specimen from the Modesto Formation. UCMP Locality V-65241, east of Woodland, yielded one specimen of *Cervus* (red deer) in sediments referable to either the Riverbank or Modesto Formations. Because of the number of vertebrate fossils recovered from the Modesto and Riverbank Formations, both are considered to be paleontology sensitive.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The 2035 General Plan contains goals and policies to reduce impacts to unique paleontological resources.

- **Goal 7.E Preserve Prehistoric, Cultural, and Archaeological Resources.** Preserve and protect areas and sites of prehistoric, cultural, and archaeological significance.

- **Policy 7.E.1. Potentially Significant Sites.** Ensure that development avoids potential impacts to sites suspected of being archeologically, paleontologically, or culturally significant.

- **Policy 7.E.2. Discovery of Resources.** If cultural, archaeological, or paleontological resources are discovered during construction, ensure their evaluation and protection, as appropriate, in accordance with applicable federal and State laws and regulations.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Based on a records search in the UCMP database, various vertebrate specimens have been discovered within the vicinity of Woodland and render the Planning Area potentially paleontologically sensitive.

Policies in the Proposed Project would reduce the potential for impacts to paleontological resources by ensuring development avoids impacts to potentially paleontologically significant sites and follows appropriate procedures if resources are discovered during construction. However, these policies cannot guarantee that development as a result of the Proposed Project would not result in damage or destruction to paleontological resources of significance.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.*7-4 – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Paleontological Resources 1)*

- Prior to the start of earthmoving activities that would disturb 1 acre of land or more within the Riverbank or Modesto Formations, the project applicant shall inform all construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered.

- If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the find and notify the City of Woodland Community Development Department.

- The project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan. The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum curation for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.

Mitigation Measure 4.7-4 would create a new implementation program that contains additional resource disturbance prevention activities and a cease-work requirement upon paleontological resource discovery. With implementation of these changes, impacts would be reduced because earth-moving activities in paleontologically sensitive rock formations would be subject to requirements consisting of construction worker personnel education, halting of work in the vicinity of any fossil specimen(s) uncovered, and preparation of a recovery plan for said specimen(s).

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation.**

b. South Alternative– The impact is considered **less than significant with mitigation.**

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4.8 HAZARDOUS MATERIALS AND TOXICS

4.8.1 INTRODUCTION

This section discusses and evaluates the potential environmental impacts related to hazardous materials, airport hazards, and fire hazards that may result from the Proposed Project. This section describes potential hazards related to hazardous materials, airports, and wildfires, and also includes information about emergency preparedness in Woodland. Geologic and seismic hazards are discussed in Section 4.7 of this EIR, "Geology, Soils, Minerals, and Paleontological Resources"; flood hazards, dam failure, tsunamis, and water quality are discussed in Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality."

This section is based on a review of relevant information from the Department of Toxic Substance Control (DTSC) EnviroStor hazardous waste facility and cleanup sites databases from 2013; the State Water Resources Control Board (SWRCB) GeoTracker permitted underground storage tanks (UST) and cleanup sites databases from 2016; and the California Department of Forestry and Fire Protection (CAL FIRE) mapped fire threat potential for California from 2009. These data sources appropriately characterize the baseline for the purposes of this EIR.

There were no responses to the NOP regarding topics addressed in this section.

4.8.2 ENVIRONMENTAL SETTING

4.8.2.1 HAZARDOUS MATERIALS

Hazardous materials include a wide variety of substances commonly used in households, businesses, and agriculture. Used motor oil, paint, solvents, lawn care and gardening products, household cleaners, gasoline, and refrigerants are among the diverse range of substances classified as hazardous materials. Nearly all businesses and residences generate some amount of hazardous waste. Certain businesses and industries generate larger amounts of such substances, including gas stations, automotive service and repair shops, printers, dry cleaners, and photo processors. Hospitals, clinics, and laboratories generate medical waste, much of which is also potentially hazardous. Some hazardous materials present a radiation risk. Radioactive materials, if handled improperly or radiation accidentally released into the environment can be dangerous because certain types of radiation can cause harmful effects on the human body.

Agricultural uses in Yolo County employ a range of hazardous materials, including fertilizers, herbicides, fungicides, and insecticides. These materials can impact humans directly during the time of application, through "drift" of the pesticide through the air from the target area to other areas, and through the residue of these materials in the soil, air and water. These materials can cause sickness and death, depending on the level of exposure, the toxicity of the pesticide, and the health condition of the person. According to federal regulations (50 CFR Part 156), every pesticide product must have a label with use instructions and precautions that must be read and followed.

4.8.2.2 SITES

Releases, leaks, or disposal of chemical compounds, such as petroleum hydrocarbons, on or below the ground surface, can lead to contamination of underlying soil and groundwater. Disturbance of a previously contaminated

area through grading or excavation operations could expose the public to health hazards from physical contact with contaminated materials or hazardous vapors. Improper handling or storage of contaminated soil and groundwater can further expose the public to these hazards, or potentially spread contamination through surface water runoff or air-borne dust.

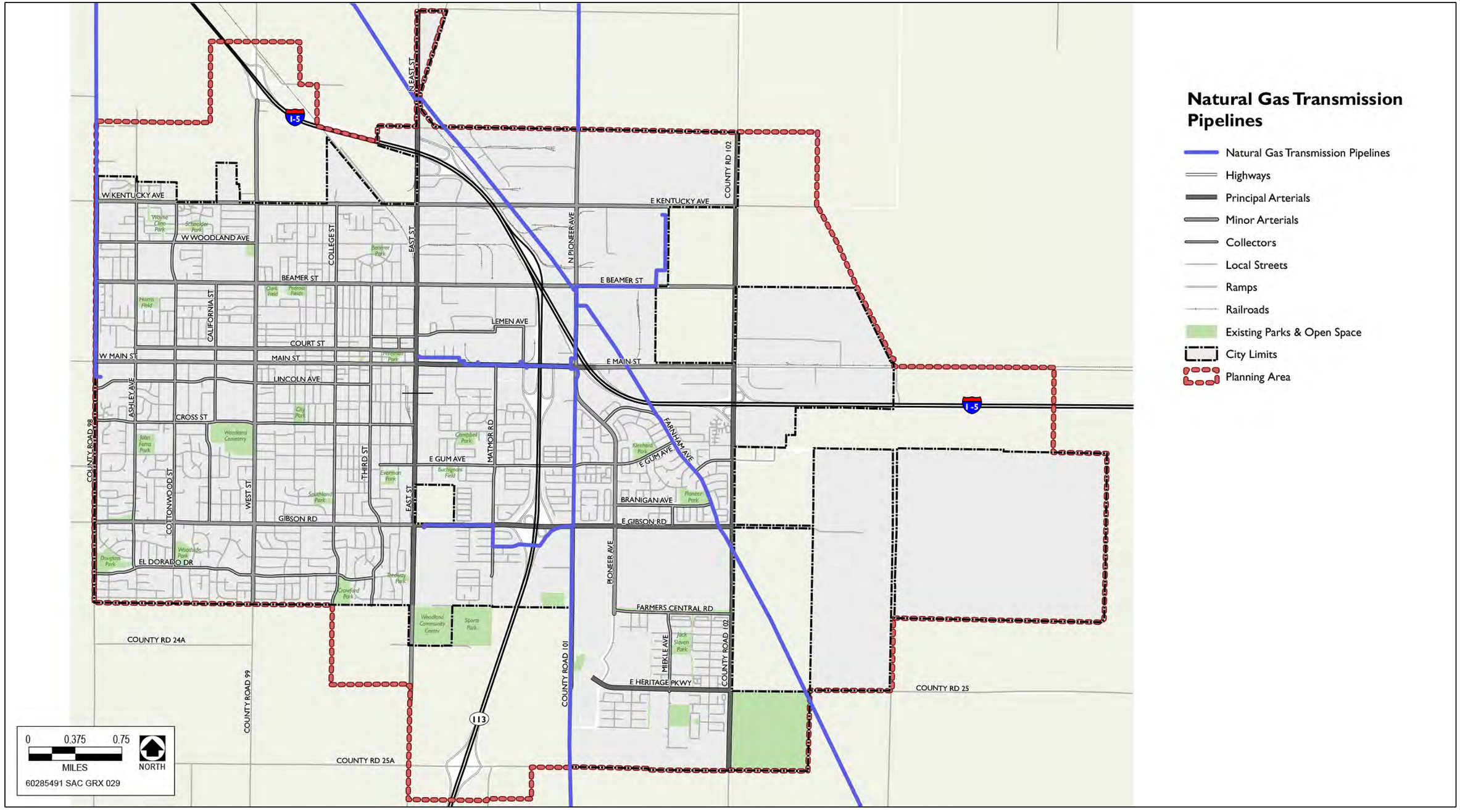
Sites within the Planning Area with potential environmental hazards were identified based on information downloaded from DTSC EnviroStor hazardous waste facility and cleanup sites databases, as well as the SWRCB GeoTracker permitted Underground Storage Tanks (USTs) and cleanup sites databases. The EnviroStor databases provide a listing of sites in California, including School Investigation sites, hazardous waste facilities and cleanup sites (DTSC 2016). The GeoTracker databases provide a listing of sites in California that are UST-permitted sites and cleanup sites (SWRCB 2016). Information in these listings includes the location and status of the sites.

The sites with known or suspected release of hazardous materials to soil and groundwater, and where current cleanup activities monitored by the SWRCB or the DTSCs are active, are shown in Exhibit 4.8-2 and listed in Table 4.8-1. There are 101 sites with hazardous or potentially hazardous listings identified within the city. There are 20 Clean Up Program sites, two State Response sites, and three Voluntary Cleanup sites, all of which reported to contain known releases of contamination. There are 67 Leaking Underground Storage Tank (LUST) sites where prevention, cleanup, or enforcement of water quality is occurring. In addition, there are three School Investigation sites that were evaluated by DTSC for possible hazardous materials contamination and do not need further action; one land disposal site that where hazardous waste might be disposed; four sites under Evaluation; and one Corrective Action site. The sites are primarily located in the industrial area and along Main Street and East Street. Some contaminated sites are on vacant parcels or properties with the potential to redevelop. Contamination does not render these sites unusable, but may require time and funding for cleanup, and in some cases, may limit allowable land uses.

4.8.2.3 HAZARDOUS MATERIALS TRANSPORT

Major transportation routes within Woodland include Interstate 5 (I-5) and State Route 113 (SR 113), surface streets, the California Northern Railroad, and the Sierra Northern Railway. Natural gas pipelines also extend throughout Woodland, roughly following I-5 to the northwest and Farnham Avenue to the southeast; along North Pioneer Avenue and Bourn Drive from East Beamer Street to the southern City limits; Main Street and East

Gibson Road between Bourn Drive and East Street; and County Road 98 from I-5 to West Main Street. These transportation routes are used to transport hazardous materials from suppliers to users as shown in Exhibit 4.8-1. Transportation accidents involving hazardous materials could occur on any of the routes, potentially resulting in explosions, physical contact by emergency response personnel, environmental degradation, and exposure to the public.



Source: City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013; Dyett & Bhatia 2013

Exhibit 4.8-1. **Natural Gas Transmission Pipelines**

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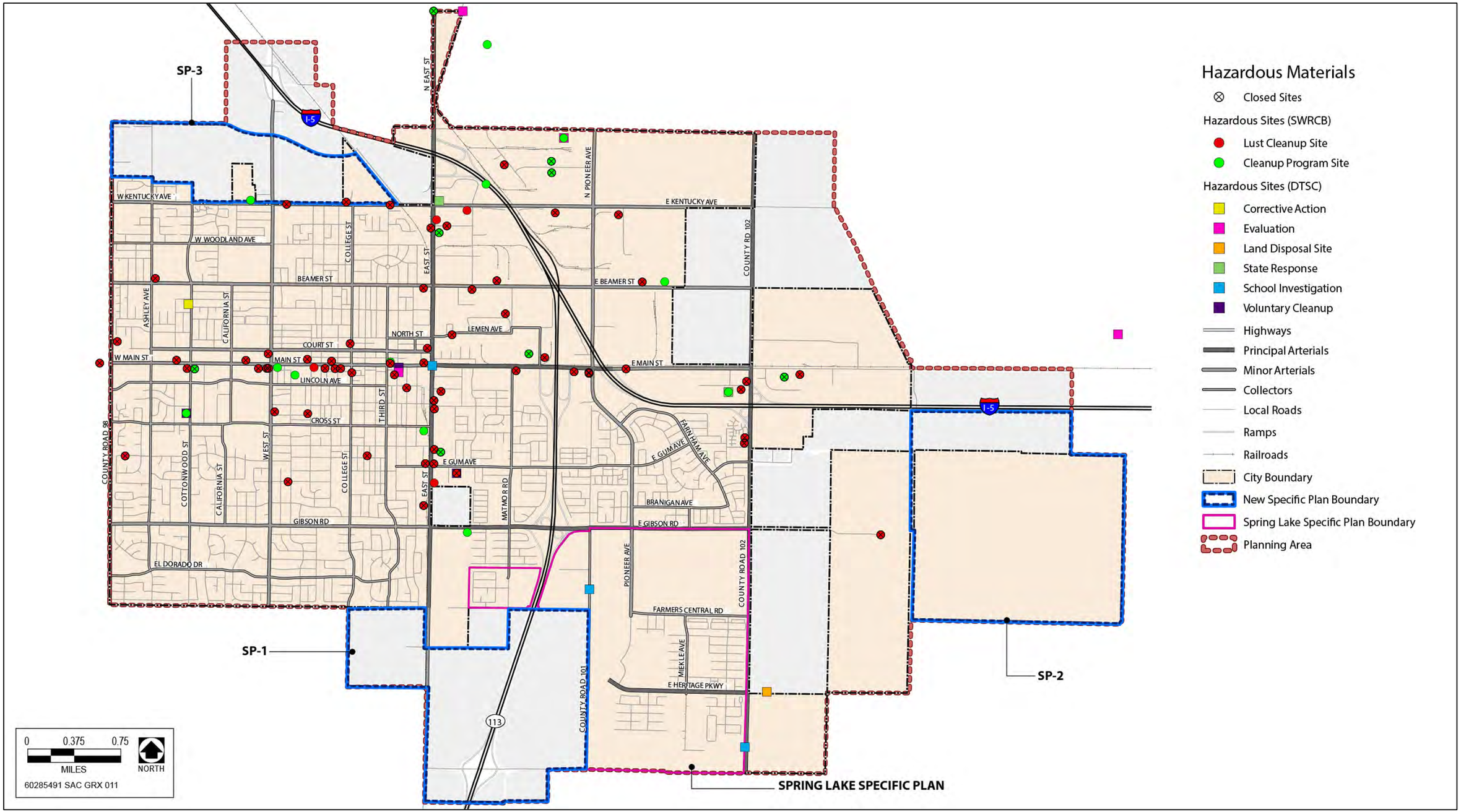

Exhibit 4.8-2. **Hazardous Materials**

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Table 4.8-1. Hazardous Materials Sites in Planning Area		
Site Name[1]	Address	Status[2]
Clean Up Program Site		
Agriform Farm Supply Co.	Highway 113 & CR 18c	Completed - Case Closed
Agronomics Yolo County	71 W. Kentucky Avenue	Open - Inactive
Ames Company, Inc.	1485 Tanforan Avenue	Completed - Case Closed
Barber Cashew Supply Corp.(Former)	350 Matmor Road	Completed - Case Closed
Cache Creek Chemicals Inc.	40261 CR 18c (Off 113 N @ I-5)	Open - Inactive
Coen Company Woodland Facility	1510 Tanforan Avenue	Completed - Case Closed
Cottonwood Plaza Shopping Center	628 Cottonwood Street	Open - Verification Monitoring
Electric Garage Company	801 Main Street	Open - Inactive
Former Lee Stabilization Facility	2086 East Main Street	Completed - Case Closed
Former Midas	22 Main Street	Open - Site Assessment
Former Service Cleaners - County Fair Mall	1296 East Gibson Road	Open - Verification Monitoring
Former Sunshine Cleaners	120 Main Street	Open - Remediation
I-5/State Route 113 Connector Project	I-5/State Route 113	Open - Site Assessment
Interstate Oil Company (Former Norcal Petroleum)	183 W. Main Street	Completed - Case Closed
Norcal Cardlock	801 East Street	Completed - Case Closed
Roy Riegels Chemicals	7185 East Beamer Street	Open - Inactive
RSI Drilling Woodland	220 North East Street	Completed - Case Closed
Tosco Woodland Bulk Plant	1152 Cross Street	Open - Verification Monitoring
Western Wood Treating	1492 Churchill Downs Ave	Open - Verification Monitoring
Wilbur Ellis	1962 Hays Lane	Open - Inactive
Corrective Action		
Yolo County Department of Agriculture	70 Cottonwood Street	No Further Action
Evaluation		
Cache Creek Settling Basin	Yolo County, east of Woodland	Refer: RWQCB
PG&E Manufactured Gas Plant Sv-Vv-Wod	SE Corner of Fourth & Main Streets	Inactive - Needs Evaluation
Western Wood Treating, Inc.	1492 Churchhill Downs Avenue	Refer: RWQCB
Agriform Farm Supply, Inc.	40189 CR 18c	Refer: RWQCB
Land Disposal Site		
Old Woodland Landfill	CR 102 @ CR 25	Open
LUST Cleanup Site		
A-Mart #716	1592 Main Street East	Completed - Case Closed
Adams Grain Case #1	1020 East Street (Previously Listed as CR 102)	Completed - Case Closed
Adams Trucking	1470 Kentucky Avenue East	Completed - Case Closed
BC Gas	450 CR 102	Completed - Case Closed
BC Stocking Cardlock Woodland	341 Industrial Way	Completed - Case Closed
Bechtold Gas Station	454-456 East Street North	Open - Remediation

Table 4.8-1. Hazardous Materials Sites in Planning Area

Site Name[1]	Address	Status[2]
Big J's Gas & Food (Former) Sigma Gas	845 East Street	Completed - Case Closed
Bj Titon Svcs.	80 Bee Jay Way	Completed - Case Closed
Carranza's Exxon	1123 Main Street East	Completed - Case Closed
Celoni Oil	1121 Gum Avenue	Completed - Case Closed
Central Motors (Former)	433 College Street	Completed - Case Closed
Century Buick Pontiac Inc.	333 Main Street (Aka: 325/401/320 Elm Street)	Completed - Case Closed
Chevron #9-0379	304 Main Street	Completed - Case Closed
Chevron #9-2597	18430 CR 102 (I-5 & CR 102)	Completed - Case Closed
CHP	1980 CR 23	Completed - Case Closed
Crary/Harper Property	611 Bartlett Avenue	Completed - Case Closed
Denise Schaeffer	163 Park Avenue	Completed - Case Closed
Don Goodner Upholstery	1038 West Beamer Street	Completed - Case Closed
Electric Garage Company	801 Main Street	Completed - Case Closed
Elm Ford	346 Main Street	Completed - Case Closed
Epstein Property	236-238 Main Street West	Completed - Case Closed
Esc Partnership	1059 Court Street	Completed - Case Closed
Exxon #7-0123	5 Main Street West	Completed - Case Closed
Facility #2584	1230 Lemen Avenue	Completed - Case Closed
Faria Property	875 Southwood Drive West	Completed - Case Closed
Fowler Paint Co	80 Main Street West	Completed - Case Closed
George Aoki	37899 Highway 16	Completed - Case Closed
Hartman Brothers	104 Matmor Street	Completed - Case Closed
Hays Trucking (1225 Oak); P3+P4	613 East Street	Completed - Case Closed
Heritage Motors/Epperson	204 College Street	Completed - Case Closed
Interstate Oil Co., Inc. Cardlock (Former Norcal Petroleum Cardlock)	801 East Street	Completed - Case Closed
J.R. SS	1400 Main Street East	Completed - Case Closed
Jackpot Food Mart	615 East Street	Completed - Case Closed
Lasher Auto Center	1680 Main Street East	Completed - Case Closed
Layne Western	275 CR 98	Completed - Case Closed
Los Rios Farms	1990 Hays Lane	Completed - Case Closed
M&M Mini-Mart	1085 East Street	Open - Verification Monitoring
Mike Adams Case #2 (Former Adams Grain)	1020 East Street (Former CR 102)	Open - Remediation
Mobil Chemical Co	1351 Beamer Street East	Completed - Case Closed
More Quality Foods	1244 East Beamer Street	Completed - Case Closed
Neba Payne	173 Main Street	Completed - Case Closed
Neilson Nursery	617 West Street	Completed - Case Closed

Table 4.8-1. Hazardous Materials Sites in Planning Area		
Site Name[1]	Address	Status[2]
Nella #6	400 Main Street	Completed - Case Closed
Nutridge Farms	1232 Alice Street	Completed - Case Closed
Pauls Signal Oil Station	39496 West Kentucky Avenue	Completed - Case Closed
Peart/Chevron P1+P2	613 East Street	Completed - Case Closed
Pepsi Cola Co	414 4th Street	Completed - Case Closed
PG&E	50 Kentucky Avenue	Completed - Case Closed
Pirmi	845 Kentucky Avenue East	Completed - Case Closed
R.C. Collet, Inc.	2290 Main Street East	Completed - Case Closed
Rice Growers Woodland Plant	1620 Kentucky Avenue East	Completed - Case Closed
Rite Aid	1755 East Beamer Street	Completed - Case Closed
Roy E Lay Trucking	1218 Kentucky East Avenue	Open - Remediation
Russel Stover	500 Santa Anita Drive	Completed - Case Closed
Sac/Yolo Mosquito Vector	1234 Fortna Avenue	Completed - Case Closed
Servisoft	49-45 Main Street West	Completed - Case Closed
Shell	300 West Street	Completed - Case Closed
Tesoro Site No. 67119 (Former Beacon #3447)	3 Main Street West	Completed - Case Closed
Tosco - Facility #0164	208 Main Street	Open - Remediation
Tosco - Facility #6436	1556 Main Street East	Completed - Case Closed
Valero Truck Station - Case #2 (Aka) A-Mart #716	1592 East Main Street	Completed - Case Closed
Woodland Coop Rice Growers	211-215 East Street North	Completed - Case Closed
Woodland Maintenance Facility	205 Main Street West	Completed - Case Closed
Woodland Sewer Treatment Plant	42929 CR 24	Completed - Case Closed
Woodland Warehouse	509 5th Street	Completed - Case Closed
Yolo County Fair	1250 Gum Avenue	Completed - Case Closed
Yolo County PWD	292 Beamer Street West	Completed - Case Closed
School Investigation		
Sycamore Ranch Elementary School	Gibson Road/Ogden Street/Branigan Street	No Further Action
Woodland High School	19123 CR 101	No Further Action
Heritage Park School Site	CR 102/Heritage Parkway	No Further Action
State Response		
Delta Trucking	1201 E Kentucky Avenue	Certified
Wilbur Ellis	1962 Hays Lane	Certified
Voluntary Cleanup		
Cottonwood Cleaners	628 Cottonwood Street	Inactive - Needs Evaluation
PG&E Former Woodland MGP	904-906 Main Street & 419-421 4th Street	Active
Woodland Fairgrounds	1250 E Gum Avenue	Refer: Local Agency

Table 4.8-1. Hazardous Materials Sites in Planning Area		
Site Name[1]	Address	Status[2]

Notes:

1. Site Definitions:
   - Cleanup Program Site: regulates and oversees the investigation and cleanup of 'non-federally owned' sites where recent or historical unauthorized releases of pollutants to the environment, including soil, groundwater, surface water, and sediment, have occurred.
   - Land Disposal Site: Waste management units where waste is discharged on land for treatment, storage, and disposal. These sites include waste piles, surface impoundments, and landfills.
   - LUST Cleanup Site: The prevention, cleanup, and enforcement of water degradation or pollution associated with underground storage tanks. Underground storage tanks are defined as one or more tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground.
   - School Investigation: Identifies proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. School sites are further defined as "Cleanup" (remedial actions occurred) or "Evaluation" (no remedial action occurred) based on completed activities. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.
   - State Response: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.
   - Voluntary Cleanup: A DTSC program that allows motivated parties who are able to fund the evaluation, investigation, cleanup, and DTSC's oversight to move ahead at their own pace to investigate and remediate their sites.
2. Status Definitions:
   - Certified: Identifies completed sites with previously confirmed release that are subsequently certified by DTSC as having been remediated satisfactorily under DTSC oversight.
   - Completed – Case Closed: A closure letter or other formal closure decision document has been issued for the site.
   - Inactive – Action Required: Identifies non-active sites where, through a Preliminary Endangerment Assessment (PEA) or other evaluation, DTSC has determined that a removal or remedial action or further extensive investigation is required.
   - Inactive – Needs Evaluation: Identifies non-active sites where DTSC has determined a PEA or other evaluation is required.
   - Open – Inactive: No regulatory oversight activities are being conducted by the Lead Agency.
   - Open – Remediation: An approved remedy or remedies has/have been selected for the impacted media at the site and the responsible party (RP) is implementing one or more remedy under an approved cleanup plan for the site.
   - Open – Site Assessment: Site characterization, investigation, risk evaluation, and/or site conceptual model development are occurring at the site.

Source: GeoTracker, State Water Resources Control Board (SWRCB); Envirostor, Department of Toxic Substances Control (DTSC) 2016.

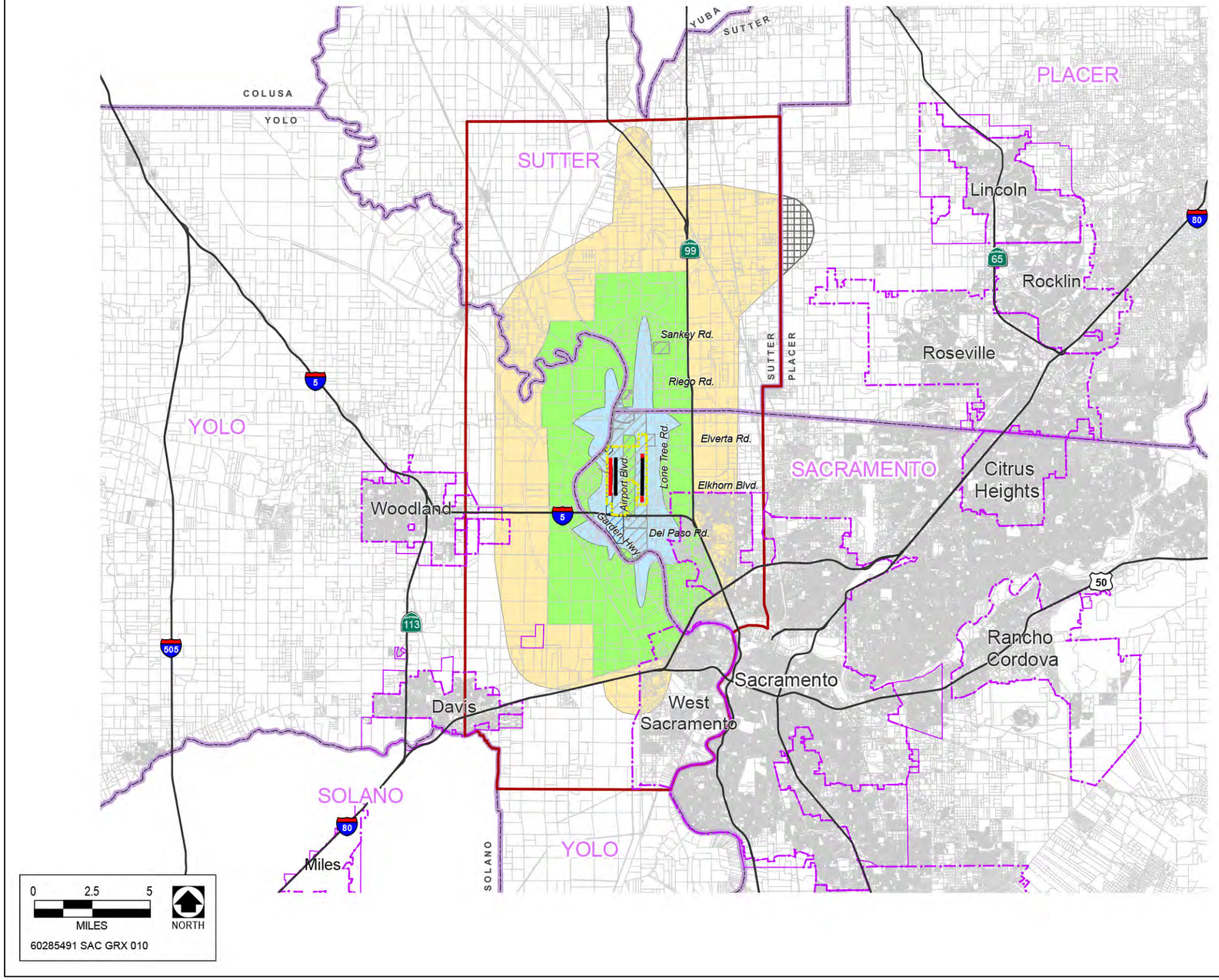
4.8.2.4 AIRPORT HAZARDS

Sacramento International Airport (SMF) is located 10 miles east of Downtown Woodland. It was opened in 1967 and now services domestic and international flights. It serves 12 major carriers and has two terminals. The western boundary of the SMF Influence Area[1] travels north-south through Woodland, following the western edge of the property that houses the City's Water Pollution Control Facility (wastewater treatment plant), as shown in Exhibit 4.8-2.

The Sacramento Area Council of Governments (SACOG) serves as the Airport Land Use Commission (ALUC) for Sacramento, Sutter, Yuba, and Yolo counties. As shown in Exhibit 4.8-3, there is a small portion of the eastern side of the Planning Area within the "Secondary Approach Area" defined in the Airport Land Use Compatibility Plan (ALUCP) as having "locations where aircraft regularly fly below 3,000 feet."

Two other airports are located near Woodland. The Yolo County Airport is located 8.5 miles to the southwest of Woodland. The Yolo County Airport has one runway that is mostly used for recreational and agricultural purposes with few commercial flights. The Watts-Woodland Airport is a privately-owned airport located 5.5 miles west of the city with one runway.

[1] Airport Influence Areas are defined as the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses.



ALUCP Overflight Compatibility

Legend

- Sacramento International Airport (SMF)
- Future Property Acquisition
- Existing Runway
- Future Runway
- Airport Operations Area (future)
- County Boundary
- City Boundary
- City Sphere of Influence

ALUC Policy Boundaries

- Airport Influence Area[2]
- Primary Approach Area[3]
- Traffic Pattern Area[4]
- Secondary Approach Area[5]
- Placer County impacts shown for informational purposes only

Notes

1. See Section 3.5 for policies applicable in each zone.

2. Airport Proximity Disclosure applies within entire Airport Influence Area. See Policy 3.5.3

3. Includes locations within CNEL 60dB contour, Safety Zones 1 through 5, and Critical Airspace Zone. Avigation Easement Dedication required. See Policy 4.1.1

4. Includes locations where aircraft regularly fly below 2,000 feet. Avigation Easement Dedication required. See Policy 4.1.1

5. Includes locations where aircraft regularly fly below 3,000 feet. Recorded Overflight Notification required. See Policy 3.5.2

Exhibit 4.8-3. **Compatibility Policy Map: Overflight**

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4.8.2.5 FIRE HAZARDS

Urban Fires

Urban fires are fires that begin in buildings in urban centers. They are typically localized, but have the potential to spread to an adjoining building, especially in areas where homes and/or business facilities are clustered close together. Structural fire risk in Woodland is greatest in older structures and neighborhoods built before modern building codes for fire safety and building systems were in place.

Wildland Fires

Wildland fires resulting from either natural or manmade causes occur in forest, brush, grasslands, or undeveloped areas. Their potential for damage is dependent on the extent and type of vegetation, known as surface fuels, as well as weather and wind conditions.

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California. CAL FIRE ranks fire threat according to the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include little or no fire threat, moderate, high, and very high fire threat. There are no State Responsibility Areas or Very High Fire Hazard Severity Zones located within the Planning Area or its vicinity. While the majority of the Planning Area is identified to have little to no wildland fire threat, some areas along County Road 102 are identified as Local Responsibility Areas with a moderate fire threat. Exhibit 4.8-4 shows existing fire hazard severity zones within the Planning Area and its vicinity.

4.8.2.6 EMERGENCY RESPONSE

See Section 4.12 of this EIR, “Public Services and Recreation” for a full description of fire and police services in the Planning Area.

4.8.3 REGULATORY FRAMEWORK

4.8.3.1 FEDERAL

Environmental Protection Agency

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust

fund to provide for clean up when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List, which is a list of contaminated sites warranting further investigation by the U.S. EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

United States Department of Transportation

Transportation of chemicals and hazardous materials are governed by the U.S. Department of Transportation, which stipulates the types of containers, labeling, and other restrictions to be used in the movement of such material on interstate highways.

Federal Emergency Management Agency

The primary mission of the Federal Emergency Management Agency is to reduce the loss of life and property and to protect the nation from all hazards, including natural disasters, acts of terrorism, and other man-made disasters, by leading and supporting a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

Disaster Mitigation Act

The Disaster Mitigation Act of 2000 requires a state mitigation plan as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Disaster Mitigation Act also established a new requirement for local mitigation plans.

Emergency Planning and Community Right-To-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA) of 1986 was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards proposed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and Community Right-to-Know reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR Appendix B). The Community Right-to-Know provisions help increase the public’s knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (HMTA) of 1975 was created to provide adequate protection from the risks to life and property related to the transportation of hazardous materials in commerce by improving regulatory enforcement authority of the Secretary of Transportation.

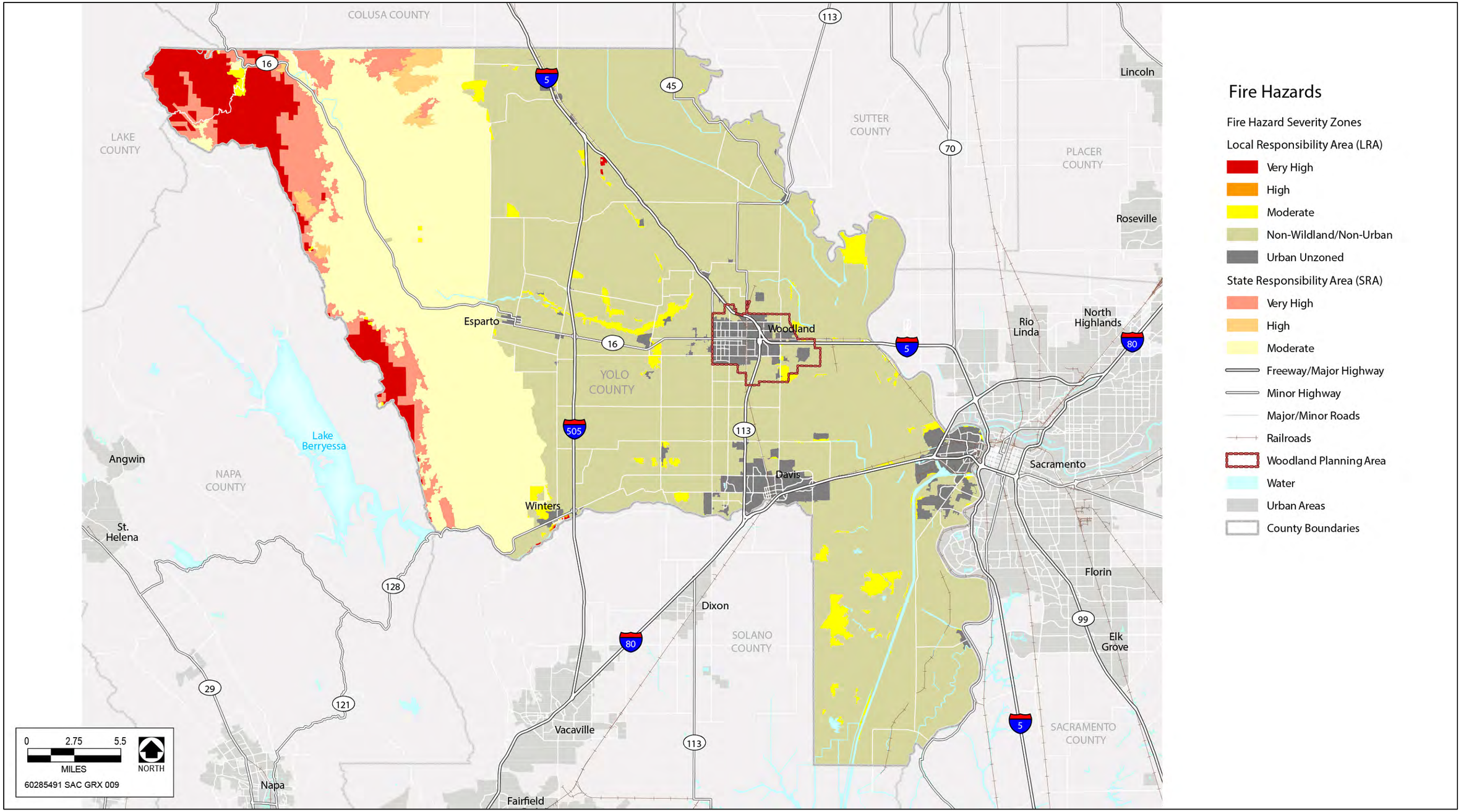

Exhibit 4.8-4. **Fire Hazards**

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4.8.3.2 STATE

California Environmental Protection Agency, Executive Order W-5-91

The California Environmental Protection Agency (CalEPA) was established in 1972 by the State of California to establish a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources.

Department of Pesticide Regulation

The purpose of the California Department of Pesticide Regulation (DPR) is to protect the health of humans and the environment. DPR sets standards for the sale and use of pesticides and encourage "reduced-risk pest management" to decrease the use of hazardous pesticides. The DPR has a staff of about 350 employees and is funded by regulatory fees. A portion of its budget supports local pesticide enforcement by County Agricultural Commissioners. DPR released "A Community Guide to Recognizing and Reporting Pesticide Problems" to inform Californians about the use, potential hazards, and response to hazards from pesticide use (DPR 2008).

Department of Resources, Recycling, and Recovery

The California Department of Resources Recycling and Recovery (CalRecycle) and the State Water Resources Control Board (SWRCB) jointly issue regulations pertaining to waste disposal on land, including criteria for all waste management units, documentation and reporting, and enforcement.

Department of Toxic Substances Control

The Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Since August 1, 1992, DTSC has been authorized to implement the state's hazardous waste management program for CalEPA.

Office of Environmental Health Hazard Assessment, Executive Order W-5-91

The State of California Office of Environmental Health Hazard Assessment was established in its current form in 1991, but the work of the Office of Environmental Health Hazard Assessment originated in the 1950s. It oversees implementation of many public health-related environmental regulatory programs within CalEPA, including implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires the governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. The proposition was intended by its authors to protect California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals.

State Water Resources Control Board

The SWRCB was established in 1967 by combining the State Water Quality Control Board and the State Water Rights Board, but its work originated in the 1950's. The Central Valley Regional Water Quality Control Board (RWQCB) is authorized by the SWRCB to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the Central Valley RWQCB authority to require groundwater investigations when the

quality of groundwater or surface waters of the state is threatened and to require remediation of the site, if necessary.

California Department of Transportation

The California Department of Transportation (Caltrans) was established in 1972 and manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, and permits more than 400 public-use airports and special-use hospital heliports. Caltrans is also the first responder for hazardous material spills and releases that occur on highway and freeway lanes and inter-city rail services.

Hazardous Material Definition, California Code of Regulations Title 22, CCR 25501

Hazardous substances are regulated by state and federal agencies in order to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that threaten life, health, property, or environment. The California Code of Regulations (CCR) Title 22 defines “hazardous material” according to the California Health and Safety Code Section 25501 definition:

A hazardous material means a material [listed in paragraph (2)] that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment, or a material specified in an ordinance adopted pursuant to paragraph (Health and Safety Code Section 25501).

School Site Selection and Approval Guide, Education Code Section 17251 and CCR Sections 14001-14012, 2000

The School Facilities Planning Division of the California Department of Education provides guidance to “help school districts (1) select school sites that provide both a safe and a supportive environment for the instructional program and the learning process; and (2) gain state approval for the selected sites.” (California Department of Education 2015) The Guide includes the following 12 criteria for school site selection: safety, location, environment, soils, topography, size and shape, accessibility, public services, utilities, cost, availability, and public acceptance.

SB 1889, Accidental Release Prevention Law/Chemical Accident Release Prevention Program, 1996

SB 1889 required California to implement a federally mandated program governing the accidental airborne release of chemicals listed under Section 112 of the Clean Air Act. Effective January 1, 1997, the California Accidental Release Prevention program (CalARP) replaced the previous California Risk Management and Prevention Program (RMPP) and incorporated the mandatory federal requirements. CalARP addresses facilities containing specified hazardous materials that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive. Yolo County Environmental Health is responsible for the implementation of CalARP in the County.

SB 1082, California Environmental Protection Agency’s Unified Program, 1993

In 1993, Senate Bill 1082 gave CalEPA the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Unified Program. The

purpose of this program is to consolidate and coordinate six different hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. The Unified Program is overseen by CalEPA with support from DTSC, RWQCBs, the OES, and the State Fire Marshal.

The Unified Program Administration and Advisory Group (UPAAG) was created to foster effective working partnerships between local, State and federal agencies. The UPAAG's goals and objectives are listed in the UPAAG Strategic Plan. The six programs are:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

State law requires county and local agencies to implement the Unified Program. The agency in charge of implementing the program is called the Certified Unified Program Agency (CUPA). The Yolo County Department of Community Services Environmental Health Services Division is the designated CUPA for the county. In addition to the CUPA, other local agencies help to implement the Unified Program.

Aboveground Petroleum Storage Act, Health and Safety Code 25270

The Aboveground Petroleum Storage Act, requires registration and spill prevention programs for above ground storage tanks that store petroleum. In some cases, Aboveground Storage Tanks (ASTs) for petroleum may be subject to groundwater monitoring programs that are implemented by the Regional Water Quality Control Boards (RWQCBs) and the SWRCB.

AB 2185 and AB 2189, Hazardous Materials Business Emergency Response Plan Program, CA Health and Safety Code Chapter 6.95

The State of California requires an owner or operator of a facility to complete and submit a HMBP to the Governor's Office of Emergency Services if the facility handles a hazardous material or mixture containing a hazardous material in amounts greater than specified threshold quantities. Yolo County Environmental Health is responsible for the implementation of the HMBP program in Yolo County. Congress requires EPA Region 9 to make RMP information available to the public through the EPA's Envirofacts Data Warehouse. The Envirofacts Data Warehouse is considered the single point of access to select EPA environmental data.

Safe School Plan, California Education Code Sections 32282 et seq.

This statute requires public schools to prepare a school safety plan, which includes routine and emergency disaster procedures and a school building disaster plan. The plan can be amended as needed and shall be evaluated at least once a year to ensure that the comprehensive school safety plan is properly implemented.

Public Resources Code 21151.4

Public Resources Code 21151.4 regulates hazardous materials near schools. Public Resources Code Section 21151.4 prohibits the certification of an EIR for a project involving the construction or alteration of a facility that might reasonably be anticipated to emit hazardous air emissions or handle extremely hazardous air emissions in a quantity greater than a certain threshold, within a quarter mile of a school.

Underground Storage Tank (UST) Act, CCR Title 23

The UST monitoring and response program is required under Chapter 6.7 of the California Health and Safety Code and Title 23 of the CCR. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning USTs. The County Department of Environmental Health is the local administering agency for this program.

Enhanced State Mitigation Plan, 2013

The State Hazard Mitigation Plan (SHMP) is a federally required official statement of the state's hazard identification, vulnerability analysis, and hazard mitigation strategy (44 Code of Federal Regulations, Subpart M, Section 206.401) under the Disaster Mitigation Act of 2000 for the State of California to receive federal funds for disaster assistance grant programs (California Emergency Management Agency 2010). The goal of the SHMP, prepared by the California Office of Emergency Services (OES), is to guide implementation activities to achieve the greatest reduction of vulnerability, which results in saved lives, reduced injuries, reduced property damage, and protection for the environment. OES worked with the California Office of Planning and Research to incorporate hazard mitigation into the 2016 General Plan Guidelines, a public draft of which was released in October 2015.

State of California Emergency Plan, 2009

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol, the California Department of Fish and Wildlife, and RWQCBs.

4.8.3.3 REGIONAL

Sacramento International Airport Land Use Compatibility Plan

The California Aeronautics Act (Public Utilities Code sections 21670 et seq.) requires the preparation of an ALUCP for most airports. The responsibility for preparing these plans is given to regional ALUCs. The Sacramento Area Council of Governments (SACOG) serves as the ALUC for the region. Local plans (such as the 2035 General Plan) with planning areas that overlap with an Airport Influence Area[2] are required by State law (Government Code Section 65302.3) to ensure that the policies in place for the affected area are consistent with the ALUCP.

[2] Airport Influence Areas are defined as the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses.

The ALUCP for SMF was updated by SACOG in December 2013. The ALUCP contains policies pertaining to noise, safety, overflight areas, and airspace protection. According to the ALUCP, the ALUC must review major land use actions, including adoption of General Plans for consistency with the ALUCP (ALUCP Policies 1.5 and 2.2). Consistency is evaluated based on the noise, safety, airspace protection, overflight, and other compatibility policies of the ALUCP. The areas in which land use compatibility policies apply, in each of these categories, corresponds to certain distances—both horizontal and vertical—from the airport (e.g., noise contours, flight approach areas, etc.). In other words, not all areas within the Influence Area are subject to the same compatibility policies and restrictions. A portion of the Woodland Planning Area falls within the SMF Airport Influence Area. [3] The Airport Influence Area constitutes the area within which certain land use actions are subject to ALUC review to determine consistency with the policies in the ALUCP.

As shown in Exhibit 4.8-3, the western boundary of the SMF Influence Area travels north-south through Woodland, following the western edge of the property that houses the City's Water Pollution Control Facility (wastewater treatment plant). While the Influence Area does overlap with part of the Planning Area, there are no restrictions pertaining to noise, safety, or airspace protection that apply in this particular area. Instead, ALUCP Policy 3.5.3 applies to this area, which relates to disclosure about airport proximity:

- **Policy 3.5.3. Airport Proximity Disclosure:** State law requires that notice disclosing information about the presence of a nearby airport be given to prospective buyers of certain residential real estate within an Airport Influence Area. The statutes define an Airport Influence Area as "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an ALUC." ALUC policy with regard to Airport Proximity Disclosure is as follows:

  For existing residences:

  1. State law indicates that the ALUC is responsible for delineating the area within which Airport Proximity Disclosure is appropriate. The recommended Airport Proximity Disclosure area for SMF is identified on Map 6 in this chapter and includes the entire Airport Influence Area.

  2. To the extent that real estate transactions involve existing residences, Airport Proximity Disclosure is a matter between private parties. The ALUC has no authority to mandate that Airport Proximity Disclosure be provided and neither the ALUC nor Local Agencies have any enforcement responsibilities.

  3. Airport Proximity Disclosure should be provided as part of all real estate transactions (sale, lease, or rental) involving residential property anywhere within the Airport Influence Area.

  For proposed Residential Development:

  1. The disclosure provisions of state law are deemed mandatory for new Residential Development anywhere within the Airport Influence Area and shall continue in effect as ALUC policy even if the state law is made less stringent or rescinded. The disclosure shall be of a format similar to that indicated in Appendix H and shall contain the language dictated by state law (see Policy 3.5.2(a)).

[3] Airport Influence Areas are defined as the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses.

2. Signs providing the above notice and a map of the Airport Influence Area shall be prominently posted in the real estate sales office and/or other key locations at any new Residential Development within the Airport Influence Area.

In addition, there is a small portion of the eastern side of the Planning Area that is within the "Secondary Approach Area" defined in the ALUCP. For this area, ALUCP Policy 3.5.2 applies:

- **Policy 3.5.2 Recorded Overflight Notification.** As a condition for Local Agency discretionary approval of residential land use development within the secondary approach area indicated on Map 6, an overflight notification shall be recorded [against individual property deeds].

The ALUCP for the Yolo County Airport was adopted in 1999, and the ALUCP for the Watts-Woodland Airport was adopted in 1993. While these airports may serve Woodland residents, businesses, and visitors, neither airport's Influence Area overlaps with the Planning Area; therefore, there are no land use implications for Woodland associated with these airports or airport operations.

Yolo County Agricultural Commissioner

According to the California Food and Agriculture Code, the regulation of pesticide use in California occurs at the County level, thus the Yolo County Agricultural Commissioner regulates and enforces use of pesticides. Pesticide use is enforced through permitting the use of restricted and non-restricted pesticides; enforcing worker safety laws; inspecting pesticide equipment and applications; auditing records of growers, pest control operators, dealers and pest control advisors; and additional strategies (Yolo County Pesticide Use Enforcement Program Elements).

Yolo County Environmental Health Services

The Yolo County Environmental Health Services Division regulates hazardous waste, aboveground petroleum storage and risk management plans, hazardous materials business plans and chemical inventories, risk management plans, and underground storage tanks. The Environmental Health Services Division mission statement is "to protect and enhance the quality of life of the Yolo County residents by identifying, assessing, mitigating and preventing environmental hazards" (Yolo County Environmental Health Services).

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The Yolo County 2030 General Plan includes a Health and Safety Element organized into three sections: Safety, Noise, and Health Care. The Health and Safety Element ensures that both natural and human-made hazards and risks are sufficiently considered in land use decision-making. The Health and Safety Element includes the following goals, policies, and actions related to wildland fire risk, hazardous materials, airport operations, and emergency preparedness.

- **Goal HS-3 Wildland Fires.** Protect the public and reduce damage to property from wildfire hazard.

- **Policy HS-3.1** Manage the development review process to protect people, structures, and personal property from unreasonable risk from wildland fires.

- **Policy HS-3.2** Encourage well-organized and efficient coordination between fire agencies and the County.

- **Policy HS-3.3** Clearly communicate the risks, requirements, and options available to those who own land and live in wildfire hazard areas.

    - **Action HS-A38** Require new and/or existing development to establish "defensible space" by providing for clearance around structures, using fire resistant ground cover, building with fire-resistant roofing materials, fuel load reduction, and taking other appropriate measures. (Policy HS-3.1) Responsibility: Planning and Public Works Department Timeframe: Ongoing

    - **Action HS-A39** Require the design and construction of new roadways and driveways in fire hazard areas to be of sufficient width, radius and grade to facilitate access by fire-fighting apparatus. (Policy HS-3.1) Responsibility: Planning and Public Works Department Timeframe: Ongoing

    - **Action HS-A45** Coordinate with fire districts to ensure fire safe design and construction of new development. (Policy HS-3.2) Responsibility: Planning and Public Works Department Timeframe: Ongoing

- **Goal HS-4 Hazardous Materials**. Protect the community and the environment from hazardous materials and waste.

- **Policy HS-4.1** Minimize exposure to the harmful effects of hazardous materials and waste.

- **Policy HS-4.2** Inspect businesses regularly for compliance with their Hazardous Materials Inventory and Hazardous Materials Business Emergency Response Plan.

- **Policy HS-4.3** Encourage the reduction of solid and hazardous wastes generated in the county.

    - **Action HS-A46** Provide adequate separation between areas where hazardous materials are present and sensitive uses. The following land uses are considered sensitive receptors for the purpose of exposure to hazardous materials: residentially designated land uses; hospitals, nursing/convalescent homes, and similar board and care facilities; hotels and lodging; schools and day care centers; and neighborhood parks. Home occupation uses are excluded. (Policy HS-4.1) Responsibility: Planning and Public Works Department Timeframe: Ongoing

    - **Action HS-A47** New development and redevelopment in areas previously used for agricultural, commercial, or industrial uses shall ensure that soils, groundwater, and buildings affected by hazardous material releases from prior land uses, as well as lead paint and/or asbestos potentially present in building materials, will not have the potential to affect the environment or health and safety of future property owners or users, and any affected areas shall be properly abated. A Phase I Environmental Site Assessment (ESA) to American Society for Testing and Materials (ASTM) standards shall be required where appropriate and a Phase II ESA may be required in certain circumstances based on the recommendations/results of the Phase I. Where the Phase I report has identified agricultural cultivation prior to the 1980s, a shallow soil investigation shall be performed at the property in accordance with DTSC guidance for sampling agricultural properties. (DEIR MM HAZ-1) (Policy HS-4.1) Responsibility: Planning and Public Works Department Timeframe: Ongoing

- **Action HS-A48** Develop a GIS-based map from the information submitted in the filed Hazardous Materials Inventories and Hazardous Materials Business Emergency Response Plans so that emergency responders are aware of potential dangers and can prepare accordingly. (Policy HS-4.2) Responsibility: Health Department Timeframe: 2010/2011

- **Action HS-A49** Promote public education about the safe disposal of used syringes and needles, household hazardous waste, such as motor oil, florescent bulbs, sharps/syringes, and batteries, including the locations of disposal sites. (Policy HS-4.3) Responsibility: Planning and Public Works Department Timeframe: Ongoing

- **Action HS-A50** Cooperate with other agencies in the prevention and control of potential oil spills, including coordination with the State Oil Spill Program (SOSP). The SOSP shall be incorporated into local emergency and safety plans, standards, and ordinances. (Policy HS-4.1) Responsibility Health Department, Office of Emergency Services Timeframe: Ongoing

- **Action HS-A51** Complete the remediation and reclamation of the County's former burn dump sites. (Policy HS-4.1) Responsibility: Planning and Public Works Department Timeframe: Ongoing

- **Goal HS-5 Airport Operations.** Protect the community from the risks associated with airport operations and protect airports from the economic impacts of encroachment from incompatible land uses.

- **Policy HS-5.1** Ensure that land uses within the vicinity of airports are compatible with airport restrictions and operations.

- **Policy HS-5.2** Ensure that new development near commercial and public use airports is consistent with setbacks, height, and land use restrictions as determined by the Federal Aviation Administration and the Sacramento Area Council of Governments Airport Land Use Commission. Ensure that development proximate to private airstrips addresses compatibility issues. (DEIR MM HAZ-3)

- **Policy HS-5.3** Respect and conservatively enforce airport safety zones as identified in airports CLUPs.

  - **Action HS-A52** Develop appropriate Aviation Disaster Response Plans. (Policy 5.1, Policy HS-5.2, Policy HS-5.3) Responsibility: Office of Emergency Services Timeframe: 2010/2011

- **Goal HS-6 Emergency Preparedness** Policies. Provide timeline and effective emergency response to reduce the potential loss of life and property.

- **Policy HS-6.1** Respond to catastrophic emergencies by:

  - Continuing and restoring critical services.

  - Maintaining order.

  - Supporting evacuations.

  - Distributing emergency supplies.

- Ensuring search/rescue operations and medical care.
- Saving lives and protecting property.
- Repairing and restoring essential public infrastructure.
- Mobilize the necessary resources to carry out emergency response efforts.
- Coordinating operations with other jurisdictions.
- Disseminating emergency public information.
- Establishing emergency operation centers and maintaining communications.
- Notifying vulnerable populations (e.g., seniors, schoolchildren, disabled, non-English speaking households, etc.)

► **Policy HS-6.2** Provide continuous advance planning to anticipate potential threats and improve emergency response effectiveness.

► **Policy HS-6.4** Encourage adequate infrastructure and resources to provide for local food security in emergencies and to restore food system integrity and operation after an emergency.

► **Policy HS-6.5** Work with the Yolo Emergency Communications Agency to seek funding for emergency communications, evacuation planning and recovery planning.

- **Action HS-A53** Develop a disaster response program to enhance the short-term and long-range recovery of affected areas, assist in the return to normal life for local residents, and expedite the reconstruction of homes, businesses, and public facilities. (Policy HS-6.1, Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: 2009/2010
- **Action HS-A54** Prepare and update emergency access/evacuation routes, including the removal of potential traffic impediments. (Policy HS-6.1, Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: 2009/2010
- **Action HS-A55** Implement the programs and procedures in the Yolo Operational Area Multi-Hazard Mitigation Plan. (Policy HS-6.1) Responsibility: Office of Emergency Services Timeframe: Ongoing
- **Action HS-A56** Conduct ongoing public outreach efforts regarding procedures and plans to be followed in the event of an emergency. (Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: Ongoing
- **Action HS-A57** Develop multiple stress scenarios on a regular basis where key evacuation routes are blocked and/or alternative communication methods are inoperable, and refine emergency response plans accordingly. (Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: Ongoing

- **Action HS-A58** Create an inventory of significant urban, rural, and natural hazards and provide standards for avoidance and/or mitigation of such hazards in an emergency. (Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: 2010/2011

- **Action HS-A59** Study the implications of climate change for future emergencies, including the increased risk and severity of fires; increased frequency and intensity of drought; expanded and deeper areas of flooding; and associated changes in disease vectors. à (Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: Ongoing

- **Action HS-A60** Ensure well-organized and efficient coordination between government, health, and community emergency response agencies. (Policy HS-6.2) Responsibility: Office of Emergency Services Timeframe: Ongoing

Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan

The purpose of a Local Hazard Mitigation Plan (LHMP) is to reduce or eliminate long term risk to human life and property resulting from hazards by identifying risks before they occur and putting together resources, information, and strategies for emergency response. A LHMP is required of all cities by federal law.

The City of Woodland partnered with Yolo County and the cities of Davis, West Sacramento, and Winters to develop the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan (MHMP). Most recently updated in 2012, the MHMP addresses threats from potential hazards and identifies possible strategies to reduce impacts. The local hazards evaluated in the MHMP are: dam failure, drought, earthquake, flood, severe weather, volcanic activity, and wildfire. Based on data from the Yolo County Assessor's Office in 2012, more than $3.2 billion worth of improvements to parcels (i.e., buildings) within the city of Woodland are exposed to hazards.

4.8.3.4 LOCAL

City of Woodland 2002 General Plan

The Health and Safety Element in the Woodland 2002 General Plan includes policies addressing both structural and wildland fire hazards, aircraft crash hazards, hazardous materials, and emergency response.

City of Woodland 2010 Engineering Standards: Design Standards, Standard Details, and Construction Specifications

Woodland engineering standards require a minimum flow of water for fire protection in accordance with Woodland Fire Department, California Fire Code, and Insurance Services Office standards. For single-family detached houses that are spaced more than 10 feet apart, water mains must provide a flow of 1,000 gallons per minute in addition to the peak normal maximum daily consumption needs for a neighborhood. For single-family detached homes that are less than or equal to 10 feet apart, water mains must provide an additional flow of 1,500 gallons per minute. The required fire-flow standard for commercial, industrial and higher-density residential areas, as well as areas with higher-value buildings, varies from 2,500 to 4,000 gallons per minute, in addition to the peak normal daily consumption needs.

City of Woodland Emergency Operations Plan

The California Emergency Services Act requires cities to prepare and maintain an Emergency Plan for natural, manmade, or war-caused emergencies that result in conditions of disaster or in extreme peril to life. The Woodland Emergency Operations Plan adopted in 2010 addresses the City's planned response to extraordinary emergency situations associated with natural disasters such as floods and severe storms, technological incidents such as dam failures, and national security emergencies, including acts of terrorism. The plan does not apply to normal day-to-day emergencies, but rather focuses on large-scale disasters that pose major threats to life, property and the environment, and require unusual emergency responses.

City of Woodland Municipal Code

Emergency Services, Chapter 8 of the Woodland Municipal Code

Chapter 8 of the Woodland Municipal Code addresses the preparation and implementation of emergency services, including the coordination of emergency functions of the City with other public and private entities.

Fire Code, Chapter 9 of the Woodland Municipal Code

Chapter 9 of the Woodland Municipal Code is entitled Fire Prevention and Emergency Services. Section 9-1 of the Code adopts the 2013 California Fire Code, California Code of Regulations, Title 24, Part 9 (California Fire Code), which is based on the 2012 International Fire Code of the International Code Council. The Fire Code establishes standards to protect public health and safety from the hazards of fire and explosions and to provide safety and assistance to fire fighters and emergency responders during emergency operations. Under the current Fire Code, all portions of a building must be located within 150 feet of a serviceable fire access road. In some instances, the Fire Marshal can make an exception to this rule, such as when a building is equipped with an approved automatic sprinkler system.

Chapter 9 of the Woodland Municipal Code also regulates storage of flammable materials and the use of fireworks.

Hazardous Materials, Chapter 11 of the Woodland Municipal Code

Chapter 11 of the Woodland Municipal Code establishes standards for underground storage of hazardous substances. The Code specifies requirements for permits, monitoring systems, inspections, and violations of underground storage of hazardous substances.

4.8.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.8.4.1 METHODOLOGY

This analysis considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from implementation of the Proposed Project, and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. Compliance with applicable federal, State, regional, and local health and safety laws and regulations by residents and businesses in the city is intended to protect the health and safety of the public. State and local agencies are required to enforce applicable requirements. In determining the level of significance, this analysis assumes that infill development and new

development under the 2035 General Plan would comply with relevant federal, State, regional, and local ordinances and regulations.

Consistent with State law, the range and types of uses allowed under the 2035 General Plan are identified only in general terms. Specific types of businesses that will occur in commercial and mixed-use land use designations are unknown, as well as whether they would generate or use hazardous materials.

A preliminary review of environmental risk databases was conducted, but this analysis did not include any sampling, site-specific review, laboratory analysis, or inspection of buildings or site surfaces. Site-specific investigation for projects developed under the Proposed Project will be required to address hazardous materials conditions. For example, Phase I environmental site assessments would be required for specific projects, and if an assessment indicates the presence or likely presence of contamination, Phase II soil/groundwater testing and remediation could be required before development on a site-specific basis.

As with this entire EIR, the impacts of the 2035 General Plan and 2035 CAP are analyzed together. In this case, analysis includes potential construction effects associated with implementation of the 2035 General Plan, as well as lighting and appliance upgrades; energy efficiency improvements; renewable energy facilities; complete streets implementation; infill development, redevelopment, and repurposing; increased tree planting; and maintenance of existing trees (2035 CAP strategies E-1, E-2, E-3, E-6, T/LU-1, T/LU-2, UF-1, UF-2, and UF-3).

4.8.4.2 THRESHOLDS OF SIGNIFICANCE

Implementation of the Proposed Project would have a potentially significant adverse impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Result in a project located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- Result in a safety hazard for people residing or working within an airport land use plan area.
- Result in a safety hazard for people residing or working in a project area located within the vicinity of a private airstrip.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.8.4.3 ISSUES NOT DISCUSSED FURTHER

Safety Hazard for People Residing or Working in A Project Area in Vicinity of a Private Airstrip—There are no private airstrips within the Planning Area. Therefore, implementation of the land use changes and policies consistent with the Proposed Project would have no impact related to the safety hazard for people residing or working in the vicinity of a private airstrip, and related impacts are not addressed further in this EIR.

4.8.4.4 IMPACT ANALYSIS

IMPACT 4.8-1 Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials. *Implementation of the Proposed Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, existing regulations and proposed policies in the Proposed Project would address this potential risk and the impact is considered* ***less than significant.***

Potential Impacts Associated with Implementation of the Proposed Project

Development under the 2035 General Plan would result in new dwelling units, mixed-use facilities, industrial facilities, and commercial space. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Implementation of the Proposed Project would therefore include land uses that would require the routine use, transport, and disposal of hazardous material and waste and may increase exposure to risk of hazards. Future construction activities associated with implementation of the Proposed Project may also generate hazardous materials and waste, such as fuels and oils from construction equipment and vehicles.

With regard to development in the new growth areas, there are no known hazardous sites within SP-1 or SP-3. There is a School Investigation site to the northwest of SP-1A, as well as three closed LUST Cleanup Sites and one open Cleanup Program Site along the southern border of SP-3.

a. East Alternative–In addition to the development discussed above, the East Alternative anticipates new development in SP-2. There are no known hazardous sites in SP-2. There is one closed LUST Cleanup Site to the east of SP-2 that the SWRCB has already formally addressed. As the CUPA for the area, the Yolo County Department of Community Services Environmental Health Services Division is responsible for implementing hazardous waste and materials State standards. These sites are under formal investigation and remediation.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Federal and State regulations require adherence to specific guidelines regarding the use, transportation, disposal, and accidental release of hazardous materials, as described in the Regulatory Framework section above.

The U.S. EPA is responsible for administering the Federal Toxic Substances Control Act and RCRA, which regulate the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as CERCLA to respond to sites contaminated with hazardous substances.

The management of hazardous materials and waste within California is under the jurisdiction of CalEPA.

The Yolo County Department of Community Services Environmental Health Services Division is the CUPA for the County and responsible for implementing hazardous waste and materials State standards, including HMBP, CalARP, and managing fuel storage tanks.

The U.S. Department of Transportation, Caltrans, and the California Highway Patrol regulate and manage routine transport of hazardous materials on I-5 and SR 113.

Proposed Project

In addition to existing regulations, there are several goals and policies in the 2035 General Plan to improve the safety of the routine use, transportation, and disposal of hazardous materials given below. There are no CAP objectives or strategies that relate to this impact.

- **Goal 3.I. Safe and Efficient Movement of Goods.** Plan and maintain a transportation system that provides for the safe and efficient movement of goods.
- **Policy 3.I.1 Truck Route Designation.** Designate routes for trucks within the city to minimize the impact of truck traffic on residential neighborhoods and shall work with Yolo County to develop a system of truck routes for adjacent areas to the city.
- **Policy 3.I.2 Truck Traffic on Residential Streets.** Continue to enforce the City ordinance restricting through truck traffic on residential streets.
- **Policy 5.J.1 Waste Collection.** Provide adequate solid waste services, and promote maximum use of solid waste source reduction, recycling, composting, and environmentally safe transformation of wastes.
- **Policy 5.J.3 New Techniques.** Collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities. Encourage members of the Woodland community to engage in responsible buying and consumption practices to reduce unnecessary packaging and recycling.
- **Policy 7.D.1 Natural Gas.** Encourage safe operation of natural gas wells within the Planning Area to promote conservation of resources and ensure safety.
- **Goal 8.E Hazardous Materials.** Minimize the risk of loss of life, injury, serious illness, damage to property, and negative economic and social impacts resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous materials waste.

- **Policy 8.E.1 Coordination.** Coordinate with Yolo County and other relevant agencies to ensure that the manufacture, use, storage, transportation, and disposal of hazardous materials in the city complies with local, State, and federal safety standards.

- **Policy 8.E.2 Disposal and Storage Plan.** Require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include a detailed plan for hazardous waste reduction, recycling, and storage.

- **Policy 8.E.3 Buffer Zone.** Require that new development for industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety.

- **Policy 8.E.5 Hazardous Materials Database.** Coordinate with Yolo County to develop a database and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous materials and wastes generated in Woodland to aid in management planning and emergency response.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

In addition to the existing federal, State and regional regulations, the Proposed Project includes policies to reduce the potential impact. Policy 5.J.1 helps ensure adequate services for the disposal of hazardous materials, and Policy 5.J.3 supports the continual improvement of solid waste disposal to improve the safety of hazardous material disposal. These policies would mitigate the risk of significant hazards through the routine disposal of hazardous materials.

Policies 8.E.1 and 8.E.5 require decisions regarding land use and development to be based on the best available information and are coordinated with relevant agencies. Policies 8.E.2 and 8.E.3 ensure that new developments that will generate or use hazardous materials prepare a detailed plan for hazardous waste reduction, recycling, and storage, and an appropriate buffer around the property boundaries. These policies mitigate the risk of significant hazards associated with the routine use of hazardous materials.

Policies 3.I.1 and 3.I.2 limit the truck traffic in residential areas, which will help reduce residents' exposure to significant hazards. Policy 7.D.1 requires the City to encourage safe operation of natural gas wells in the Planning Area. These three policies reduce the risk of significant hazards through the routine transport of hazardous materials.

    a. East Alternative–The impact is considered **less than significant**.

    b. South Alternative–The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.8-2 **Create a Significant Hazard to the Public or the Environment through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment.** *Implementation of the Proposed Project would allow for a wide variety of uses, including commercial and industrial uses that could result in upset and accident conditions involving the release of hazardous materials into the environment. Individual projects under the Proposed Project for which there are potential significant impacts related to hazards would require a project-level environmental review at the time they are proposed. With existing regulations and Proposed Project goals and policies, the impact is considered* ***less than significant.***

Potential Impacts Associated with Implementation of the Proposed Project

Currently, there are no reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As discussed in Impact 4.8-1, there are no known sites of hazardous materials in the new growth areas, and hazardous sites in areas that may receive infill development are under the responsibility of the CUPA and State agencies. Although the risk of upset and accident conditions involving the release of hazardous materials into the environment cannot be completely eliminated, it can be reduced to a manageable level. However, the 2035 General Plan anticipates a wide variety of uses, including commercial and industrial uses. New developments, such as dry cleaners, gas stations, or manufacturers, could result in upset and accident conditions involving the release of hazardous materials into the environment. Individual projects under the Proposed Project for which there are potential significant impacts related to hazards would require a project-level environmental review at the time they are proposed. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Federal and State regulations require adherence to specific guidelines regarding the use, transportation, disposal, and accidental release of hazardous materials, as described in the Regulatory Framework section above.

The U.S. EPA is responsible for administering the Federal Toxic Substances Control Act and RCRA, which regulate the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as CERCLA to respond to sites contaminated with hazardous substances.

The management of hazardous materials and waste within California is under the jurisdiction of CalEPA.

The Yolo County Department of Community Services Environmental Health Services Division is the CUPA for the County and responsible for implementing hazardous waste and materials State standards, including HMBP, CalARP, and managing fuel storage tanks.

The U.S. Department of Transportation, Caltrans, and the California Highway Patrol regulate and manage routine transport of hazardous materials on I-5 and SR 113.

Proposed Project

The 2035 General Plan includes the following goals and policies designed to reduce risks associated with release of hazardous materials. There are no CAP objectives or strategies that relate to this impact.

- **Policy 8.E.1 Coordination.** Coordinate with Yolo County and other relevant agencies to ensure that the manufacture, use, storage, transportation, and disposal of hazardous materials in the city complies with local, State, and federal safety standards.

- **Policy 8.E.2 Disposal and Storage Plan.** Require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include a detailed plan for hazardous waste reduction, recycling, and storage.

- **Policy 8.E.3 Buffer Zone.** Require that new development for industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety.

- **Policy 8.E.5 Hazardous Materials Database.** Coordinate with Yolo County to develop a database and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous materials and wastes generated in Woodland to aid in management planning and emergency response.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Existing regulations will reduce potential impacts associated with implementation of the Proposed Project.

The 2035 General Plan policies commit the City to coordinating with Yolo County and other agencies with a purview over hazardous materials issues to ensure developments under the 2035 General Plan are compliant with safety standards; requiring detailed planning for new uses that propose to generate or use hazardous materials; providing a buffer between hazardous materials uses and sensitive receptors; and tracking data on hazardous materials to inform risk management and emergency response.

a. East Alternative– The impact is considered **less than significant**.

b. South Alternative– The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.8-3 Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School. *Projects that could potentially occur under the Proposed Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. However, existing regulations provide standards for uses involving the handling or emissions of hazardous materials within a quarter mile of schools. The impact is considered* ***less than significant****.*

Potential Impacts Associated with Implementation of the Proposed Project

Implementation of the 2035 General Plan would allow land uses that would be reasonably expected to handle hazardous materials or generate hazardous emissions. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

In regards to existing schools, Exhibit 4.8-5 shows the land use designations of the 2035 General Plan within one-quarter mile of existing schools. There are no areas that are designated Industrial with one quarter mile of existing schools. With respect to other intensive uses, there is land designated Regional Commercial within one quarter mile of Tafoya Elementary School, but this land was designated General Commercial in the existing General Plan. Lands with this designation would not necessarily be expected to accommodate uses that would require handing or emissions of hazardous materials. In addition, public schools are required to evaluate and potentially amend their school safety plan on an annual basis as described in the Regulatory Framework discussion above.

The 2035 General Plan specifies that new schools would have to be built to serve new population growth, as needed, which would most likely be in new growth areas. In the case of a new school, the California Department of Education regulates the siting of schools, including new facilities and upgrading construction projects. New facilities would not be allowed within one-quarter mile of facilities emitting or handling hazardous materials, consistent with California Department of Education requirements.

a. East Alternative– The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

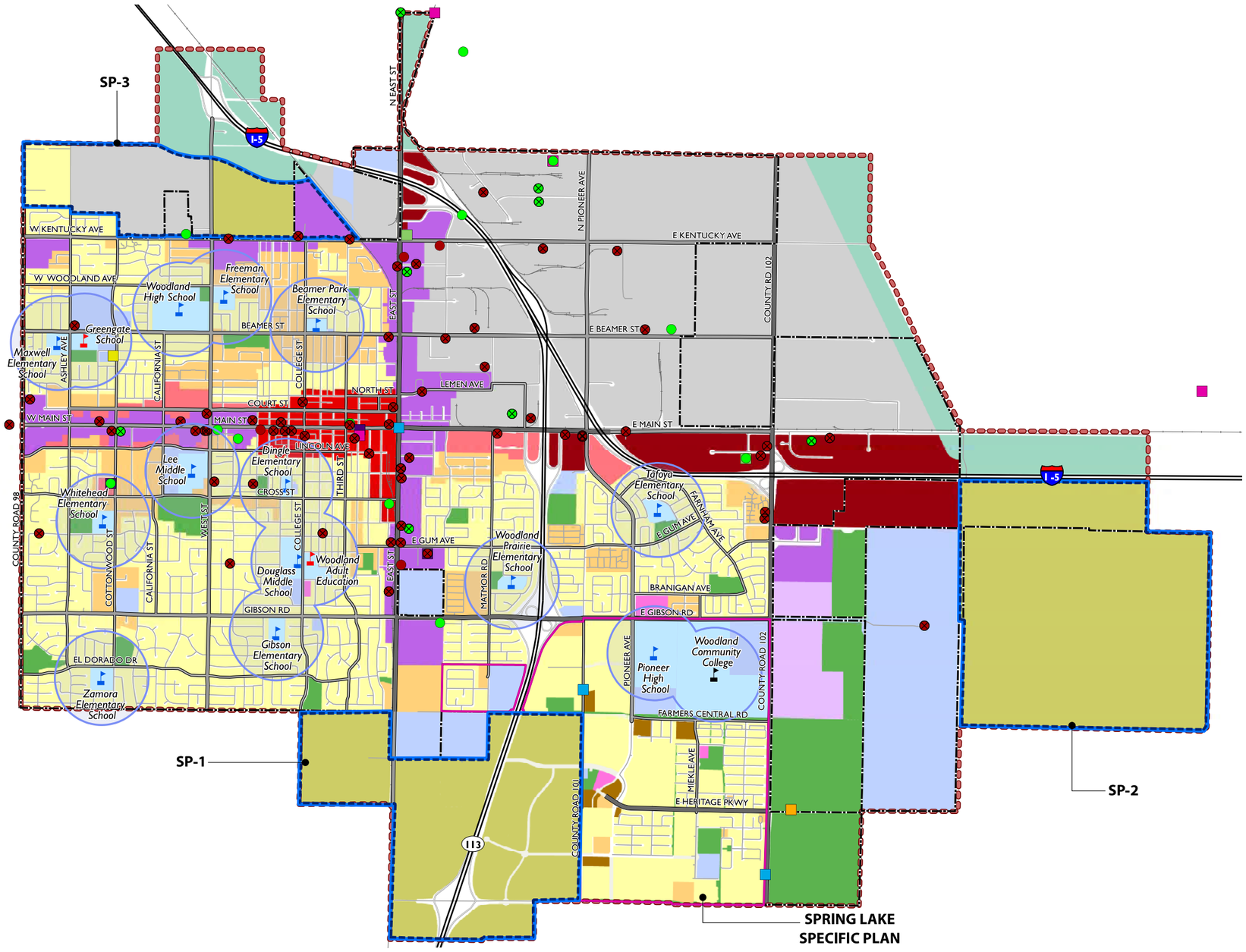
b. South Alternative– The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Federal and state regulations require adherence to specific guidelines regarding the use, transportation, disposal, and accidental release of hazardous materials, as described in the Regulatory Framework section above.

Figure 4.8-5.
Hazardous Materials and Proximity from Schools



SC); City of Woodland, California, 2013; Yolo County, 2013; Dyett & Bhatia, 2013

Exhibit 4.8-5. **Hazardous Materials and Schools**

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California Public Resources Code 21151.4 sets standards for new projects involving the handling or emissions of hazardous materials within one-quarter mile of a school.

The School Facilities Planning Division of the California Department of Education provides guidance to school districts in selecting safe school sites, per Education Code Section 17251.

Proposed Project

The 2035 General Plan includes policies to reduce the potential impact from hazardous materials near schools, in addition to those discussed in Impact 4.8-1. Hazardous air quality emissions are addressed further in Section 3.2, Air Quality. There are no CAP objectives or strategies that relate to this impact.

- **Policy 8.E.1 Coordination.** Coordinate with Yolo County and other relevant agencies to ensure that the manufacture, use, storage, transportation, and disposal of hazardous materials in the city complies with local, State, and federal safety standards.

- **Policy 8.E.2 Disposal and Storage Plan.** Require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include a detailed plan for hazardous waste reduction, recycling, and storage.

- **Policy 8.E.3 Buffer Zone.** Require that new development for industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

- **Policy 8.E.5 Hazardous Materials Database.** Coordinate with Yolo County to develop a database and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous materials and wastes generated in Woodland to aid in management planning and emergency response.

Summary of Impact Analysis

Existing and new uses of hazardous materials will continue to be regulated by federal, State, and local laws as discussed in Impact 4-8.1

In addition, 2035 General Plan Policy 8.E.1 will help limit the potential for hazardous emissions or hazardous materials within one-quarter mile of a school by supporting coordination between the City and relevant agencies, such as the Woodland Joint Unified School District. Policy 8.E.2 requires that all development projects that will generate or utilize hazardous wastes have a plan for hazardous waste reduction, recycling, and storage. Policy 8.E.3 requires that new development include an appropriate buffer around the property boundaries to protect public safety. Policy 8.E.5 directs the City Woodland to work with Yolo County on managing an updated

database of hazardous materials to ensure that all decision-making, including permitting new development, is based on the best information available.

a. East Alternative– The impact is considered **less than significant**.

b. South Alternative– The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.8-4 Be Located on a Site Which Is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5 and, as a Result, Would Create a Significant Hazard to the Public or the Environment. *Implementation of the Proposed Project could involve changes to sites included on a list of hazardous materials sites compiled pursuant to Government Code 64964.5. However, with existing regulations and Proposed Project goals and policies, the impact is considered* ***less than significant****.*

Potential Impacts Associated with Implementation of the Proposed Project

As discussed in the Environmental Setting section above, there are 101 sites in the Planning Area that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 or that need further investigation (see Exhibit 4.8-2). Several of the sites have reported releases to the ground resulting in soil and groundwater contamination and which are subject to various state and federal laws and regulators, including CERCLA, U.S. EPA, DTSC, and the RWQCB. The 2035 General Plan anticipates infill development in areas along Main Street and East Street where there are known hazardous materials sites. Development of sites with existing soil or groundwater contamination could potentially pose a significant hazard to the public or the environment through releases of hazardous materials into the environment. As discussed in Impact 4.8-1, these sites are regulated by existing federal and state policies and have been or are being investigated and remediated. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative– The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Federal and State regulations require adherence to specific guidelines regarding the use, transportation, disposal, and accidental release of hazardous materials, as described in the Regulatory Framework section above.

The U.S. EPA is responsible for administering the Federal Toxic Substances Control Act and RCRA, which regulate the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as CERCLA to respond to sites contaminated with hazardous substances.

The management of hazardous materials and waste within California is under the jurisdiction of CalEPA.

The Yolo County Department of Community Services Environmental Health Services Division is the CUPA for the County and responsible for implementing hazardous waste and materials State standards, including HMBP, CalARP, and managing fuel storage tanks.

The U.S. Department of Transportation, Caltrans, and the California Highway Patrol regulate and manage routine transport of hazardous materials on I-5 and SR 113.

Proposed Project

The following policies in the 2035 General Plan are designed to lessen the impact of sites contaminated with hazardous materials. There are no CAP objectives or strategies that relate to this impact.

- **Policy 8.E.1 Coordination.** Coordinate with Yolo County and other relevant agencies to ensure that the manufacture, use, storage, transportation, and disposal of hazardous materials in the city complies with local, State, and federal safety standards.

- **Policy 8.E.2 Disposal and Storage Plan.** Require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include a detailed plan for hazardous waste reduction, recycling, and storage.

- **Policy 8.E.3 Buffer Zone.** Require that new development for industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety.

- **Policy 8.E.5 Hazardous Materials Database.** Coordinate with Yolo County to develop a database and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous materials and wastes generated in Woodland to aid in management planning and emergency response.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The safety of hazardous materials sites will continue to be regulated by federal, State, and local laws as discussed in Impact 4-8.1

In addition, 2035 General Plan Policies 8.E.1, 8.E.2, 8.E.3, and 8.E.5 help improve the safety of existing hazardous materials sites. These policies would reduce the risk of any significant hazard to the public or environment through the release of hazardous materials, associated with the implementation of the Proposed Project.

a. East Alternative- The impact is considered **less than significant**.

b. South Alternative- The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.8-5 For a Project Located within and Airport Land Use Plan or, where such a Plan has Not Been Adopted, within Two Miles of a Public Airport or Public Use Airport, Would the Project Result in a Safety Hazard For People Residing or Working within an Airport Land Use Plan Area. *A portion of the Planning Area is in the SMF Airport Influence Area. The 2035 General Plan includes policies to avoid any adverse impact. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

SMF has an ALUCP developed and adopted by the SACOG ALUC. The City requires review of consistency between the ALUCP and all proposed major projects, including the 2035 General Plan, within the Airport Influence Area. The area east of the property that houses the City's Water Pollution Control Facility (wastewater treatment plant) in the Planning Area is within the Airport Influence Area, as shown in Exhibit 4.8-3. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–A small area at the far east of the Planning Area, including approximately half of SP-2, is within the Secondary Approach Area of the ALUC policy boundaries. The East Alternative anticipates growth within the northeast quadrant of SP-2 by 2035. In the Airport Influence Area, overflight notification is required for residential development, per ALUCP Policy 3.5.2.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County 2030 General Plan includes several policies related to airport hazards, including requiring the County to ensure that new development near commercial and public use airports is consistent with setbacks, height, and land use restrictions as determined by the Federal Aviation Administration and the SACOG Land Use Commission and to develop appropriate Aviation Disaster Response Plans.

Policy 3.5.3 of the ALUCP requires disclosure of airport proximity for new residential development within this area.

Proposed Project

The following 2035 General Plan policies are designed to avoid any impact related to airport compatibility. There are no CAP objectives or strategies that relate to this impact.

- **Policy 3.J.1 Airport Land Use Compatibility Plan.** Ensure consistency with the Airport Land Use Compatibility Plan (ALUCP) for Sacramento International Airport.
- **Policy 3.J.2 New Airports or Land Strips.** Discourage the development of new airports or landing strips within one and one-half miles of the Urban Limit Line.
- **Policy 8.D.2 Federal Compliance.** Ensure that development within airport approach and departure zones complies with Federal Aviation Administration Regulations.
- **Policy 8.D.3 Notification to Residential Buyers.** Disclose information about the presence of nearby airports to prospective buyers of existing or new residential properties located within the SMF Airport Influence Area, in accordance with State law. Require a Recorded Overflight Notification as a condition of approval for residential projects located with the SMF Airport Secondary Approach Area.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The 2035 General Plan policies ensures compliance with federal regulations related to approach and departure zones, as well as notification to residential buyers about the presence of nearby airports per ALUCP Policy 3.5.3.

a. East Alternative–The impact is considered **less than significant**.

b. South Alternative–The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.8-6 Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan. *Proposed Project policies support the mitigation of and preparation for emergencies. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The City adopted the Woodland Emergency Operations Plan in 2010, which addresses the city's planned response to extraordinary emergency situations associated with any type of natural disaster, technological incident, or state of war emergency. Implementation of the 2035 General Plan would result in new development and population growth, resulting in an increase in demand for emergency services, which could affect the implementation of adopted Emergency Operations Plan and MHMP. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The 2009 State of California Emergency Plan outlines the state government's response to disasters, as well as the response of all governments and the private sector. The Yolo County 2030 General Plan includes several policies related to emergency responses in the county.

Proposed Project

In addition to the 2035 General Plan goals and policies discussed in Impacts 4.8-1 and 4.8-4, the goals and policies listed below reduce the impact of impaired implementation of emergency response. There are no CAP objectives or strategies that relate to this impact.

- **Policy 8.F.2 Coordination.** Continue to coordinate emergency preparedness, response, recovery, and mitigation activities with Yolo County, special districts, service agencies, voluntary organizations, other cities within the county, surrounding cities and counties, and State and federal agencies.

- **Policy 8.F.3 Public Information.** Provide periodic public information programs that explain the City's emergency preparedness programs.

- **Policy 8.F.4 Siting of Critical Facilities.** Ensure that the siting of critical emergency response facilities and communications facilities such as the Emergency Operations Center, hospitals, fire stations, police offices and substations, dispatch centers, and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geological effects, fire, and explosions.

- **Policy 8.F.5 Emergency Access and Evacuation.** Require areas subject to fires, flooding, and other hazards have emergency access and evacuation routes that are clearly marked with consistent signage. Make evacuation and rescue maps available to the public.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

In addition to the Woodland Emergency Operations Plan and the MHMP, the 2035 General Plan includes policies to reduce the potential impact. Policy 8.F.4 ensures that critical facilities, such as hospitals and dispatch centers, are sited in locations that have minimal exposure to flooding, seismic and geological effects, fire, and explosions. Policy 8.F.5 requires areas susceptible to hazards have emergency access and evacuation routes that are clearly marked with consistent signage. Policy 8.F.2 supports the continued coordination between the City and relevant agencies in preparing for and operating during an emergency. Policy 8.F.3 aims to improve public education and awareness of emergencies.

a. East Alternative– The impact is considered **less than significant**.

b. South Alternative– The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.8-7 Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to Urbanized Areas or Where Residences are Intermixed with Wildlands. *Most of the Planning Area is non-wildland/non-urban area that is not at risk for wildland fires. Implementation of the Proposed Project would result in new development in SP-1A, which is adjacent to a Moderate Fire Hazard Severity Zones. However, existing regulations related to fire flow, access, and clearances around structures would ensure a less than significant impact.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 General Plan anticipates infill development. Some of this new development could replace or upgrade existing structures built before modern building codes for fire safety and building systems were in place. Thus, implementation of the 2035 General Plan could result in the replacement of older facilities with newer facilities that would comply with modern building code requirements, including Chapter 9 (Fire Protection Systems) of the California Building Code, which requires such improvements as fire sprinkler systems and fire alarms.

Most of the Planning Area is non-wildland/non-urban area that is not at risk for wildland fires. According to CAL FIRE maps of fire threat potential, as shown in Figure 4.8-4, there are no State Responsibility Areas or Very High Fire Hazard Severity Zones (FHSZ). However, there are Moderate FHSZs in the southeast of the Planning Area, along County Road 102, and to the northeast of the Planning Area.

Implementation of the Proposed Project would result in new development in SP-1A, which is adjacent to the Moderate FHSZ. Development in these areas would be consistent with Woodland's requirements regarding peakload water supply, minimum road widths and clearances around structures as described in the Regulatory Settings. These requirements reduce the threat to urban areas. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative– The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative– The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing Laws and Regulations

The Yolo County 2030 General Plan includes policies to reduce the risk of wildland fires on unincorporated county land, including a requirement for the County to manage the development review process to protect people and property from wildland fire risk.

Proposed Project

The 2035 General Plan includes the following goals and policies that will reduce associated with wildfire.

- **Goal 5.B Fire Protection Services.** Provide a comprehensive program of fire protection services to protect residents of and visitors to Woodland from injury and loss of life and to protect property from fires.
- **Policy 5.B.1 Response Time and Service Standards.** Strive to maintain a high level of fire protection service to the community by achieving the following response times:
  - Emergency medical service calls: 60 seconds turnout time, at least 90 percent of the time.
  - Fire and special operations response: 80 seconds turnout time, at least 90 percent of the time.
  - Arrival at fire suppression incident: 4 minutes or less travel time of the first arriving engine, at least 90 percent of the time.
  - Deployment of an initial full alarm assignment: 8 minutes or less travel time, at least 90 percent of the time.
  - Arrival at an emergency medical incident: 4 minutes or less travel time, at least 90 percent of the time.
  - Dispatch call answering time: 15 seconds or less, at least 95 percent of the time, and 40 seconds or less, at least 99 percent of the time.
  - Dispatch call processing time: 60 seconds or less, 90 percent of the time, and 90 seconds or less, 99 percent of the time.
- **Policy 5.B.2 Staff Training and Competency.** Maintain a Fire Department staff training program that ensures that personnel receive a minimum of 240 hours of training per year. Ensure that personnel maintain competency to execute all responsibilities required for their position.
- **Policy 5.B.3 ISO Target.** Strive to maintain an ISO rating of 3 or better for the city.
- **Policy 5.B.4 Development Project Requirements.** Require development projects to develop or fund fire protection facilities, equipment, personnel, and operations and maintenance that maintain or improve upon the

City's standards, as demonstrated through positive fiscal impacts or through specific funding mechanisms in the event of fiscal deficits.

- **Policy 5.B.5 Fire Safety Education.** Continue to coordinate a public education program in order to foster public awareness of fire hazards with the intention of reducing injury and loss of life, damage to property, and degradation of the natural environment.

- **Policy 5.B.6 Adequate Infrastructure.** Continue to pursue the provision of adequate water supplies, hydrants, and appropriate property access to allow for adequate fire suppression throughout the city.

- **Policy 5.B.7 Building Codes.** Adopt and enforce amendments to the City's construction and fire codes, as determined appropriate, to require adequate water infrastructure and automatic fire detection, control, and suppression systems, to systematically reduce the level of risk to life and property from fire, commensurate with the City's fire suppression capabilities.

- **Policy 5.B.8 Development Application Review by Fire Department.** Continue Fire Department review of all development applications, provide comments, and recommend conditions of approval that will ensure adequate on-site and off-site fire protection systems and features are provided.

- **Policy 5.B.10 Construction of New Fire Stations.** Consider location of existing stations in relation to planned growth, and explore efficacy of current station locations as part of any new fire station location analysis. Consider where a station relocation might preclude need for a new station with a new engine company. Prior to approval and construction of new fire stations, ensure that adequate funding is available for both the construction and the ongoing operation, maintenance, and staffing of future fire stations.

- **Goal 8.C Fire Hazards.** Minimize the risk of loss of life, injury, and damage to property and watershed resources resulting from fire hazards.

- **Policy 8.C.1 Buildings of Public Assembly.** Ensure that existing and new buildings of public assembly incorporate adequate fire protection measures to reduce the potential loss of life and property in accordance with state and local codes and ordinances.

- **Policy 8.C.2 Education.** Continue education programs in schools, service clubs, organized groups, industry, utility companies, government agencies, press, radio, and television in order to increase public awareness of local fire hazards and other risks including the ability to recognize these risks and appropriate avoidance techniques.

- **Policy 8.C.3 Smoke Detectors.** Encourage and promote the installation and maintenance of smoke detectors in existing residences and commercial facilities that were constructed prior to the requirement for their installation.

- **Policy 8.C.4 Fire Prevention Programs.** Develop high-visibility fire prevention programs, including those offering voluntary home inspections and promoting awareness of home fire prevention measures.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

2035 General Plan Goal 5.B establishes that the City should provide a comprehensive program of fire protection services, and Goal 8.C requires the City to work towards minimizing damage from fires. Policies 5.B.1, 5.B.2, and 5.B.3 set standards for and supports the capacity and ability of Fire Department staff. Policies 5.B.4, 5.B.6, 5.B.7, 5.B.8, 5.B.10, 8.C.1, and 8.C.3 set standards for the safety of new buildings and developments. Policies 5.B.5 and 8.C.2 aim to improve public education and awareness of emergencies.

a. East Alternative- The impact is considered **less than significant**.

b. South Alternative- The impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

4.9 HYDROLOGY, FLOODING, AND WATER QUALITY

4.9.1 INTRODUCTION

This section presents the existing conditions with regard to surface water and groundwater resources related to the Proposed Project, summarizes the regulatory and planning framework, and analyzes the impacts on surface water and groundwater resources associated with implementation of the Proposed Project. This section also discusses and evaluates the potential environmental impacts from flooding in the Planning Area that may be associated with implementation of the Proposed Project. Impacts on water supply and wastewater treatment are discussed in Section 4.14 of this EIR, "Utilities."

The existing baseline is described based on a number of technical documents and mapping of the Planning Area compiled by the City and other agencies mostly published between 2011 and 2016. Data from the City of Woodland from 2013, the Sacramento Area Council of Governments (SACOG) from 2013, and the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan from 2012 were used to identify flood hazard areas, dam inundation and levee protection zones.

The City received three NOP comment letters that included comment relevant to hydrology, flooding, and water quality. The California Department of Transportation, District 3, asked for a study of drainage impacts, including flooding of major roadways and runoff into local creeks. Potential drainage issues are addressed throughout the Environmental Setting subsection, the Regulatory Framework subsection, and in Impacts 4.9-1 through 4.9-4. At a workshop addressing the scope of the EIR, one respondent inquired whether the baseline conditions would incorporate recent flood updates. This EIR uses the most recent available information and regulations regarding flooding. The Central Valley Regional Water Quality Control Board provided background regulatory information, which is reflected in Section 4.9.3. The Federal Emergency Management Agency (FEMA) provided information on the current countywide flood maps and floodplain management building requirements, which are included below.

4.9.2 ENVIRONMENTAL SETTING

Woodland is located in in the eastern portion of Yolo County within the Sacramento River Hydrologic Region. The City is largely surrounded by agricultural lands. The Yolo Bypass and the Sacramento River are located two miles to the east. Willow Slough and Putah Creek are located south of the city. Cache Creek is approximately one-half mile north and northeast of the City's Planning Area.

4.9.2.1 CLIMATE

Woodland has a Mediterranean climate and typically experiences hot, dry summers and temperate, rainy winters. Winter precipitation in Woodland comes from the North Pacific storm track, averaging 20 inches per year. Woodland's annual precipitation falls from October to April, with the majority falling between the months of November and March (Yolo County 2009).

4.9.2.2 SURFACE WATER RESOURCES

There are no natural surface water features within either the city limits or the Planning Area; however, there are many hydrologic features throughout the region and immediate area that are relevant to the City in terms of water

supply and flood risk. Woodland lies within portions of four major watersheds: Sacramento River, Cache Creek, Putah Creek, and Willow Slough. Surface water in Yolo County and the Woodland area generally drains to the Yolo Bypass on the eastern edge of the county. Much of the surrounding agricultural land is irrigated through a series of canals and drainage ditches connected to these waterways.

Water from the Sacramento River, Cache Creek, and Putah Creek supplies drinking water to urban areas throughout Yolo County and the Central Valley. Woodland has recently converted to use Sacramento River water as the primary source of drinking water through the Woodland-Davis Clean Water Agency, and uses groundwater to meet any remaining unmet demand. Construction of Woodland-Davis Clean Water Agency project-related facilities has recently been completed (Woodland-Davis Clean Water Agency 2016).

Exhibit 4.9-1 illustrates the major waterways near the City of Woodland.

Sacramento River

Although not located within the Planning Area, the Sacramento River is the largest river in California. It drains 26,300 square miles of the northern Central Valley and carries nearly one-third of the total annual runoff of all California streams. The river and its associated reservoirs provide California with two-thirds of its annual water supply. Water in the Sacramento River primarily comes from the melting of the Sierra Nevada snowpack, the drainage of several connecting tributaries, and flows from Shasta Lake and Lake Oroville, two of California's largest reservoirs and major components of the federal Central Valley Project and State Water Project. The river flows south from the Klamath Mountains, down through the Sacramento Valley to Suisun Bay, then into San Francisco Bay, and eventually to the Pacific Ocean.

Cache Creek

Cache Creek, located north and east of the Planning Area, flows through the counties of Lake, Colusa, and Yolo and is diverted through a series of canals to provide water for agricultural irrigation. The south fork of Cache Creek serves as the primary outfall of the Clear Lake and Cache Creek Dam, while the north fork diverts water via the Indian Valley Dam and Reservoir project. The north and south forks of Cache Creek flow to the Capay Diversion Dam, where they are diverted for distribution throughout Yolo County. Although Cache Creek was a tributary of the Yolo Bypass at one point, most of the water is now diverted and flow only reaches the Bypass during years of heavy rainfall.

Putah Creek

Water flowing through Putah Creek originates in the southwestern portion of Lake County, from natural springs on the east side of Cobb Mountain and other flows in the Mayacammas Mountains. The water flows east into Lake Berryessa, through the Monticello Dam and hydroelectric power plant, across the Sacramento Valley, and eventually into the Yolo Bypass south of the Planning Area

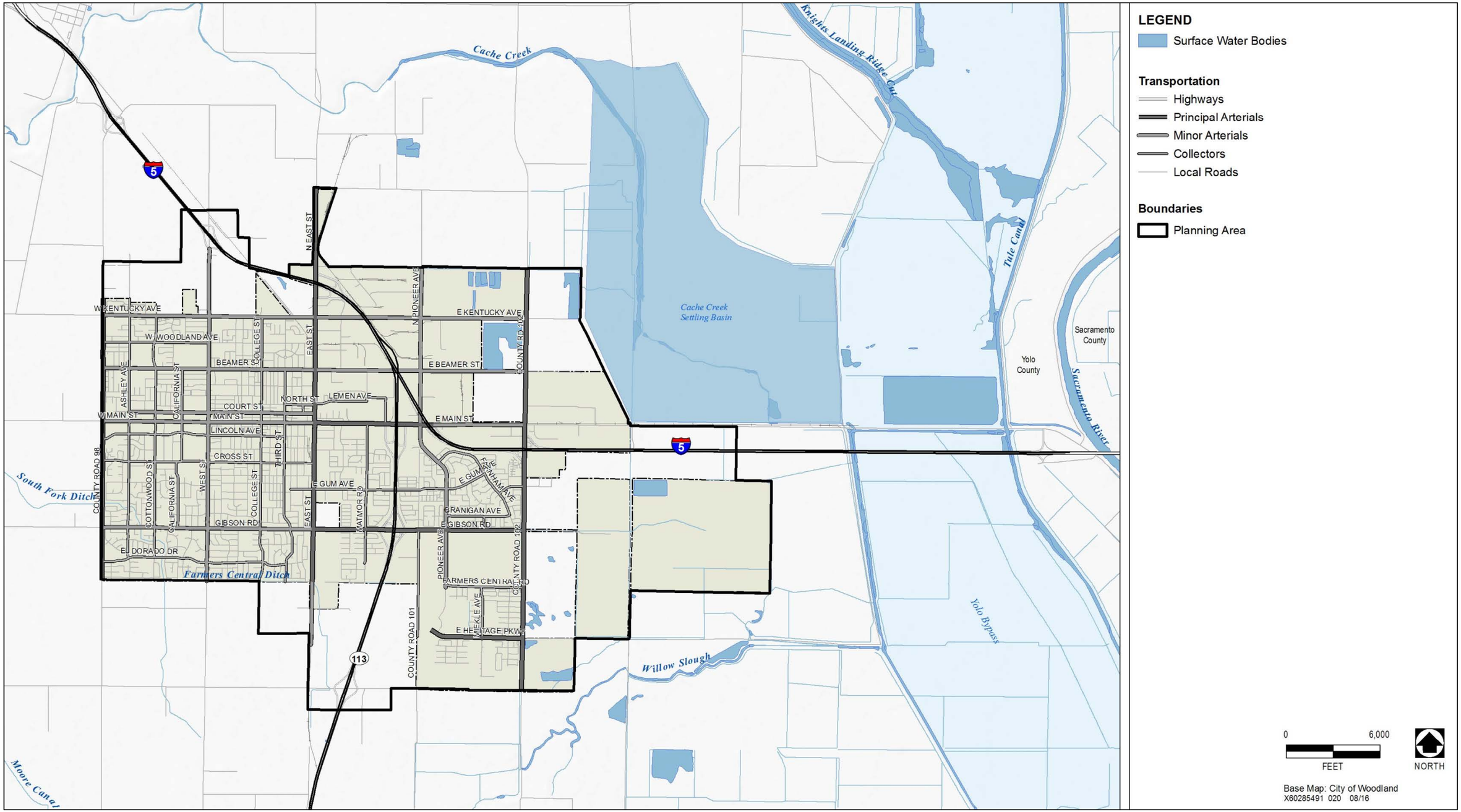

Exhibit 4.9-1. **Surface Waters**

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Willow Slough

The Willow Slough was constructed in order to divert waters to the Yolo Bypass through a shorter route. It drains water from Cache Creek, beginning near the foothills southwest of Woodland, across the valley floor and ultimately discharges into the Yolo Bypass southeast of the city.

Yolo Bypass

The Yolo Bypass, located to the east of the Planning Area, was constructed as part of the Sacramento River Flood Control Project (1917–1925) to convey flood flows from the Sacramento Watershed. The Bypass includes 59,000 acres of floodplain that can convey as much as 490,000 cubic feet per second (cfs). Much of the Bypass is farmed, while some of the land has been dedicated as a managed wetland and wildlife area.

Water Distribution Channels

There are more than 175 miles of irrigation and drainage facilities in Yolo County that transport water from the Capay Diversion Dam to irrigated lands surrounding Woodland. Most are managed by the Yolo County Flood Control and Water Conservation District. There are also several ditches constructed and maintained by private landowners. While these canals and ditches typically serve irrigation uses, they are also used to manage runoff from rainfall during the winter.

4.9.2.3 GROUNDWATER RESOURCES

The Sacramento Valley Groundwater Basin is the major groundwater basin in the Sacramento River hydrologic region. There are 18 groundwater subbasins. The Yolo Subbasin (Groundwater Basin Number 5-21.67) encompasses approximately 400 square miles in the southern portion of the Sacramento Valley Groundwater Basin, primarily in Yolo County (California Department of Water Resources [DWR] 2004). This subbasin is bounded on the east by the Sacramento River, on the west by the Coast Range, on the north by Cache Creek, and on the south by Putah Creek. Woodland is located in the Lower Cache-Putah Subarea within the eastern portion of the Yolo Subbasin, the East Yolo Subbasin.

The Yolo Subbasin is roughly bisected by an anticlinal structure, but otherwise is gently sloping from west to east, following the Sacramento Valley topography, and drains into the Sacramento-San Joaquin Delta. Elevations range from approximately 400 feet at the base of the Coast Range to the west to nearly sea level in the eastern areas. Cities within the subbasin consist of Davis, West Sacramento, Winters, and Woodland. Precipitation averages approximately 20–24 inches per year in the western portion of the subbasin, and approximately 18–20 inches per year in the eastern portion of the subbasin (DWR 2004).

Two main aquifers are present: an intermediate, unconfined aquifer at depths of approximately 200–700 feet; and a deep confined aquifer at depths of approximately 700–2,700 feet. City of Woodland wells pump from the intermediate aquifer at depths of 200–600 feet below the ground surface (LTD Engineering 2004).

The primary water-bearing formations comprising the Yolo subbasin are sedimentary continental deposits of Late Tertiary (Pliocene) to Quaternary (Holocene) age. Fresh water-bearing units consist of younger alluvium, older alluvium, and the Tehama Formation. The cumulative thickness of these units ranges from a few hundred feet near the Coast Range on the west to nearly 3,000 feet near the eastern margin of the basin. Saline water-bearing sedimentary units underlie the Tehama formation and are generally considered the boundary of fresh water.

Younger alluvium consists of flood basin deposits that occur along the eastern margin and recent stream channel deposits. Flood basin deposits occur along the eastern margin of the subbasin in the Yolo Flood Basin. They consist primarily of silts and clays, but along the eastern margin of the subbasin may be locally interbedded with stream channel deposits of the Sacramento River. Thickness of the unit ranges from 0–150 feet. The flood basin deposits have low permeability and generally yield low quantities of water to wells. The quality of groundwater produced from the basin deposits is often poor. The younger alluvium varies from moderately to highly permeable, but often lies above the saturated zone. Where saturated, the younger alluvium yields substantial quantities of water to wells. Older alluvium consists of loose to moderately compacted silt, silty clay, sand, and gravel deposited in alluvial fans during the Pliocene and Pleistocene. Thickness of the unit ranges from 60–130 feet, about one quarter of which is coarse sand and gravel. Permeability of the older alluvium is highly variable. Wells penetrating sand and gravel lenses of the unit produce between 300 and 1,000 gallons per minute (gpm). Adjacent to the Sacramento River, wells completed in ancestral Sacramento River stream channel deposits yield up to 4,000 gpm. Wells completed in the finer-grained portions of the older alluvium produce between 50 and 150 gpm.

The Tehama Formation is the thickest water-bearing unit underlying the Yolo Subbasin, ranging in thickness from 1,500–2,500 feet. Surface exposures of the Tehama Formation are limited mainly to the Coast Range foothills along the western margin of the basin, as well as in the Plainfield Ridge. The Tehama Formation consists of moderately compacted silt, clay, and silty fine sand enclosing lenses of sand and gravel, silt and gravel, and cemented conglomerate. Permeability of the Tehama Formation is variable, but generally less than the younger units. Because of its relatively greater thickness, however, wells completed in the unit can yield up to several thousand gpm.

Underlying the Tehama Formation are brackish to saline water-bearing sedimentary units, including the somewhat brackish sedimentary rocks of volcanic origin (Pliocene to Oligocene) underlain by marine sedimentary rocks (Oligocene to Paleocene), which are typically of low permeability and contain connate water. The upper contact of these units generally coincides with the fresh/saline water boundary. The contact is found near the Coast Range at depths as shallow as a few hundred feet. Near the eastern margin of the basin, it reaches depths of nearly 3,000 feet.

The geologic structure of the groundwater subbasin is dominated by an anticlinal ridge oriented northwest to southeast, which is expressed at the surface as the Dunnigan Hills and Plainfield Ridge. The anticlinal structure impedes subsurface flow from west to east. Subsurface groundwater outflow sometimes occurs from the Yolo Subbasin into the Solano Subbasin to the south. Subsurface outflow and inflow may also occur beneath the Sacramento River to the east with the South and North American subbasins. Subsurface groundwater inflow may occur from the west out of the Capay Valley Basin.

Groundwater Storage and Levels

It is estimated that water storage below the ground surface ranges from between 20 and 420 feet and that the subbasin can hold up to 14,038,000 acre-feet (Yolo County 2005).

Groundwater levels have historically decreased during periods of drought due to increased groundwater pumping and less surface water recharge (e.g., in the late 1970s and early 1990s) but recover quickly in “wet” years. Long-term trends do not indicate any substantial decline in water levels, although localized pumping depressions have previously occurred in the vicinity of the Davis, Woodland, and Dunnigan/Zamora areas. Past studies (Scott and

Schalmini 1975) have concluded that the Yolo Subbasin is subject to overdraft;[1] however, completion of Indian Valley Reservoir in 1976 provided substantial relief in the form of additional available surface water (YCFCWCD 2000). Recent evaluation of groundwater levels in the County indicates current conditions are stable in all groundwater zones (YCFCWCD 2004).

Groundwater Quality

There is naturally occurring salinity, boron, and selenium in the groundwater. City wells have been experiencing increasing concentrations of nitrates over the past few decades. Nitrates are from agricultural fertilizers that reach the groundwater. In addition, City wells have been found to contain more hexavalent chromium (Chromium-6) than allowed by new State standards. Hexavalent chromium is a naturally occurring metal in soil and water. The Chromium-6 maximum contaminant level (MCL) became effective on July 1, 2014, and the City must achieve compliance by January 1, 2020, according to Senate Bill 685. The California Chromium-6 MCL is 10 µg/L, and the average concentration in the City's wells is 16 µg/L. However, the City's groundwater is in compliance with the other regulated substances' MCLs (City of Woodland 2015a). The opening of the RWTF, shifting Woodland's primary source of water from groundwater to surface water, addresses the issue of non-compliance. Groundwater will supplement and be blended with the surface water supply or used only in emergencies (City of Woodland 2016).

Subsidence

Groundwater pumping has altered this gradient in some areas by creating localized depressions in the water table and has contributed to land subsidence, the sinking of land resting from groundwater extraction, that caused the aquifer to experience a decline in capacity from 1950 to 1976 and led to the development of the Indian Valley Dam and Reservoir. Inelastic (permanent) land subsidence resulting from groundwater withdrawal has occurred in the Yolo Subbasin as a result of groundwater overdraft, although impacts of inelastic land subsidence in the Woodland Area since 1999 have been limited (City of Woodland 2016:6-5). The risk of future subsidence depends on various factors, such as the degree of new groundwater development (especially in new areas or at different depths), changing land uses, and the mineral composition of the aquifer skeleton.

Rates of inelastic land subsidence are being established by the Water Resources Association of Yolo County's (WRA) Yolo Subsidence Monitoring Project. At present, data are insufficient to establish significance criteria for rates of inelastic land subsidence in the Woodland area. The City will participate in future surveys of the Yolo Subsidence Network and will evaluate the results with other members of the WRA (City of Woodland 2011: ES-4).

4.9.2.4 FLOODING

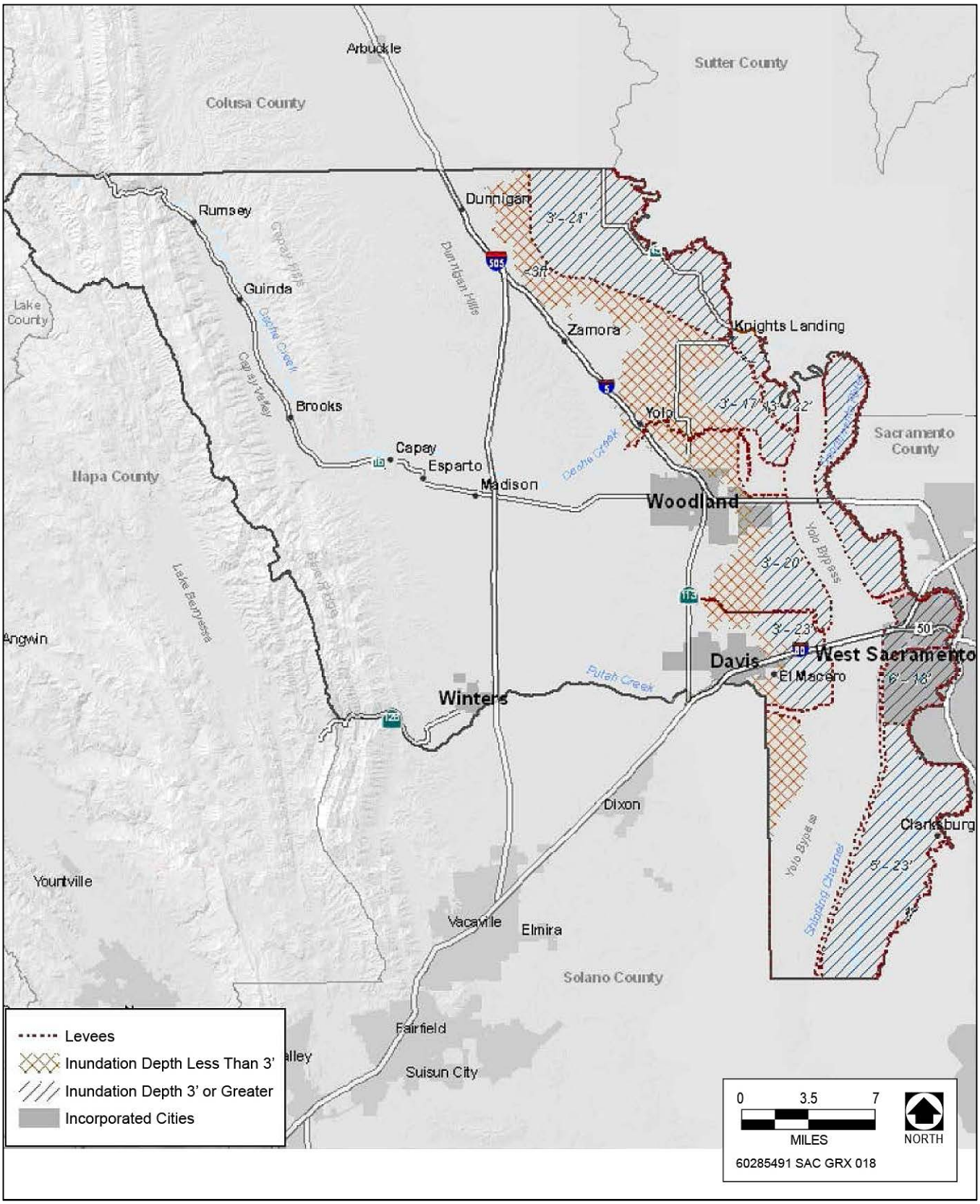
The City of Woodland is surrounded by waterways that periodically flood. These waterways include Cache Creek to the north and northwest and the Yolo Bypass/Sacramento River system to the east. In the event of a severe storm, these water bodies can overtop creek banks and levees, or levees could fail, resulting in flooding in Woodland.

[1] Groundwater overdraft occurs when groundwater use exceeds the amount of recharge into an aquifer, which leads to a decline in groundwater level.

In major flooding events, Cache Creek spills south and east towards Woodland. The lower Cache Creek levee system does not provide adequate protection from storm events greater than approximately the 30-year storm when there are storm events that are greater than approximately the 30-year storm, water can overtop the levee and result in flooding. The levee system is not currently certified by FEMA as adequate to provide the required flood protection for the area. The Cache Creek Settling Basin is located just northeast of the Planning Area. Its levees act as a dam and impede the west to east conveyance of Cache Creek floodwaters. In addition, most of the Planning Area located east of Country Road 102 lies in the Yolo Bypass floodplain. These factors can result in flood depths of 10 to 12 feet in parts of the Planning Area that includes commercial and residential development, as well as on Interstate 5 in the eastern part of the city. Interstate 5 impounds and directs floodwater leaving the levee system into developed areas of Woodland in the western part of the city. The location of levees and the levee inundation areas are shown in Exhibit 4.9-2 from the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan. Northeastern areas of the City are at risk of levee inundation up to three inches and eastern areas are at risk of inundation up to 20 inches.

Typical flood hazards in Woodland generally consist of shallow sheet flooding from surface water runoff from large rainstorms with depths generally less than two feet. However, in larger storm events, there are significant areas within the Planning Area on the north and east sides that are also affected by flooding from Lower Cache Creek. FEMA and the California Department of Water Resources (DWR) have published floodplain maps showing areas that would be inundated by 100-year and 200-year flood events respectively. The FEMA 100-year floodplain mapping is regulatory and establishes the floodplain areas where flood insurance is required. Recent State law requires 200-year floodplain mapping. As shown in Exhibit 4.9-3, 45 percent of the Planning Area is located in the Cache Creek and/or Yolo Bypass 200-year floodplains and subject to a 0.5 percent probability of flooding in any given year. In addition, it is also important to consider the potential flooding depths that properties could experience, as this can indicate the relative ease or difficulty of mitigating future flood hazards. For instance, a parcel with a historic flood depth of less than one foot presents a more attractive development opportunity than one that can flood to levels of more than three feet, in which case the property would have to be filled to above the flood water surface elevation. DWR and the Central Valley Flood Protection Plan, discussed below, typically view three feet as the threshold for what constitutes “deep” flooding. Roughly 25 percent of land within the Planning Area is subject to flooding depths of over three feet.

The industrial area, located in the northeastern section of the Planning Area, is particularly susceptible to flooding. In addition, some portions of SP-3 are subject to flood depths of up to three feet, and the majority of SP-2 is susceptible to flooding depths of greater than seven feet.



Source: Yolo County 2012

Exhibit 4.9-2. **Levee Protection Zones**

City streets, even those outside of the floodplain, are also subject to localized flooding during periods of heavy rainfall. Currently, portions of the city's storm drain system is not adequately sized for the actual flows. Older parts of the city, particularly west of East Street, do not have a system of under-street storm drain pipes. Instead, runoff is conveyed through intersections in valley gutters, gutter culverts, or inverted siphons, and must travel long distances to reach a drain inlet. In these areas, when the capacity of drain inlets and pipes is exceeded, localized street flooding occurs and remains for three to four hours after rainfall has subsided. Refer to Section 4.14 of this EIR, "Utilities," for a more detailed discussion of the city's stormwater infrastructure.

Flood Protection

Many agencies at various levels of government are responsible for flood protection. At the federal level, the three primary agencies are the U.S. Army Corps of Engineers, FEMA, and the Bureau of Reclamation. At the State level, the primary agencies are the Department of Water Resources and the Central Valley Flood Protection Board. At the regional and local level, the primary agencies include the Yolo County Flood Control and Conservation District, Yolo County, and the City of Woodland.

Woodland's geography and flooding history present challenges for phasing of new development. Securing a comprehensive flood protection solution is a critical priority for Woodland. The City is currently conducting a feasibility study for the Lower Cache Creek flood project. Working with the U.S. Army Corps of Engineers, the City has narrowed the alternatives for flood risk reduction to two alternatives and has updated the modeling of the alternatives, including preparation of revised cost estimates. Both alternatives collect floodwater that leaves Cache Creek, intercept the water prior to entering Woodland, and direct the flood water to the Yolo Bypass.

Dam Inundation

Areas in and around Woodland could potentially experience up to eight feet of flooding in the unlikely event of failure of the Indian Valley Dam, located on the North Fork of Cache Creek. In addition to a severe earthquake, other potential events that could lead to dam failure or overtopping include major flood inflows, massive landslide or slippage, and piping (when water finds a path through the levee embankment) or erosion of the dam embankment. Flooding would occur within six to seven hours of dam failure. Exhibit 4.9-4, from the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan identifies areas in and around Woodland subject to dam inundation.

Sea Level Rise

Sea level rise is caused by thermal expansion—the expansion of water from increased ocean temperatures—and melting of glaciers, ice caps, and ice sheets. Sea level rise can result in the destruction of coastlines, saltwater intrusion into fresh water sources, flooding of wetlands, and habitat loss. Because of the Planning Area's long distance from the Pacific Ocean and the intervening mountainous topography, sea level rise is not a factor in Woodland.

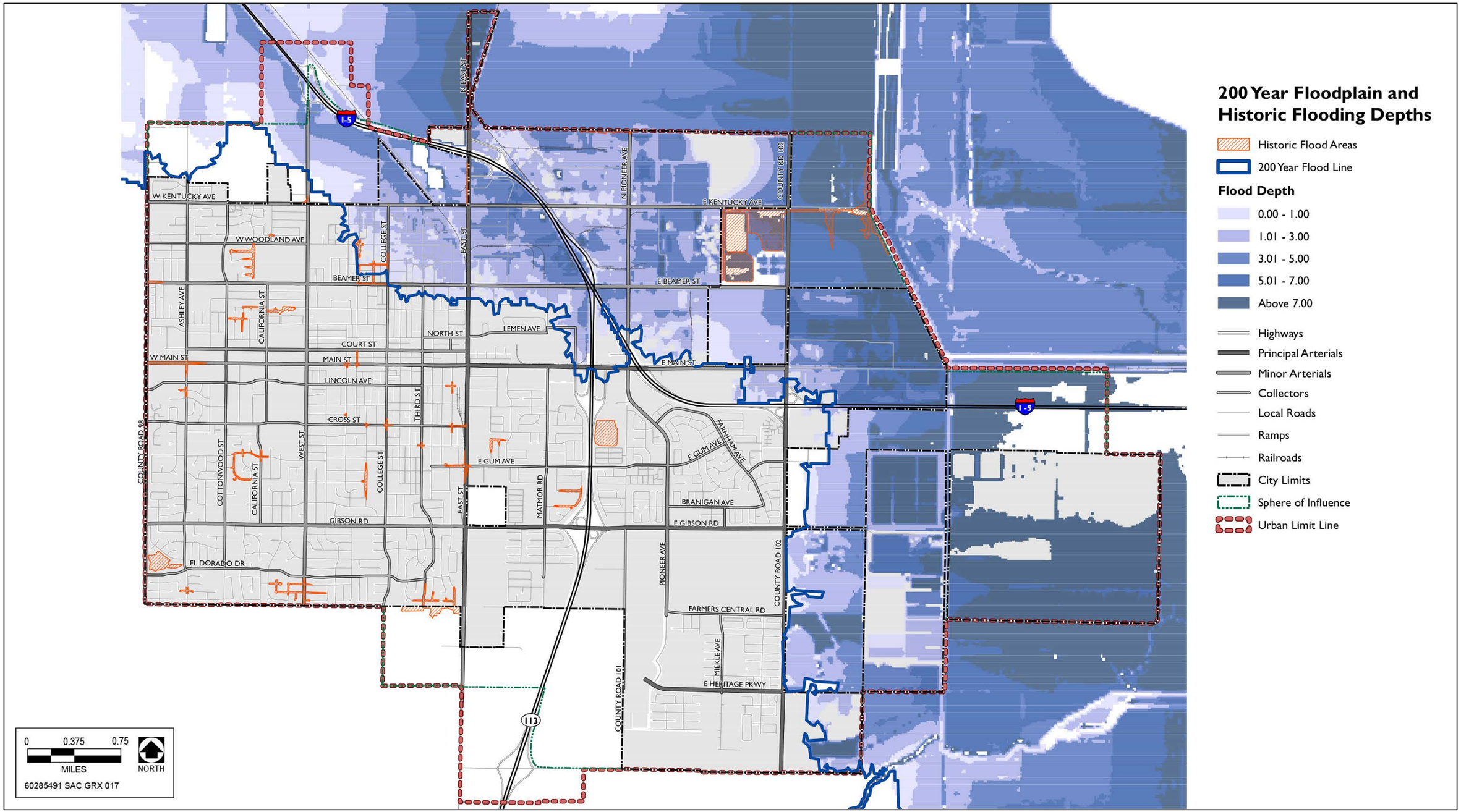


Exhibit 4.9-3. **200-Year Floodplain and Flooding Depths**

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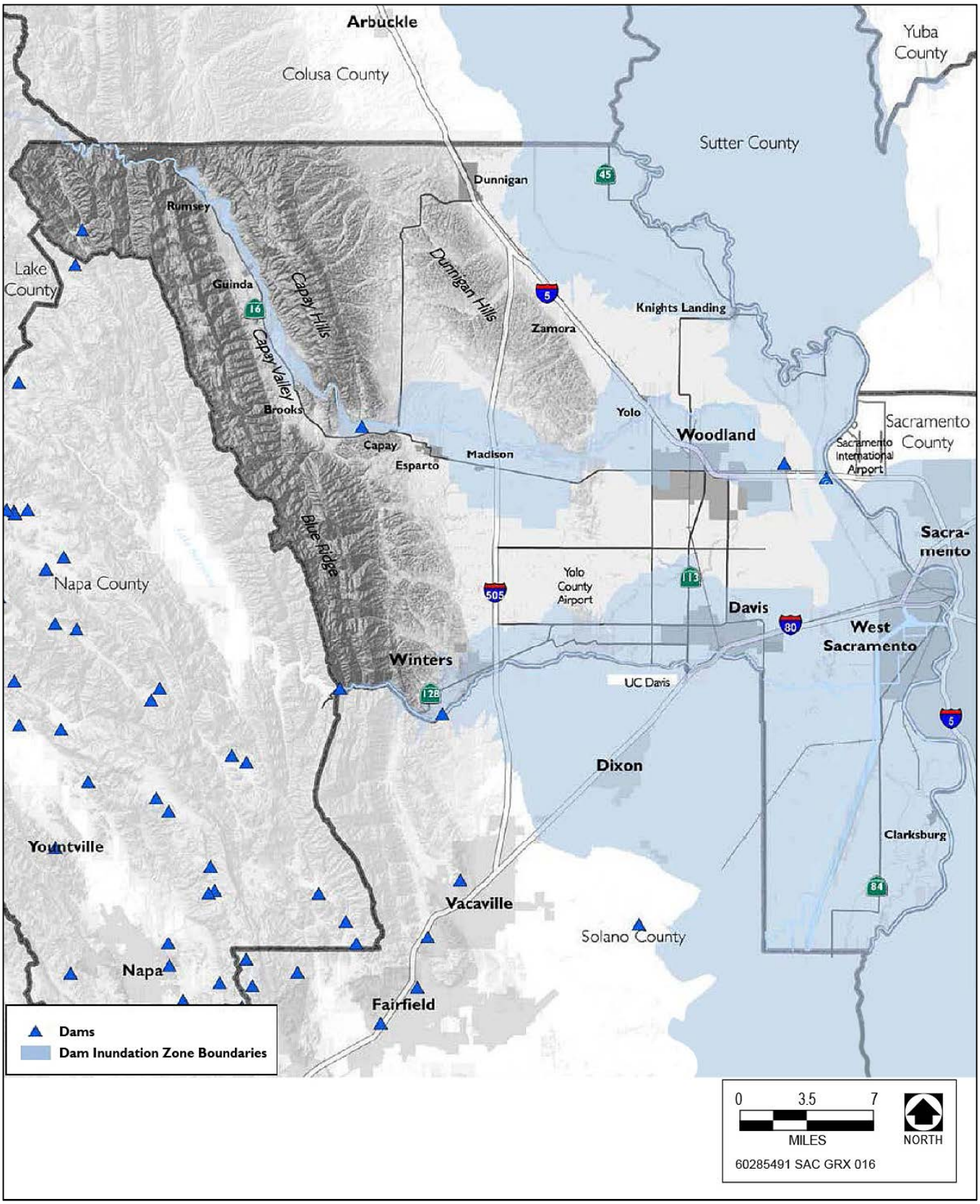


Source: Yolo County 2012

Exhibit 4.9-4. **Dam Inundation Zones**

4.9.2.5 SURFACE WATER QUALITY

The Clean Water Act Section 303(d) requires states to maintain a list of impaired water bodies, establishing Total Maximum Daily Loads (TMDL) for each. The primary surface water resources in the area are the Sacramento River and the Yolo Bypass. Others resources include Cache Creek, Putah Creek, Willow Slough, and Clear Lake. Surface water quality for water bodies in the Woodland area are generally good; however, several water bodies are listed on the 303(d) list. The Sacramento River is listed as impaired by mercury and pesticides. These chemicals are found at their highest concentrations at discharge points along the creeks that receive run-off from agricultural fields and abandoned mines and associated waste materials transported from upstream areas.

The potential health risks associated with mercury include neurological dysfunction, particularly in children. It is ingested by humans mainly through fish and food consumption. It is persistent in the environment and will bioaccumulate (i.e., greatly magnify its concentration from water and sediments up the food chain to fish and other organisms). Diazinon, one of the most widely used pesticides in the United States, can be toxic at high exposures. Group A pesticides, some of which are no longer manufactured in the United States, are classified as known, probable, or possible human carcinogens.

Cache Creek is listed on the 303(d) list for the presence of boron and mercury, as well as unknown toxicity. The high boron and mercury concentrations are due, in part, to the erosion of marine sediments into the watershed. The Yolo County Flood Control and Water Conservation District (YCFCWCD) has detected boron concentrations of 0.7 milligrams per liter (mg/l) in the spring to 2.2 mg/l in the winter, averaging less than 1.0 mg/l. during irrigation season (Yolo County 2005). The Cache Creek watershed was a primary source of mercury used for gold mining in the Sierra Nevada, and one half of all the mercury entering the Sacramento River system flows from this watershed. It is estimated that over 40 abandoned mines are found in the drainage. The Cache Creek Settling Basin was designed to capture sediment as well as enhance groundwater recharge prior to discharge into the Yolo Bypass.

Putah Creek is also listed for boron and mercury, and Willow Slough is listed for boron, as well as pathogens, including *Escherichia coli* (E. coli) and fecal coliform. Table 4.9-1 provides a summary of 303d-listed impaired water bodies in the Woodland area and their associated pollutants.

4.9.2.6 GROUNDWATER QUALITY

Groundwater in the Yolo Subbasin is characterized by a sodium magnesium bicarbonate, calcium magnesium bicarbonate, and magnesium carbonate chemistry. Groundwater quality is generally considered adequate for agricultural and municipal uses, although it tends to be “very hard” (Yolo County 2005). There are some localized areas throughout the basin that have been recorded to have high concentrations of boron. Electrical conductivity, an indicator of salinity, has continued to increase in the County since 1975, at least in some areas. Groundwater near Cache Creek has been noted to contain higher concentrations of selenium, nitrate, and boron and other areas just east of Woodland have been identified as having a high levels of nitrates (Yolo County 2005).

As required by state law, the City of Woodland prepares annual water quality reports. Results from the shallow and intermediate aquifers have indicated some areas with contaminant levels that nearly meet the maximum concentration levels (MCLs) for nitrates, salts, and other contaminants. In some cases, where concentrations exceeded MCLs, wells were abandoned or taken off line.

Table 4.9-1. Woodland Area Waterbodies–Total Maximum Daily Loads				
Water Body	Pollutant	Category	Expected TMDL Completion Date	Miles Affected
Sacramento River (Knight's Landing to the Delta)	Chlordane	Pesticides	2021	16
	DDT	Pesticides	2021	16
	Dieldrin	Pesticides	2022	16
	Mercury	Metals/Metalloids	Completed in 2012	16
	PCBs	Other Organics	2021	16
	Unknown Toxicity	Toxicity	2019	16
Cache Creek	Boron	Metals/Metalloids	2021	96
	Mercury (South Fork)	Metals/Metalloids	Completed in 2007	96
	Unknown Toxicity	Toxicity	2019	96
	Mercury (North Fork)	Metals/Metalloids	Completed in 2007	14
Putah Creek	Boron	Metals/Metalloids	2021	27
	Mercury	Metals/Metalloids	2017	27
Willow Slough and Bypass	Boron	Metals/Metalloids	2021	10
	Boron	Metals/Metalloids	2021	6
	Escherichia coli (E. coli)	Pathogens	2021	6
	Fecal Coliform	Pathogens	2021	6

Note: TMDL = Total Maximum Daily Load; DDT = Dichlorodiphenyltrichloroethane; PCBs = Polychlorinated biphenyls

Source: State Water Resources Control Board 2015

Senate Bill 385 was signed by California's Governor in September 2015 establishing the MCL for hexavalent chromium. The established MCL for hexavalent chromium is 10 ppb. Public water systems have until January 1, 2020 to come into compliance without being deemed in violation of the MCL. This MCL does affect existing water supplies in the city of Woodland; however, as stated above, the City of Woodland has secured surface water supplies for both current and future demands from the Sacramento River, using groundwater to meet any remaining unmet demand, through the Woodland-Davis Regional Water Supply Project.

The shallow and intermediate groundwater zones are an important source of supply for private domestic and irrigation purposes. Municipal supplies have been largely developed from the intermediate groundwater zone; however, since 1990, there has been increased interest in the exploration and development of the deep zone for municipal uses. Deep zone test wells beneath Woodland have found high concentrations of arsenic, among other contaminants, and therefore the deep groundwater zone of the aquifer is not expected to be a viable source for supplemental municipal supply for the Planning Area.

4.9.2.7 CLIMATE CHANGE RESILIENCY

As noted in the *City of Woodland Groundwater Management Plan* (2011: 2-11), DWR and other agencies and cooperative research groups have performed studies to model potential future climate change effects at the regional level on both streamflow and temperature. The focus has been on the Sacramento River system since it is a major source of water for much of California. The model results are not in agreement as to whether future

annual average runoff will increase or decrease. However, the model results similarly indicate more extreme hydrology, i.e., more floods and droughts, regardless of the "average" hydrology, and the models all show that the future will likely be warmer than it is today.

Other potential changes related to hydrology include less snowpack, earlier runoff from snowmelt, more precipitation as rain than snow, changes in the amount and timing of stream flows, changes in water resources system operations, and rising sea levels. In turn, these changes could affect water supply reliability and water quality. DWR has confirmed that some impacts have been occurring for many years. For example, the historical Sacramento River snowmelt runoff has been decreasing as a percentage of total annual flows for much of the 20th century. This is an indication of a long-term decrease in snowpack, and perhaps an increase in wintertime flows and floods.

As discussed in further detail in the "Regulatory Framework" subsection, the City of Woodland has already taken steps to respond to the potential hydrologic and water quality effects related to climate change by initiating a change to a conjunctive use water program. The Woodland-Davis Regional Water Supply Project will allow the City to implement an integrated water resources approach that utilizes both surface and groundwater, rather than relying solely on groundwater (Woodland-Davis Clean Water Agency 2016). Climate change is addressed in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy."

4.9.3 REGULATORY FRAMEWORK

4.9.3.1 FEDERAL

Clean Water Act, 33 U.S.C. §1251 et seq.

The Clean Water Act of 1972 (CWA) is the primary federal law that governs and authorizes water quality control activities by the U.S. Environmental Protection Agency (EPA), the lead federal agency responsible for water quality management. By employing a variety of regulatory and non-regulatory tools, including establishing water quality standards, issuing permits, monitoring discharges, and managing polluted runoff, the CWA seeks to restore and maintain the chemical, physical, and biological integrity of surface waters to support the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water.

EPA is the federal agency with primary authority for implementing regulations adopted pursuant to the CWA, and has delegated the State of California as the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 described below.

Water Quality Criteria and Standards

Pursuant to federal law, EPA published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Section 303(d) requires states to develop lists of the water bodies and associated pollutants that exceed water quality criteria.

National Pollutant Discharge Elimination System Permit Program, Section 402

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the U.S. Federal NPDES permit regulations have been established for broad categories of discharges, including point source municipal waste discharges and nonpoint source stormwater runoff. NPDES permits generally identify limits on the concentrations and/or mass emissions of pollutants in effluent discharged into receiving waters; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

More specifically, the discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to ensure the maintenance of public health and safety, protection of receiving water resources, and safeguarding of the water's designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life.

In November 1990, EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons.[2] Phase II of the NPDES stormwater permit regulations became effective in March 2003 and required NPDES permits be issued for construction activity for projects that disturb between one and five acres. Phase II of the municipal permit system (i.e., known as the NPDES General Permit for Small Municipal Separate Storm Sewer Systems [Small MS4s], Order NO. 2003-0005-DWQ as amended by 2013-0001-DWQ) required small municipality areas of less than 100,000 persons to develop stormwater management programs. Woodland's 2012/2013 Storm Water Management Program Annual Report (City of Woodland 2013) describes the City's activities to comply with the NPDES General Permit for Small MS4s.

California's Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the NPDES permit system (refer to additional details in the section, "State Regulations," below).

Section 401 Water Quality Certification or Waiver

Under Section 401 of the CWA, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the U.S.) must first obtain a certificate from the appropriate agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirements is delegated by the State Water Resources Control Board (SWRCB) to the nine regional boards. The Central Valley RWQCB is responsible for the Woodland area.

[2] Phase I also applies to storm water discharges from a large variety of industrial activities, including general construction activity if the project would disturb more than 5 acres.

Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a TMDL for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives.[3] EPA must either approve a TMDL prepared by the state or disapprove the State's TMDL and issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. The goal of the TMDL program is that, after implementation of a TMDL for a given pollutant on the 303(d) list, the causes that led to the pollutant's placement on the list would be remediated.

Federal Antidegradation Policy, 40 CFR 131.12

The federal antidegradation policy is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- existing instream uses and the water quality necessary to protect those uses shall be maintained and protected;
- where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and
- where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

National Toxics Rule and California Toxics Rule, 40 CFR 131

In 1992, EPA promulgated the National Toxics Rule under the Clean Water Act to establish numeric criteria for priority toxic pollutants for 14 states to bring all states into compliance with the requirements of section 303(c)(2)(B) of the CWA. The National Toxics Rule established water quality standards for 42 pollutants not covered under California's statewide water quality regulations at that time. As a result of the court ordered revocation of California's statewide Basin Plans in September 1994, EPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, EPA issued the California Toxics Rule, which includes all the priority pollutants for which EPA has issued numeric criteria not included in the National Toxics Rule. These criteria apply to discharges to surface waters in the Woodland area.

[3] The TMDL prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows the link between loading reductions and the attainment of water quality objectives.

Safe Drinking Water Act, Title XIV of The Public Health Service Act

The Safe Drinking Water Act was passed in 1974 to regulate the nation's drinking water supply. The law was amended in 1986 and 1996, and requires many actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs, and groundwater. The Safe Drinking Water Act authorizes EPA to set national health-based standards for drinking water to protect against both naturally occurring and human-caused contaminants that may be found in drinking water. EPA sets national standards for drinking water to protect against health risks, considering available technology and costs. These National Primary Drinking Water Regulations set enforceable maximum contaminant levels (MCLs) for particular contaminants in drinking water or require ways to treat water to remove contaminants. EPA, states, and local agencies then work together to make sure that these standards are met.

Federal Emergency Management Agency National Flood Insurance Program, 42 U.S.C. 4016(a)

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection covered by the FIRMs is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (AEP) (i.e., the 100-year flood event). As developments are proposed and constructed FEMA is also responsible for issuing revisions to FIRMs, such as Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) through the local agencies that work with the National Flood Insurance Program.

Executive Order 11988

Executive Order 11988 (Floodplain Management) addresses floodplain issues related to public safety, conservation, and economics. It generally requires federal agencies constructing, permitting, or funding a project in a floodplain to do the following:

- Avoid incompatible floodplain development;
- Be consistent with the standards and criteria of the NFIP; and
- Restore and preserve natural and beneficial floodplain values.

4.9.3.2 STATE

Porter-Cologne Water Quality Control Act of 1969, Water Code Division 7 and Related Sections

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (basin plans).The Central Valley RWQCB is responsible for the area, which includes Woodland.

Basin plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The act also requires waste dischargers to notify the RWQCBs of such activities through the filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, CWA Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to RWD requirements and WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

State Water Resources Control Board

SWRCB and its nine RWQCBs administer water rights and enforce pollution control standards throughout the state. SWRCB is responsible for granting of water right permits and licenses through an appropriation process following public hearings and appropriate environmental review by applicants and responsible agencies. In granting water right permits and licenses, SWRCB must consider all beneficial uses, including water for downstream human and environmental needs.

In addition to granting the water right permits needed to operate new water supply projects, SWRCB also issues water quality-related certifications to developers of water projects under Section 401 of the CWA.

Water Quality Control Plan for the Sacramento–San Joaquin River Basins

The *Water Quality Control Plan for the Sacramento–San Joaquin River Basins* (Basin Plan) (Central Valley RWQCB 2015) identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River hydrologic regions, which include waters near Woodland. State and federal laws mandate protecting designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]).

The beneficial uses of any specifically identified water body generally apply to all tributary streams to that water body. Those water bodies not specifically designated for beneficial uses in the Basin Plan are assigned the Municipal and Domestic Supply (MUN) use, in accordance with the State Water Board Resolution No. 88-63. Although specific surface waters have not been identified for groundwater recharge or freshwater replenishment in the Basin Plan, these additional protected beneficial uses are designated in the Basin Plan. Unless otherwise designated by the Central Valley RWQCB, all groundwater is considered suitable or potentially suitable for municipal use, agricultural supply, and industrial process supply.

Stormwater flows from Woodland, as well as effluent from the City's wastewater treatment plant (conveyed separately), are ultimately discharged into the Tule Canal, which is part of the Yolo Bypass and falls within the area covered by the Basin Plan. The Basin Plan describes a set of designated beneficial uses for each water body. Beneficial uses help to define the resources, services, and qualities of the aquatic systems. Beneficial uses also serve as a basis for establishing water quality objectives and discharge prohibitions. The Basin Plan contains specific numeric water quality objectives that are applicable to each water body or portions of water bodies. Objectives have been established for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids, temperature, turbidity, and trace elements. Numerous narrative water quality objectives have also

been established. Finally, the Basin Plan contains a set of implementation plans, which represent the Central Valley RWQCB's programs and specific plans of action for meeting water quality objectives and protecting beneficial uses.

California Toxics Rule and State Implementation Policy, 40 CFR 131.48

The California Toxics Rule (CTR) was adopted in 2000 in response to requirements of the EPA National Toxics Rule (NTR) and establishes numeric water quality criteria for approximately 130 priority pollutant trace metals and organic compounds. The CTR criteria are regulatory criteria adopted for inland surface waters, enclosed bays, and estuaries in California that are on the CWA Section 303(c) listing for contaminants. The CTR includes criteria for the protection of aquatic life and human health. Human health criteria (water and organism based) apply to all waters with a Municipal and Domestic Water Supply Beneficial Use designation as indicated in the basin plans. The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, also known as the State Implementation Plan (SIP), was adopted by the SWRCB in 2000. It establishes provisions for translating CTR criteria, NTR criteria, and basin plan water quality objectives for toxic pollutants into:

- NPDES permit effluent limits;
- effluent compliance determinations;
- monitoring for 2,3,7,8-TCDD (dioxin) and its toxic equivalents;
- chronic (long-term) toxicity control provisions;
- site-specific water quality objectives; and
- granting of effluent compliance exceptions.

The goal of the SIP is to establish a standardized approach for permitting discharges of toxic effluents to inland surface waters, enclosed bays, and estuaries throughout the state.

National Pollutant Discharge Elimination System Permit System and Waste Discharge Requirements for Construction, Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ

The SWRCB's statewide stormwater general permit for construction activity (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) is applicable to all construction activities that would disturb 1 acre of land or more. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters.

Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality (i.e., pollution and/or hydromodification) upstream and downstream. To comply with the requirements of the Construction General Permit, project applicants must file a notice of intent with the SWRCB to obtain coverage under the permit; prepare a Storm Water Pollution Prevention Plan (SWPPP); and implement inspection, monitoring, and reporting requirements appropriate to the project's risk level as specified in the SWPPP. The SWPPP includes a site map, describes construction activities and potential pollutants, and identifies Best Management Practices (BMPs) that will be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources, such as petroleum products, solvents, paints, and cement.

The Central Valley RWQCB (2013) has also adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities (General Dewatering Permit). Permit conditions for the discharge of these types of wastewater to surface waters are specified in the General Order for Dewatering and Other Low Threat Discharges to Surface Waters (Order No. R5-2013-0074, NPDES No. CAG995001). Discharges may be covered by the General Dewatering Permit if (1) the average dry-weather discharge does not exceed 0.25 million gallons per day or (2) the discharge does not exceed 4 months in duration. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the General Dewatering Permit. The General Dewatering Permit also specifies standards for testing, monitoring, and reporting; receiving-water limitations; and discharge prohibitions. If dewatering activities would exceed 4 months in duration, a project-specific permit from the Central Valley RWQCB is required. Furthermore, where dewatering activities would occur in areas of contaminated groundwater or intermix with contaminated soil, the permittee is required to consult with the Central Valley RWQCB to determine the specific permit terms, disposal methods, and/or the types of treatment.

The statewide stormwater permit for general industrial activity (Order 2014-0057-DWQ) regulates discharges associated with 10 broad categories of industrial activities, such as wastewater treatment works, and recycling facilities.

The NPDES permits all involve similar processes including submittal of notices of intent for discharging to water in the area under the Central Valley RWQCB and for implementation of BMPs to minimize those discharges. The Central Valley RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the state.

Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider the use of post-construction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements. NPDES permits require the implementation of design and operational BMPs to reduce the level of contaminants in stormwater runoff. Types of BMPs include source controls, treatment controls, and site planning measures.

SB 5 and 17; AB 5, 70, 156, and 162, 2007 Flood Legislation, sections in the California Government Code, Health and Safety Code, Public Resources Code, and Water Code

In 2007, the State legislature enacted six interrelated bills to strengthen the linkage between local land use planning decisions and flood management practices. SB 5 and 17, and AB 5, 70, 156, and 162 added or amended over 25 sections of the Government Code, Health and Safety Code, Public Resources Code and Water Code:[4]

- California Government Code Sections 11564, 13332.11.1, 65007, 65300.2, 65302, 65302.7, 65302.9, 65303.4, 65352, 65584.04, 65860.1, 65865.5, 65962, 66474.5
- Health and Safety Code Section 50465

[4] The complete list of Code changes as a result of this legislation can be found here: http://www.water.ca.gov/legislation/2007-reference.pdf.

- Public Resources Code Section 5096.830

- Water Code Sections 8200, 8201, 8306, 8307, 8521, 8522.3, 8522.5, 8523, 8550, 8551, 8552, 8554, 8575, 8577, 8578, 8580-8582, 8590, 8610.5, 8612, 8613, 9110, 9120, 9121, 9122, 9130, 9140, 9141, 9142, 9600-9625, 9650-9651, 12585.12, 12878, 12878.1, 12878.21, 12878.23

There was considerable overlap between these bills. Together they significantly modified floodplain planning and management at the State, regional, and local levels. The six flood protection bills of 2007 (in the order they were signed) are summarized below:

- SB 5 (Machado). Enacts the Central Valley Flood Protection Act of 2008. Requires the California Department of Water Resources (DWR) and the Central Valley Flood Protection Board (CVFPB; previously known as the State Reclamation Board) to prepare and adopt a Central Valley Flood Protection Plan (CVFPP) by 2012. Establishes that 200-year protection is to be the minimum urban level of flood protection. Sets deadlines for cities and counties in the Central Valley to amend their general plans and their zoning ordinances to conform to the Plan. Restricts approval of development agreements and subdivision maps in flood hazard zones, once the general plan and zoning ordinance amendments have been enacted, unless certain findings are made. Mandates Central Valley counties to develop flood emergency plans within 24 months of adoption of the Plan. Legislative intent for SB 5 is also included in AB 5 and AB 156.

- SB 17 (Florez). Sets compensation for the members of the CVFPB. Establishes the duties of the Board. The provisions of this bill were also enacted by AB 5.

- AB 5 (Wolk). Establishes the CVFPB and its duties. Sets out requirements and deadlines for reports on the flood control system to be prepared by DWR and the Board, including levee flood zone protection maps to be prepared by DWR. The same requirements are also enacted by AB 156.

- AB 70 (Jones). Provides that cities and counties will share liability with the state in the case of litigation over unreasonably approved new development on agricultural lands. This would not apply where the city or county has amended its general plan and zoning, and otherwise makes land use decisions consistent with the CVFPP. "Unreasonably approving" is defined as approval without appropriate consideration of known significant risks of flooding.

- AB 156 (Laird). Requires DWR and the Board to adopt a schedule for mapping flood risk areas within the Central Valley. Sets out requirements for reports on the flood control system to be prepared by DWR and the Board, including levee flood zone protection maps to be prepared by DWR by December 31, 2008. Mandates DWR to provide yearly notices to owners of property within a levee protection zone, beginning September 1, 2010. The same requirements are also enacted by AB 5.

- AB 162 (Wolk). Requires cities and counties to amend the land use, conservation, safety, and housing elements of their general plans to address flood-related matters. These amendments are required to be made by the next scheduled revision of the housing element after January 1, 2009.

Since 2007, there have been a number of legislative amendments to provide further clarifications to these bills, and to require further related actions at both the state and local level.

California planning law has long required that city and county general plans identify flood prone areas and limit development within those areas. The 2007 flood bills revised the requirements for the Land Use, Conservation, and Safety elements of city and county general plans with the most extensive changes taking place in the requirements for the Safety Element. These requirements apply to all cities and counties statewide. However, jurisdictions within the Central Valley (of which Woodland is one) face additional scrutiny to ensure conformity between their general plans and the CVFPP.

Sustainable Groundwater Management Act, California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4

In 2014, the California Legislature enacted a three-bill law (Assembly Bill-1739, Senate Bill [SB]-1168, and SB-1319), known as the Sustainable Groundwater Management Act (SGMA). The SGMA was created to provide a framework for the sustainable management of groundwater supplies, and to strengthen local control and management of groundwater basins throughout the state with little state intervention. The SGMA is intended to empower local agencies to adopt groundwater management plans that are tailored to the resources and needs of their communities, such that sustainable management would provide a buffer against drought and climate change, and ensure reliable water supplies regardless of weather patterns. The SGMA is considered part of the statewide, comprehensive California Water Action Plan that includes water conservation, water recycling, expanded water storage, safe drinking water, and wetlands and watershed restoration. The SMGA protects existing surface water and groundwater rights and does not affect current drought response measures (Association of California Water Agencies [ACWA] 2014).

The SGMA requires that local agencies form a local groundwater sustainability agency (GSA) within 2 years (i.e., by 2017). Agencies located within high- or medium-priority basins must adopt groundwater sustainability plans (GSP) within 5–7 years. The time frame for basins determined by DWR to be in a condition of "critical overdraft" is 5 years (i.e., by 2020). Local agencies will have 20 years to fully implement GSPs after the plans have been adopted. Intervention by the SWRCB would occur if a GSA is not formed by the local agencies, and/or if a GSP is not adopted or implemented.

The SGMA requires local agencies to develop and implement groundwater sustainability plans in high and medium priority groundwater basins throughout the State of California. In 2014, DWR designated the Yolo groundwater subbasin as high priority (DWR 2014). However, the Yolo Subbasin is not included on DWR's list of critically overdrafted basins (DWR 2016). Local agencies must form groundwater sustainability agencies by 2017, then agencies in critically overdrafted basins must develop plans by 2020, while agencies in all other high and medium priority basins must prepare plans by 2022. Designation of a groundwater sustainability agency is not required until 2017, and groundwater sustainability plans are not required until 2020 at the earliest.

Central Valley Flood Protection Plan, Water Code Section 9614

The Central Valley Flood Protection Plan (CVFPP, as set forth in Water Code, Section 9614) guides the State's participation in managing flood risk and making infrastructure investments along the Sacramento and San Joaquin River systems, and it influences federal and local participation in managing flood risk. The CVFPP guides financial investments. Last adopted in 2012, it must be updated every five years and include the following elements:

- A description of the Flood Management System, its performance, and the challenges to modifying it;

- A description of the facilities included in the State Plan of Flood Control;
- A description of probable impacts of projected climate change, land-use patterns, and other potential challenges;
- An evaluation of needed structural improvements and a list of facilities recommended for removal; and
- A description of both structural and nonstructural methods for providing an urban level of flood protection to currently urbanized areas in the Central Valley.

California Department of Water Resources

The California Department of Water Resources (DWR) is responsible for preparation of the California Water Plan, management of the State Water Project (SWP), regulation of dams, provision of flood protection, and other functions related to surface water and groundwater resources. These other functions include helping water agencies prepare their Urban Water Management Plans (UWMPs), which are discussed in Section 4.14 of this EIR, "Utilities."

4.9.3.3 REGIONAL

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The 2030 General Plan for Yolo County was adopted in 2009. The County's Health and Safety Element contains a number of goals, policies, and implementation actions related to flood hazards and protection that pertain to unincorporated land in the Planning Area. The section on flood hazards and protection includes the following goals, policies, and implementation actions to protect the public and reduce damage to property from flood hazards.

- **Policy HS-2.1** Manage the development review process to protect people, structures, and personal property from unreasonable risk from flooding and flood hazards.
- **Policy HS-2.2** Ensure and enhance the maintenance and integrity of flood control levees.
- **Policy HS-2.3** Actively update and maintain policies and programs to ensure consistency with State and federal requirements.
- **Policy HS-2.4** Clearly communicate the risks, requirements, and options available to those who own land and live within the floodplain.
- **Policy HS-2.6** Maintain the structural and operational integrity of essential public facilities during flooding.
    - **Action HS-A5** Require a minimum of 100-year flood protection for new construction, and strive to achieve 200-year flood protection for unincorporated communities. Where such levels of protection are not provided, require new development to adhere to the requirements of State law and the County Flood Damage Prevention Ordinance.

- **Action HS-A6** Continue to require habitable structures in the 100-year floodplain to be designed and constructed so that they do not significantly contribute to cumulative flooding that could pose a hazard to surrounding landowners and/or the public.

- **Action HS-A7** Yolo County shall not approve any discretionary permit, or ministerial permit, that would result in the construction of a new residence, for a project located within a flood hazard zone, unless the County can make the findings identified in Section 65962a of the Government Code.

- **Action HS-A8** Locate new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities. Where such location is not feasible, incorporate methods to minimize potential flood damage to the facility.

- **Action HS-A11** Locate new structures outside of the floodplain, where feasible, and implement appropriate methods to minimize potential damage where new construction occurs within flood hazard zones.

- **Action HS-A16** Support the efforts of levee maintenance districts with efforts to secure State and Federal funding for geotechnical studies of levees and implementation of associated improvements, as well as their ongoing maintenance.

- **Action HS-A17** Encourage flood hazard reduction projects along the Sacramento River to be consistent with the guidelines of the Sacramento River Corridor Floodway Management Plan.

- **Action HS-A18** Coordinate with local, State and Federal agencies to define existing and potential flood problem areas, including the possible impacts associated with global climate change, and to maintain and improve levees and other flood control features.

- **Action HS-A19** Develop a detailed maintenance and funding plan for levees under County control, to ensure that levee safety is maintained.

- **Action HS-A22** Ensure that the upgrade, expansion, or construction of any flood control levee demonstrates that it will not adversely divert flood water or increase flooding.

- **Action HS-A23** Work cooperatively with other local agencies and interested parties to develop funding mechanisms to finance the local share of design, construction, and capital costs for repairs and improvements to flood control levees.

- **Action HS-A30** Maintain and update on a regular basis the County Flood Damage Prevention Ordinance, to ensure its conformity with the State Model Flood Ordinance and all Federal Emergency Management Agency requirements.

- **Action HS-A31** Inform the public about the specific risks of living in areas at risk of flooding, and provide steps property owners can take to reduce their exposure to flood damages. Encourage all landowners within the 100- or 200-year floodplain, and/or within areas protected by levees, to purchase and maintain flood insurance.

- **Action HS-A32** Require that all residential development projects located within floodplains include a signed waiver regarding the potential flood risk to future buyers.

- **Action HS-A33** Develop and implement a public outreach campaign to notify landowners and tenants of their flood status, options for flood insurance, evacuation plans, flood protection programs, locally responsible flood agencies, and other related topics.

- **Action HS-A37** Continue to work with the Flood Control District, the City of Woodland, other appropriate agencies and private landowners to develop strategies and pursue funding for the implementation of projects to improve flood protection for urban and rural residents along lower Cache Creek.

Yolo County Floodplain Management Ordinance, Title 8, Land Development, Chapter 4, Flood Protection

In compliance with the National Flood Insurance Program, Yolo County adopted a Floodplain Management Ordinance, which is part of the County Code (Title 8, Chapter 4). The ordinance requires that projects planned for construction within special flood hazard areas on flood insurance rate maps (FIRMs) must meet development and construction standards specifically designed to prevent or limit flood damage. Special flood hazard areas are areas within the 100-year flood plain. The ordinance requires that the lowest floor, including basement, for all new structures or substantial improvements to existing structures within a special flood hazard area shall be elevated one foot above the 100-year Base Flood Elevation for that area.

Yolo County Flood Control and Water Conservation District

The Yolo County Flood Control and Water Conservation District (YCFCWCD) is an independent special district created to manage and expand water resources in a portion of Yolo County, including the cities of Woodland, Davis and Winters, and the towns of Capay, Esparto, Madison and other small communities within the Capay Valley. The District manages three dams in Yolo County, as well as over 150 canals and laterals across roughly 195,000 acres of land along the valley floor. YCFCWCD has implemented a Water Management Plan to manage existing water supplies and develop sources of supplemental supplies for future needs (YCFCWCD 2000). The Water Management Plan also provides information about the District's water rights, facilities, and distribution system and information about the District's historic management activities in the conjunctive use of surface water and groundwater supplies.

Woodland-Davis Clean Water Agency

The Woodland-Davis Clean Water Agency (WDCWA) is a joint powers authority that was created in 2009 to plan and implement the Woodland-Davis Regional Water Supply Project. Project plans include a jointly-owned and operated intake on the Sacramento River (WDCWA in partnership with Reclamation District 2035), raw water pipelines connecting the intake to a new regional water treatment plant, and separate pipelines delivering treated water to the cities of Woodland and Davis, and the U.C. Davis university campus. Improvements to existing water supply systems will vary for Woodland and Davis and will include facilities, such as distribution pipelines, water storage tanks, and booster pump stations.

The project will divert up to 45,000 acre-feet of water per year from the Sacramento River. Water rights were granted in March 2011, and will be subject to conditions imposed by the State. Water diversions will be limited

during summer and other dry periods. A more senior water right for 10,000 acre-feet was purchased from the Conaway Preservation Group to provide summer water supply. Groundwater will continue to be used by Woodland and Davis during times when demand for water cannot be met with surface water supplies alone.

The water treatment facility will supply up to 30 million gallons of water per day (mgd), with an option for future expansion to 34 mgd. Of that amount, Woodland's share of treated surface water will be 18 mgd, with Davis' share at 12 mgd. Approximately 5.1 miles of pipeline will transport raw water from the surface water intake on the Sacramento River to the water treatment plant located south of Woodland. From there, the treated water will travel 7.8 miles via pipeline to Davis, and up to 1.4 miles to Woodland. The project was completed in May 2016 (Woodland-Davis Clean Water Agency 2016).

4.9.3.4 LOCAL

City of Woodland 2002 General Plan

The Health and Safety Element of the City of Woodland's 2002 General Plan addresses flood hazards and protection. Its policies are focused on protecting development from damage and requiring new development within the floodplain to be designed to avoid flood damage. Policies also call for support of continued maintenance of the Indian Valley Dam and preparedness for evacuation in the event of dam failure.

- **Goal 8.B.** To protect the lives and property of the citizens of Woodland from hazards and manage floodplains for their open space and natural resource values.

- **Policy 8.B.1.** The City shall continue to implement floodplain zoning and undertake other actions required to comply with state floodplain requirements, and to maintain the City's eligibility under the Federal Flood Insurance Program.

- **Policy 8.B.2.** The City shall require evaluation of potential flood hazards prior to approval of development projects. The City shall require proponents of new development to submit accurate topographic and flow characteristics information. This will include depiction of the 100-year floodplain boundaries under fully-developed, pre- and post-project runoff conditions.

- **Policy 8.B.3.** The City shall not allow development in areas subject to deep flooding (i.e., over four feet deep) unless adequate mitigation is provided, to include project levees designed for a standard project flood or a minimum of 400-year protection, whichever is less.

- **Policy 8.B.5.** The City shall prohibit the construction of facilities essential for emergencies and large public assembly in the 100-year floodplain, unless the structure and road access are free from flood inundation.

- **Policy 8.B.6.** The City shall continue to work closely with the U.S. Army Corps of Engineers, the Yolo County Resource Conservation District, the Federal Emergency Management Agency, the State Department of Water Resources, and the Yolo County Flood Control and Water Conservation District in defining existing and potential flood problem areas and solutions.

- **Policy 8.B.9.** The City shall support efforts by the Yolo County Resources Conservation District and Yolo County Flood Control and Water Conservation District to manage the Cache Creek watershed area.

- **Policy 8.B.10.** The City shall encourage the Yolo County Flood Control and Water Conservation District to continue to maintain the Indian Valley Dam to protect against potential dam failure.

City of Woodland Storm Water Management Program

The City released its Storm Water Management Program (SWMP) in 2004, and the City's stormwater ordinance and Post-Construction Standards Manual were updated in 2015 to comply with the NPDES General Permit for Small MS4s that enable the City to comply with the CWA. The SWMP sets forth the program that the City implements to protect and improve stormwater quality.

Water that flows through the City's storm drain system is not treated; rather, it is released directly to local waterways. In Woodland, stormwater is conveyed from west to east by gravity flow, through a series of canals and pipes to a pump station. From there, water is pumped into a canal that flows from the Yolo Bypass to the Tule Canal, which discharges into the Sacramento River.

A stormwater management program for Small MS4s must be comprised of six elements that, when implemented in concert, are expected to result in substantial reductions of pollutants discharged into receiving water bodies. These six elements, termed "minimum control measures" are as follows:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Municipal Operations Runoff Control

The SWMP requires control of stormwater runoff from construction sites in order reduce pollutants in storm sewer systems from construction sites. NPDES Phase II General Permit for Small MS4s requires the City to:

- Adopt, maintain, and enforce an ordinance, policy, or other regulatory mechanism to require erosion and sediment controls at the construction sites, as well as sanctions to ensure compliance.
- Develop and implement requirements for construction site operators to implement appropriate erosion and sediment control best management practices.
- Develop and implement requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.
- Develop and implement procedures for site plan review, which incorporate consideration of potential water quality impacts.
- Develop and implement procedures for receipt of and response to information submitted by the public regarding stormwater runoff impacts due to construction projects.
- Develop and implement procedures for site inspection and enforcement of control measures.

The SWMP also requires post-construction stormwater management for new development and redevelopment in order to reduce, long term, the type and quantity of pollutants in urban stormwater runoff, and the quantity of

water delivered to waterbodies during storms after construction. NPDES Phase II General Permit for Small MS4s requires the City to:

- Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to 1 acre, including projects less than 1 acre that are part of a larger common plan of development or sale, that discharge into Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts.
- Adopt and enforce an ordinance, policy, or other regulatory mechanism that requires projects to include long-term operation and maintenance of appropriate BMPs to address post-construction runoff.
- Develop and implement strategies which include a combination of structural and/or nonstructural BMPs appropriate for the community.
- Ensure adequate long-term operation and maintenance of BMPs.

Finally, the SWMP sets forth a process to be applied to the review of development site plans to address long-term water quality issues and impacts associated with proposed land uses following construction.

The City also requires compliance with its *Post-Construction Standards Plan* (2015), which contains guidance for design of site-specific stormwater site design control measures, source control measures, and treatment control measures to prevent and/or reduce pollutants in stormwater runoff from projects. General site design control measures, such as conserving natural areas and minimizing impervious area, are required for all categorical new development projects. Source control measures limit the exposure of materials and activities so that potential sources of pollutants are prevented from contacting storm runoff. Treatment control measures are reasonable, engineered systems that provide a reduction of pollutants in runoff to be consistent with the MEP standards imposed by the Federal Clean Water Act on the City.

Woodland's *Post-Construction Standards Plan* also provides guidance for project proponents as well as municipal plan checkers through the design of Phase II MS4 Permit requirements, including post-construction site design requirements through the incorporation of LID standards and hydromodification management techniques (City of Woodland 2015). Post-construction requirements must meet the Section E.12 requirements of Order No. 2013-001-DWQ.

City of Woodland Municipal Code

Urban Stormwater Quality Management and Discharge Control, Municipal Code Chapter 23D

The purpose of the City's Urban Stormwater Quality Management and Discharge Control Ordinance (Chapter 23D of the Municipal Code) is to provide for compliance with SWRCB's NPDES permit requirements, as well as CWA and Porter-Cologne Act requirements.

Stormwater Best Management Practices (BMPs) must be implemented by all persons where a discharge has the potential to enter the City's storm drainage system, including repair of leaks, cleanup of hazardous material spills, protection of watercourses, and proper waste disposal. Development must comply with the California Stormwater Quality Association's (CASQA) *Construction Best Management Practice Manual* (2003) or its equivalent, and

associated requirements for erosion and sediment controls, soil stabilization, dewatering, source controls, pollution prevention measures, and illicit discharges.

An erosion and sediment control plan is required as a condition of the issuance of a grading or building permit. The erosion and sediment control plan (or a SWPPP) must contain appropriate site-specific construction site BMPs, the rationale used for selecting or rejecting BMPs, a quantification of expected soil loss where necessary, a list of applicable permits directly associated with applicable grading activity, and evidence that those permits have been obtained. BMPs must be implemented to the satisfaction of the City in order to ensure that the discharge of pollutants from a construction site will be effectively prohibited and will not cause or contribute to a condition of pollution or to an exceedance of water quality standards.

Industrial or commercial facilities require appropriate NPDES permits/WDRs, and implementation of BMPs consistent with the CASQA Industrial/Commercial BMP Handbook or its equivalent. The person responsible for any industrial or commercial facility must enter into an agreement for the operation, maintenance, and annual reporting of any structural control measures and treatment systems and to record such agreement with the County Recorder's Office.

The ordinance also includes post-construction standards and requirements for the use of source control, low impact development (LID), and hydromodification measures.

Flood Control, Municipal Code Chapter 6 and Chapter 10

Chapter 10 of the City's Municipal Code addresses flood control, containing a single policy that states the City's position to encourage a regional flood control project instead of the Lower Cache Creek flood barrier project previously studied by the United States Army Corps of Engineers.

Chapter 6, Article II Floodplain Management Regulations establishes standards and procedures for development in areas of special flood hazard identified by the Federal Insurance Administration of the Federal Emergency Management Agency in 2002. In order to promote the public health, safety, and general welfare and to minimize public and private losses due to flooding in Woodland, this section of the Municipal Code includes language:

- "Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- "Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- "Controlling the alteration of natural floodplains, stream channels and natural protective barriers which help accommodate or channel flood waters;
- "Controlling filling, grading, dredging and other development which may increase flood damage;
- "Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas."

4.9.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.9.4.1 METHODOLOGY

The effects of the Proposed Project were compared to environmental baseline conditions (i.e., existing conditions) to determine impacts. This analysis assumes that project applicants for projects consistent with the Proposed Project will be required to comply with applicable regulations. Impacts are evaluated qualitatively based on anticipated programmatic-level construction and operational characteristics associated with the Proposed Project.

Potential impacts due to residential and non-residential development within the 200-year flood hazard area are based on maps of the 200-year floodplain from the City of Woodland and the SACOG Mapping Center from 2013. The 200-year flood is the flood that has half of one percent chance of being equaled or exceeded in any given year. Exhibits from the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan from 2012 were used for the impact analysis of dam inundation and levee failure.

4.9.4.2 THRESHOLDS OF SIGNIFICANCE

Based on the CEQA Guidelines, Appendix G, and the requirements adopted in SB 5 as described in the Regulatory Settings, the Proposed Project would result in a significant impact related to hydrology and water quality if the project would:

- violate any water quality standards or waste discharge requirements;,
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the level of the local groundwater table (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in flooding on- or off-site;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 200-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place within a 200-year flood hazard area, structures which would impede or redirect flood flows;
- expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or

- expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

4.9.4.3 ISSUES NOT DISCUSSED FURTHER

Inundation By Seiche, Tsunami, or Mudflow—Because of the Planning Area's distance from the Pacific Ocean, tsuanmis would not represent a hazard. The Planning Area is protected from exposure to seiches by levees on both the east and west sides of the Yolo Bypass (which lies between the city and the Sacramento River), as well as levees on the west side of the Sacramento River. The levees were designed and engineered to withstand seismic activity, including the potential for seiches. In addition, the Planning Area's topography is relatively level, ranging from 0-4 percent, and not subject to mudflow. Therefore, inundation by seiche, tsunami, or mudflow would not pose a hazard for the Planning Area, and this impact is not addressed further in this EIR.

4.9.4.4 IMPACT ANALYSIS

IMPACT 4.9-1 Violation of Water Quality Standards. *Implementation of the Proposed Project would convert large areas of undeveloped land to residential, commercial, industrial, and mix-uses, as well as intensify land uses as infill in existing downtown and major corridor areas, resulting in impacts related to additional discharges of pollutants to receiving water bodies. Such pollutants would result in adverse changes to the water quality of local water bodies. However, with adoption and implementation of the proposed policies in the Proposed Project, combined with current land use, stormwater, grading, and erosion control regulations, this impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project would affect long-term water quality by adding impervious surfaces and increasing urban stormwater runoff. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The Proposed Project plans for a variety of land use changes, including intensification of development on existing sites, demolition of existing structures with replacement land uses, and changes from undeveloped agricultural and open spaces lands to developed uses. Each type of land use change has the potential to alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Changes in land use to a more developed state, if not properly managed, can adversely affect water quality.

Construction activities associated with Proposed Project implementation could alter drainages and result in soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from construction sites. The construction related impact is discussed in Impact 4.9-2. The balance of this impact assessment is focused on long-term water quality impacts.

Sediment, trash, organic contaminants, nutrients, trace metals, pathogens (e.g., bacteria and viruses), and oil and grease compounds are common urban runoff pollutants that can affect receiving water quality. Sources of these pollutants may be erosion from disturbed areas, deposition of atmospheric particles derived from automobiles or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, and accidental spills of toxic materials on surfaces that receive rainfall and generate runoff. Specifically, sources of sediment include roads and parking lots, as well as destabilized landscape areas, streambanks, unprotected slopes (which

for the most part do not occur in the Planning Area), and disturbed areas where vegetation has been removed during the grading process. Sediments, in addition to being contaminants in their own right, transport other contaminants, such as trace metals, nutrients, and hydrocarbons that adsorb to suspended sediment particles. New urban industrial and commercial development can generate urban runoff from parking areas, as well as any areas of hazardous materials storage exposed to rainfall.

Urban contaminants typically accumulate during the dry season and may be washed off when adequate rainfall returns in the fall to produce a "first flush" of runoff. The amount of contaminants discharged in stormwater drainage from developed areas varies based on a variety of factors, including the intensity of urban uses such as vehicle traffic, types of activities occurring (e.g., office, commercial, industrial), types of contaminants used at a given location (e.g., pesticides, herbicides, cleaning agents, petroleum byproducts), contaminants deposited on paved surfaces, and the amount of rainfall.

Long-term operational discharges of urban contaminants into the stormwater drainage system and ultimate receiving waters would increase with the Proposed Project, as compared to existing conditions. The major factor in this increase is the added amount of impervious surfaces, primarily taking the form of parking lots, driveways, streets, rooftops, and sidewalks. In addition, the presence of additional industrial, commercial, and other urban land uses that utilize potential pollutants (e.g., cleaning agents, pesticides, oil) could result in discharges if there is not proper storage, application, and/or disposal.

New growth residential and non-residential development would primarily occur on existing vacant and agricultural lands that are primarily pervious. This change from previous to impervious surface would result in an associated increase in urban stormwater runoff, which can be a source of surface water pollution. Infill development, as opposed to new growth, would result in less potential for increased stormwater runoff and associated water quality impacts than new growth on currently pervious, undeveloped land. However, the scale of both new growth and infill development would nonetheless have the potential to cause or contribute to an increase in long-term discharges of urban contaminants into the stormwater drainage system and ultimate receiving waters compared to existing conditions.

a. East Alternative– The total acreage of development under the East Alternative is approximately 11,633 acres, although this includes the Open Space and Flood Study Area designations, which are not anticipated to have intensive development. Without these two totals, the total is 10,439. Most new developed acreage would be outside current city limits – the total acreage of development outside current city limits under the East Alternative is 2,321. Not including the Open Space and Flood Study Area designations, the total developed acreage outside city limits is 1,612 acres. The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative– The total acreage of development under the South Alternative is approximately 11,722 acres, although this includes the Open Space and Flood Study Area designations, which are not anticipated to have intensive development. Without these two totals, the total is 10,528. Most new developed acreage would be outside current city limits – the total acreage of development outside current city limits under the South Alternative is 2,992. Not including the Open Space and Flood Study Area designations, the total developed acreage outside city limits is 2,283 acres. The South

Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Several existing regulations would apply to projects implemented pursuant to the Proposed Project that would reduce or avoid impacts related to long-term erosion, sedimentation, and water quality degradation. To receive a building permit from the City, a grading and drainage plan must be submitted to the Department of Public Works that must incorporate stormwater pollution control as well as storm drainage design features to control increased runoff from the project site. As described in Section 4.9.2, the City's Urban Stormwater Quality Management and Discharge Control Ordinance requires implementation of BMPs where a discharge has the potential to cause or contribute to pollution or contamination of stormwater, the City's storm drainage system, or receiving waters.

Under the NPDES MS4 Phase II General Permit for stormwater discharge, the City is required to develop, administer, implement, and enforce a SWMP to protect and improve stormwater quality. Implementation of the City's SWMP requires post-construction stormwater management for new development and redevelopment to protect stormwater quality and the quantity of water delivered to waterbodies. To obtain coverage under the City's NPDES Phase II MS4 permit, applicable projects within the City of Woodland are required to comply with the City's *Post Construction Standard Plan* (2015) to reduce post-construction runoff in through the incorporation of BMPs, LID, and hydromodification management techniques.

Industrial or commercial facilities require appropriate NPDES permits/WDRs, and implementation of BMPs consistent with the *CASQA Industrial/Commercial BMP Handbook* or its equivalent, including annual reporting of any structural control measures and treatment systems. In addition, the Industrial Pretreatment Program (General Plan Policy 5.H.10 – please see below) would continue in accordance with State and federal requirements.

Projects that disturb more than 1 acre of land must comply with the requirements in the SWRCB General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) [Construction General Permit]. Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality. The Construction General Permit contains a numeric, two-part, risk-based analysis process. It also identifies the need to address changes in the hydrograph, defined as hydrograph modification or hydromodification, which could result from urbanization of a watershed, and requires LID controls to more closely mimic the pre-developed hydrologic condition.

With regard to wastewater, the City of Woodland Public Works Division operates the Water Pollution Control Facility (WPCF) under Order No. R5-2014-0120 and NPDES Permit No. CA0077950. Under this permit, the plant is authorized to discharge up to 10.4 million gallons per day (MGD) average dry weather flow and an instantaneous peak flow of 15.6 MGD to the Tule Canal. Current flows are about half of this value (5 MGD) (City of Woodland 2016:6-8). The permit includes stringent technology-based and water quality-based effluent limits for various pollutants in order to meet numeric objectives or protect beneficial uses. The WPCF provides a

tertiary level of treatment and UV disinfection. As described in proposed General Plan Policy 5.H.6 (please see below), all new sewage generators will be required to connect to the City's system, wherever feasible. In addition, proposed Policy 5.H.1 would ensure that increased capacity is available to serve the Planning Area consistent with the 2035 General Plan. Discharges from the WPCF would not result in violation of water quality standards or WDRs, as the City would comply with conditions of the City's NPDES permit. Please see Section 4.14 of this EIR, "Utilities," for more detail on the City's system capacities for stormwater and wastewater.

Proposed Project

In addition to existing regulations, the 2035 General Plan includes goals and policies designed to protect water quality in the Planning Area. The 2035 CAP focuses on greenhouse gas emission reduction and does not directly address hydrology or water quality.

- **Goal 5.H Wastewater Collection, Treatment, Disposal, and Reuse.** Ensure that adequate wastewater collection, treatment, recycling and disposal facilities are provided in a timely fashion to serve existing and future needs.

- **Policy 5.H.1 Treatment Capacity and Cost Recovery.** Provide wastewater collection and treatment services to the existing Woodland community. Ensure that increased wastewater treatment facility capacity is available to serve planned urban development within the Planning Area consistent with this General Plan. Accommodate increase in flows and loadings from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law.

- **Policy 5.H.6 Connection to Sewer System.** Require all sewage generators within its service area to connect to the City's system, except those areas where the City has determined a connection to the City's sewage collection system would be infeasible.

- **Policy 5.H.10 Industrial Pretreatment Program.** Continue the industrial pretreatment program in accordance with State and federal requirements.

- **Goal 5.I Stormwater Management.** Maintain the City's storm drainage system and promote best management practices to protect from flooding, enhance water quality, prevent infrastructure deterioration, and comply with State and federal laws.

- **Policy 5.I.1**. **Storm Drainage System and Cost Recovery.** Maintain and improve the storm drainage system for the existing Woodland community. Ensure that increased storm drainage system capacity is available to serve planned urban development within the Planning Area consistent with this General Plan. Accommodate increase in flows and loadings from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law.

- **Policy 5.I.2. Storm Drainage Facilities Master Plan.** Update the Storm Drainage Facilities Master Plan as needed to plan for and direct the collection, repurposing, and/or disposal of stormwater and to provide site appropriate solutions that protect surface water quality in the Planning Area waterways.

- **Policy 5.I.4. Low Impact Development.** Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code. Such features may include, but are not limited to:

  - Canopy trees or shrubs to absorb rainwater;
  - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;
  - Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
  - Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
  - On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
  - Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

- **Policy 5.I.6 Adequate Financing for Stormwater Management.** Adequately finance stormwater management while adhering to strict accountability, transparency, and ratepayer protections.

- **Policy 5.I.8 Stormwater Detention Facilities.** Use stormwater detention facilities to mitigate drainage impacts and reduce storm drainage system costs. To the extent practical, design stormwater detention facilities for multiple purposes, including recreational use in dry conditions and/or stormwater quality improvement.

- **Policy 5.J.5 Cleanup and Nuisance Abatement.** Continue and enhance nuisance abatement efforts and services that discourage illegal dumping.

- **Policy 7.A.1 Surface Water Project.** Continue to cooperate with the City of Davis and UC Davis to operate the Surface Water Project in order to balance the groundwater supply, and protect against aquifer overdrafts and water quality degradation.

- **Policy 7.A.4 Best Management Practices.** Continue to require the use of feasible and practical best management practices (BMPs) and promote Low Impact Development to protect receiving waters from the adverse effects of construction activities and urban and agricultural runoff.

- **Policy 8.E.1 Coordination.** Coordinate with Yolo County and other relevant agencies to ensure that the manufacture, purchase, use, storage, transportation, and disposal of hazardous materials in the city is conducted in a responsible manner that complies with local, State, and federal safety standards.

- **Policy 8.E.2 Disposal and Storage Plan.** Require that applications for discretionary development projects that will generate hazardous wastes or utilize hazardous materials include a detailed plan for hazardous waste reduction, recycling, and storage.

- **Policy 8.E.3 Buffer Zone.** Require that new development for industries that store and process hazardous materials provide a buffer zone between the installation and the property boundaries sufficient to protect public safety.

- **Policy 8.E.4 Emergency Response.** Coordinate with Yolo County to provide for safe and efficient hazardous waste emergency response and plan for contaminated site cleanup.

- **Policy 8.E.5 Hazardous Materials Database.** Coordinate with Yolo County to develop a database and maintain complete and accurate information on the types, quantities, sources, and management of all hazardous materials and wastes generated in Woodland to aid in management planning and emergency response.

- **Policy 8.E.6 Education.** Collaborate with Yolo County to educate residents and businesses about household hazardous wastes, less toxic materials that can be used in place of toxic materials, and proper household and business waste disposal methods.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on water quality would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.9-1 – Policy 5.1.4 should be amended as follows:

- **Policy 5.I.4. Low Impact Development.** Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code <u>to reduce runoff rates, filter out pollutants, and facilitate groundwater infiltration</u>. Such features may include, but are not limited to:

  - Canopy trees or shrubs to absorb rainwater;

  - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;

- Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
- Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
- On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
- Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

Implementation of the this mitigation measure in addition to policies outlined in the Proposed Project would serve to minimize long-term water quality impacts associated with increased urbanization. The goal of these policies as they relate to wastewater collection, treatment, disposal, and reuse is to ensure that adequate facilities are provided in a timely fashion to accommodate current and future needs, and thereby manage wastewater to protect receiving water quality.

Inadequate stormwater drainage infrastructure can lead to localized flooding, as well as erosion and sedimentation. Adequate stormwater conveyance capacity and pre-treatment through the use of LID technologies and BMPs is critical since stormwater in the City of Woodland is discharged untreated through a series of sloughs that eventually connect to Yolo Bypass.

The goal of the General Plan policies as they relate to stormwater management is to provide flood protection, enhance water quality, prevent infrastructure deterioration, and facilitate compliance with State and federal laws. Successful implementation of the 2035 General Plan policies would avoid, minimize, or compensate for potential water quality impacts by requiring projects to reduce pollution and runoff through implementation of LID technologies, BMPs, pretreatment, and upgrades to stormwater and wastewater treatment capacity, as needed.

Policies related to the safe handling and disposal of hazardous materials would also protect water quality through the proper handling, use, and disposal of hazardous materials, as well as emergency response planning to minimize potential water quality impacts from accidental spills. Together, these polices assist the City in complying with federal and State regulations, such as the Clean Water Act, EPA's water quality criteria, and the Safe Drinking Water Act.

Adoption and implementation of the proposed policies and compliance with existing stormwater, grading, and erosion control regulations would reduce this potential impact.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation incorporated.**

b. South Alternative– The impact is considered **less than significant with mitigation incorporated.**

IMPACT 4.9-2 Construction-Related Water Quality Impacts. *Construction and grading activities during development consistent with the Proposed Project could result in excess runoff, soil erosion, and stormwater discharges of suspended solids and increased turbidity. Such activities could mobilize other pollutants from project construction sites as contaminated runoff to on-site and ultimately off-site drainage channels. Many construction-related wastes have the potential to degrade existing water quality. Construction activities that are implemented without mitigation could violate water quality standards or cause direct harm to aquatic organisms. However, with implementation of existing regulations and water quality policies contained in the 2035 General Plan, this impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Although the Planning Area is relatively flat and consists of soils with high clay content and associated low erosion potential, the amount of ground disturbance associated with development of would pose potentially significant construction-related impacts to water quality. The level of ground disturbance associated with the East and South Alternatives would pose impacts related to erosion and sedimentation that could result in degradation of waterways and conflict with beneficial uses, water quality objectives, and standards established in the Basin Plan. In addition, accidental spills of construction-related contaminants (e.g., fuels, oils, paints, solvents, cleaners, concrete) could also occur during construction, thereby degrading water quality. Construction dewatering also has the potential to impact water quality if proper dewatering procedures are not followed and water is not properly stored and disposed of.

Both the East and South Alternatives would result in impacts related to construction water quality. Many construction-related wastes have the potential to degrade existing water quality and beneficial uses by altering the dissolved oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment. Development planned as part of the Proposed Project would include substantial earth-disturbing activities (i.e., cut and fill, vegetation removal, grading, trenching, movement of soil) that could expose disturbed areas and stockpiled soils to winter rainfall and stormwater runoff. Although these construction activities would occur in soils that have a low erosion hazard related to the relatively flat topography and high soil clay content, areas of exposed or stockpiled soils could be subject to wind or water erosion, allowing temporary discharges of sediment into the storm drain system, and ultimately to the Yolo Bypass, Tule Canal, and Sacramento River.

If not managed properly, water used for dust suppression during construction could also enter the storm drain system. Accidental spills of construction-related contaminants (e.g., fuels, oils, paints, solvents, cleaners, and concrete) or non-stormwater discharges from activities such as construction dewatering could also occur during construction, resulting in releases to nearby surface water, and thereby degrading water quality.

Additional discussion of soil erosion is provided in Section 4.7 of this EIR, "Geology, Soils, Minerals, and Paleontological Resources." The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Several existing regulations would apply to projects that could be implemented pursuant to the 2035 General Plan and that would reduce or avoid impacts related to erosion, sedimentation, and water quality degradation during construction. Chapter 6, Article III of the City of Woodland Municipal Code addresses erosion and sediment control under the City's Grading and Erosion Control Ordinance, which pertains to compliance with the building code. Project applicants must obtain a grading permit that includes evidence of environmental documentation under CEQA, along with a soils engineering report and an engineering geology report as required by Appendix Chapter 33 of the CBC, Section 3309. The City's Standard Specifications require certain BMPs to protect stormwater during construction. Periodic review of, and revision to, the Grading Ordinance and Standard Specifications to determine if additional erosion and sediment control BMP requirements for construction sites are necessary is a requirement contained in the SWMP.

As described in Section 4.9.2, "Regulatory Framework," NPDES stormwater permitting programs regulate municipal storm drain systems, industrial facilities, and construction sites. An erosion and sediment control plan (or a SWPPP) containing appropriate construction site BMPs is required as a condition of the issuance of a grading or building permit, and development must comply with the CASQA *Construction Best Management Practice Manual* (2003) or its equivalent, as well as associated requirements for erosion and sediment controls, soil stabilization, dewatering, source controls, pollution prevention measures, and illicit discharges. BMPs must be implemented to the satisfaction of the City in order to ensure that the discharge of pollutants from a construction site will be effectively prohibited and will not cause or contribute to a condition of pollution or to an exceedance of water quality standards.

Projects that disturb more than 1 acre of land must apply for coverage and comply with the requirements in the SWRCB Construction General Permit, including the preparation and implementation of a SWPPP. Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality. A SWPPP must identify the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. All NPDES permits also have inspection, monitoring, and reporting requirements to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of stormwater-related pollutants. Source controls, treatment controls, and site planning measures are typical types of BMPs. The permit also requires dischargers to consider the use of post-construction permanent BMPs that would remain in service to protect water quality throughout the life of the project. The City inspects construction sites over one acre at least monthly to ensure that sediment and other pollutants are not entering the stormwater conveyance system (City of Woodland 2004: 2-21).

Implementation of the Central Valley RWQCB's NPDES General Dewatering Permit (Order No. R5-2013-0074, NPDES No. CAG995001) for short-term discharges of small volumes of wastewater from eligible construction-related activities requires testing, monitoring, and reporting standards. Dewatering activities that exceed four

months in duration or that would occur in areas of contaminated groundwater would require a project-specific permit from the Central Valley RWQCB and consultation to determine the specific permit terms, disposal methods, and/or the types of treatment in the case of contaminated soil or groundwater. Adherence to permit terms would reduce potential water quality degradation resulting from construction dewatering activities.

Proposed Project

The 2035 General Plan includes the following goals and policies designed to protect water quality in the Planning Area during construction. The 2035 CAP focuses on greenhouse gas emission reduction and does not directly address hydrology or water quality.

Goal 5.I Stormwater Management. Maintain the City's storm drainage system and promote best management practices to protect from flooding, enhance water quality, prevent infrastructure deterioration, and comply with State and federal laws.

- **Policy 5.I.4. Low Impact Development.** Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code. Such features may include, but are not limited to:
  - Canopy trees or shrubs to absorb rainwater;
  - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;
  - Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
  - Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
  - On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
  - Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.
- **Policy 5.I.5 Prohibiting Grading Activities in Rainy Season.** Prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of storm drainage facilities.
- **Policy 5.I.6 Adequate Financing for Stormwater Management.** Adequately finance stormwater management while adhering to strict accountability, transparency, and ratepayer protections.
- **Policy 7.A.4 Best Management Practices.** Continue to require the use of feasible and practical best management practices (BMPs) and promote Low Impact Development to protect receiving waters from the adverse effects of construction activities and urban and agricultural runoff.
- **Policy 8.E.4 Emergency Response.** Coordinate with Yolo County to provide for safe and efficient hazardous waste emergency response and plan for contaminated site cleanup

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on water quality would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.9-2 – Implement Mitigation Measure 4.9-1

Successful implementation of the General Plan policies would avoid and minimize water quality impacts during construction because they would require implementation of LID technologies and BMPs to protect receiving water quality; appropriate hazardous materials handling, storage, and disposal; and prohibit grading activities in the rainy season when erosion potential is at its highest. Compliance with General Plan policies and existing regulations, including acquisition of appropriate regulatory permits and preparation and implementation of a SWPPP and BMPs, would reduce potential impacts related to erosion and water quality during construction.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.9-3 On-Site and Downstream Erosion and Sedimentation and Alteration of Drainage Patterns – East and South Alternatives. *Development and land use change consistent with the 2035 General Plan would increase the amount of impervious surfaces, thereby increasing surface runoff. This increase in surface runoff would result in an increase in both the total volume and the peak discharge rate of stormwater runoff, and therefore could result in greater potential for erosion, sedimentation, hydromodification, and on- and off-site flooding. However, with adoption and implementation of the proposed policies and actions in the 2035 General Plan, combined with current grading, erosion, and flood control regulations, this impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Buildout contemplated under the Proposed Project would include new development on undeveloped properties, additional structures developed on already-developed properties, demolition of existing structures with

replacement uses, and infill development on currently vacant properties, along with required infrastructure and services. Each type of land use change would contribute different relative amounts of stormwater runoff corresponding to the percentage of impervious surface added. The relative amount of impervious surface associated with development would range from low (e.g., open space) to high (e.g., large commercial projects with large parking areas, major roads, etc.). Most of the new growth residential units as well as much of the industrial development on the north side of the Planning Area would occur on existing pervious agricultural or open space lands. Expansion of impervious surfaces in the Planning Area would increase the peak discharge rate of stormwater runoff and could result in erosion, sedimentation, and on-site or downstream flooding. Increased peak flow rates may exceed drainage system capacities, exacerbate erosion in overland flow and drainage swales and creeks, and result in downstream sedimentation. Sedimentation, in turn, could increase the rate of deposition in natural receiving waters and reduce conveyance capacities, resulting in an increased risk of flooding. Erosion of upstream areas and related downstream sedimentation typically leads to adverse changes to water quality and hydrology.

The addition of impervious surfaces and drainage infrastructure from urbanization results in increased runoff volumes and dry weather flows, increased frequency and number of runoff events, increased long-term cumulative duration of flows, as well as increased peak flows. Both the East and South Alternatives would result in impacts related to increases in impervious surface. In addition, grading and excavation activities associated with implementation of the 2035 General Plan could result in changes to drainage patterns.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are existing regulations in place to address potential effects related to erosion, sedimentation, hydromodification, and on- and off-site flooding – some of which are augmented by Proposed Project policies.

The City of Woodland's Storm Drainage Facilities Master Plan includes requirements for development to preserve water quality and minimize localized flooding during storm events. It outlines existing facilities, floodplains, design criteria, storm drainage water quality monitoring, and implementation of future facilities. General Plan 2035 includes Policy 5.I.2. to update this plan, as needed, to accommodate and plan for future storm drainage needs.

The City of Woodland Department of Public Works Design Standards include drainage facility capacity criteria designed to ensure the containment and/or conveyance of the design storm. The Design Standards include design capacities for storm drains, open channels, bridges, culverts, regional storage facilities, and drains, as well as requirements to ensure access for maintenance and operation of drainage systems (Woodland 2010).

Under the NPDES MS4 Phase II General Permit for stormwater discharge, the City is required to develop, administer, implement, and enforce a SWMP to protect and improve stormwater quality. The City of Woodland's

SWMP requires that measures for long-term BMPs that protect water quality and control runoff flow be incorporated into development and substantial redevelopment projects. All projects within the City of Woodland are required to comply with City's *Post Construction Standard Plan* (2015) to reduce post-construction runoff and control urban runoff pollution in compliance with of the City's Phase II MS4 permit through the incorporation of BMPs, LID, and hydromodification management techniques. This includes the requirement to treat stormwater runoff through evapotranspiration, infiltration, stormwater harvesting and reuse, or biotreatment. Hydromodification management requires regulated projects to slow and minimize the amount of runoff so that there is no net-increase in post-construction runoff flow rate as compared to the pre-construction value for a 2-year, 24-hour storm event (City of Woodland 2015:24). In addition, a SWPPP would be required in compliance with the NPDES Construction General Permit and would include BMPs to avoid construction-related erosion and sedimentation on- or off-site.

Proposed Project

In addition to existing regulations, the 2035 General Plan includes policies designed to help reduce impacts from on-site and downstream erosion and sedimentation and alteration of drainage patterns in the Planning Area. The 2035 CAP focuses on greenhouse gas emission reduction and does not directly address hydrology or water quality.

- **Goal 5.I Stormwater Management.** Maintain the City's storm drainage system and promote best management practices to protect from flooding, enhance water quality, prevent infrastructure deterioration, and comply with State and federal laws.

- **Policy 5.I.1 Storm Drainage System and Cost Recovery.** Continue to maintain and improve the storm drainage system for the existing Woodland community. Ensure that increased storm drainage system capacity is available to serve planned urban development within the Planning Area consistent with this General Plan. Accommodate increase in flows and loadings from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law.

- **Policy 5.I.2. Storm Drainage Facilities Master Plan.** Update the Storm Drainage Facilities Master Plan as needed to plan for and direct the collection, repurposing, and/or disposal of stormwater and to provide site appropriate solutions that protect surface water quality in the Planning Area waterways.

- **Policy 5.I.3. Overland Flow Requirements in New Development.** Require development to provide for the overland flow of stormwater meeting or exceeding the City's standard design capacity of the storm drainage system. Overland flow waters should be conveyed over public streets where possible and should be at least one foot below building pad elevations and contain provisions for removal of silt and other contaminants.

- **Policy 5.I.4. Low Impact Development.** Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code. Such features may include, but are not limited to:

    - Canopy trees or shrubs to absorb rainwater;

    - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;

- Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
- Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;
- On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and
- Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

- **Policy 5.I.5 Prohibiting Grading Activities in Rainy Season.** Prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of storm drainage facilities.
- **Policy 4.I.6 Adequate Financing for Stormwater Management.** Adequately finance stormwater management while adhering to strict accountability, transparency, and ratepayer protections.
- **Policy 4.I.7 Stormwater Detention Facilities.** Use stormwater detention facilities to mitigate drainage impacts and reduce storm drainage system costs. To the extent practical, design stormwater detention facilities for multiple purposes, including recreational use in dry conditions and/or stormwater quality improvement.
- **Goal 7.A Protect Water Supply and Quality.** Protect and enhance the natural quantity and qualities of surface water and groundwater resources in the Woodland area.
- **Policy 7.A.4 Best Management Practices.** Continue to require the use of feasible and practical best management practices (BMPs) and promote Low Impact Development to protect receiving waters from the adverse effects of construction activities and urban and agricultural runoff.
- **Policy 7.B.2 Sensitive Habitat Types.** Support and cooperate with efforts of other local, State, and federal agencies and private entities engaged in the preservation and protection of sensitive habitat types from incompatible land uses and development. Sensitive habitat types include alkali sink, freshwater wetlands, freshwater marsh, riparian forest, drainages, riverine habitat and lakes.
- **Policy 7.B.5 Open Space for Conservation.** Where appropriate, permanently protect as open space areas of natural resource value, including wetlands preserves, riparian corridors, woodlands, and floodplains. Support the maintenance of open space and natural areas that are interconnected and of sufficient size to protect biodiversity, accommodate wildlife movement, and sustain ecosystems.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on erosion and drainage patterns would be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **significant**.

Mitigation Measures

Mitigation Measure 4.9-3 – Implement Mitigation Measure 4.9-1

General Plan policies require implementation of LID technologies, BMPs, and hydromodification management techniques to protect receiving water quality, mitigate excessive runoff, and mimic the runoff of a natural environment. Additional policies would serve to maintain and improve the City's storm drainage system. Prohibiting grading activities in the rainy season would also serve to reduce erosion potential. Finally, policies addressing open space and sensitive habitat conservation would restrict incompatible land uses and development from areas including riparian corridors, drainages, and floodplains. Adoption and implementation of the policies in the 2035 General Plan, combined with enforcement of the existing grading, erosion, and flood control regulations would reduce this potential impact.

Summary of Impact after Mitigation

a. East Alternative– The impact is considered **less than significant with mitigation incorporated.**

b. South Alternative– The impact is considered **less than significant with mitigation incorporated.**

IMPACT 4.9-4 Interference with Groundwater Recharge or Substantial Depletion of Groundwater Supplies. *Land use changes under the Proposed Project would result in additional impervious surfaces, which could reduce the amount of groundwater recharge and in turn, affect the yield of hydrologically connected wells. However, a substantial reduction in groundwater recharge is not anticipated. An increase in water demands and associated depletion of groundwater supplies could also result from the land use changes under the Proposed Project; however, access to new surface water supplies and opportunities for conjunctive use through aquifer storage and recovery would result in a reduced reliance on groundwater supplies. With compliance with existing regulations and implementation of Proposed Project policies, this impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The major groundwater recharge areas in the vicinity of the Planning Area are the Sacramento River and other active stream channels in Yolo County. Neither alternative is located in the vicinity of a major groundwater recharge area. A minor source of groundwater recharge is rainfall infiltrating through the soil to the aquifer. If urban infrastructure (e.g., buildings, roads, parking areas) is built on top of a soil with a high infiltration rate, it can result in a reduction in groundwater recharge. Build-out of the alternatives would result in a net increase in

impervious area and an associated potential reduction in groundwater recharge potential. However, most soils within the Planning Area are loams and clays, which typically have a low infiltration rates.

Until May 2016, the City of Woodland relied entirely on groundwater to meet all water demands; the Yolo Subbasin is currently neither adjudicated nor in overdraft (City of Woodland 2016:6-5). Over the last five years, the City has pumped between 8,602 and 15,160 acre-feet of groundwater annually from the Yolo Subbasin for retail use (City of Woodland 2016:6-6). Drinking water had been pumped from 16 out of 19 wells located in the City. Groundwater elevations declined from the 1950s to the 1970s, but have since rebounded since the implementation of regional water supply projects. In a partnership with the City of Davis, Woodland has secured water rights on the Sacramento River and the WDCWA Regional Water Treatment Facility was designed to provide up to 18 MGD (55 AF/day) of surface water. As part of this Woodland-Davis Regional Water Supply Project, Woodland will have direct use of surface water, as well as the ability to store some of the treated surface water in the aquifer during low water demand months to be recovered and distributed to customers during high water demand months under the City's aquifer storage and recovery program (City of Woodland 2016:6-1). A limited amount of groundwater from three existing City wells will be blended with the surface water and the City will also maintain wells for emergency use and for landscape irrigation in City parks. Thus, the addition of surface water to Woodland's water supply portfolio will substantially reduce groundwater extractions (City of Woodland 2016:6-5), reduce reliance on groundwater resources, as well as improved water quality. The Woodland-Davis Regional Water Supply Project was completed in May 2016 (Woodland-Davis Clean Water Agency 2016).

The City's population projections and associated water demand projections used in the 2015 Urban Water Management Plan are based on draft population projections used for this proposed General Plan Update 2035 (City of Woodland 2016:3-2). By adding surface water as well as recycled water (for industrial use) to the water supply that has previously has been entirely dependent on groundwater, the potential for groundwater depletion is decreased even though implementation of the 2035 General Plan would involve projects that could increase water demand. The 2015 Urban Water Management Plan projects zero retail water to come from groundwater sources between 2020 and 2040; 100 percent of water supplies would come from surface water and recycled water supplies (City of Woodland 2016:6-13 Table 6-11). Construction activities may also require temporary dewatering in areas of shallow groundwater, which would result in localized, short-term groundwater extraction. Use of surface water through the Woodland-Davis Regional Water Supply Project to decrease the demand for groundwater supplies, and compliance with the SGMA which will provide for sustainable management of groundwater supplies, would reduce impacts related to groundwater.

Please see Section 4.14 of this EIR, "Utilities," for a detailed discussion of water supply.

a. East Alternative–The dominant soil types in the East Alternative Planning Area include Pescadera silty clay and Willows Clay. Loams with fine sediment typically have low infiltration rates. In addition, the Planning Area is not identified as a major groundwater recharge area. Development associated with the East Alternative would result in increased impervious area as compared to existing conditions; however, urban development over low infiltrating soils is not expected to interfere considerably with groundwater recharge. Construction activities may also require temporary dewatering in areas of shallow groundwater, which would result in localized, short-term groundwater extraction.

b. South Alternative–The dominant soil types in the South Alternative Planning Area include Reiff very fine sandy loam and the Yolo silt loam. Loams with fine sediment typically have low infiltration rates. In addition, the Planning Area is not identified as a major groundwater recharge area. Development associated with the South Alternative would result in increased impervious area as compared to existing conditions; however, urban development over low infiltrating soils is not expected to interfere considerably with groundwater recharge. Additionally, to obtain coverage under the City's NPDES Phase II MS4 permit, applicable projects within the City of Woodland are required to comply with the City's *Technical Guidance Manual for Stormwater Quality Control Measures* (2006) and *Post Construction Standard Plan* (2015) and incorporate BMPs, such as conserving natural areas and minimizing impervious area, and LID, which would reduce potential project interference with groundwater recharge.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The City of Woodland *Groundwater Management Plan* (2011) has been prepared in order to comply with three pieces of legislation (AB 3030, SB 1938, and SB 1672). In addition, compliance with the SGMA, as described in Section 4.9.2, "Regulatory Framework," requires adoption of a GSP by 2022, which will provide for sustainable management of groundwater supplies.

Proposed Project

The 2035 General Plan includes the following goals and policies designed to protect groundwater supplies. The 2035 CAP focuses on greenhouse gas emission reduction and does not directly address hydrology or water quality.

- **Policy 5.G.4 Water Management Plans.** Maintain and every five years update the Urban Water Management Plan and the Groundwater Management Plan. Develop and maintain the Groundwater Sustainability Plan in conjunction with the Yolo Sustainable Groundwater Management Plan. Use available and "state of the practice" tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.

- **Policy 5.G.5 Recycled Water.** Expand the recycled water system as feasible and in accordance with a Recycled Water System Master Plan, which should provide an evaluation of potential recycled water uses, facilities planning, distribution service areas, recommended recycled water system, financial modeling, implementation strategies, and the feasibility of forming a recycled water utility.

- **Goal 7.A Protect Water Supply and Quality.** Protect and enhance the natural quantity and qualities of surface water and groundwater resources in the Woodland area.

- **Policy 7.A.1 Surface Water Project.** Continue to cooperate with the City of Davis and UC Davis to operate the Surface Water Project in order to balance the groundwater supply, and protect against aquifer overdrafts and water quality degradation.

- **Policy 7.A.2 Groundwater Management.** Support local efforts to establish a Groundwater Sustainability Agency and adopt a Groundwater Management Plan. Ensure that the City of Woodland and local watershed agencies retain local authority to regulate and manage groundwater.

- **Policy 4.C.12 Water Supply and Infrastructure.** ASR programs support completion of the Davis-Woodland Water Supply Project, Aquifer Storage and Recovery wells, and related local facilities to ensure water supplies are available to serve current and future water needs in Woodland.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With implementation of policies in the Proposed Project, combined with current laws, regulations, and policies, the impact on groundwater would be reduced. The policies of the 2035 General Plan would help preserve the minimal groundwater recharge potential of the Planning Area through the implementation of LID, encourage water conservation/demand management, and supports completion of the Davis-Woodland Water Supply Project to provide surface water and aquifer storage and recovery, which will diversify the water supply portfolio and thereby reduce the need for groundwater extractions. General Plan polices are intended to protect groundwater supplies as well as groundwater quality. Policy 4.I.4 involving the implementation of LID could have the potential to locally, and likely minimally, increase groundwater recharge through the construction of infiltrative storm drainage facilities. Compliance with General Plan policies, including demand management (Policy 6.A.2), would reduce impacts related to groundwater. Compliance with General Plan policies and existing regulations would reduce impacts related to groundwater recharge and supplies.

    a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

    b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.9-5 Place Housing Within a 200-Year Flood Hazard Area As Mapped on a Federal Flood Hazard Boundary Or Flood Insurance Rate Map or Other Flood Hazard Delineation Map. *Implementation of the Proposed Project would place housing in new growth areas within a current 200-year flood hazard area only if a funded, comprehensive flood solution is secured. Additional policies in the Proposed Project limit the flooding risks of infill development. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The 2035 General Plan creates a new land use designation—Flood Study Area—for areas that may be needed to support future flood infrastructure. The Flood Study Area designation is applied to areas restricted from urban development due to health and safety concerns related to flood risk or because the property falls within a likely future flood project improvement area. Only agriculture, recreation, and open space uses are permitted in the Flood Study Area, although existing structures and business operations in areas designated as Flood Study Area may remain but may not expand.

There are areas of Woodland within the 200-year flood hazard area outside of the Flood Study Area, including portions of SP-3, areas in northeastern Woodland, SP-2, and areas east of County Road 102, as shown in Exhibit 4.9-5.

Table 4.9-2 shows an estimate of the amount of new residential development anticipated in new growth areas common to both Alternatives that are mostly located in the 200-year flood hazard area. Beyond what is shown in Table 4.9-1, there are existing neighborhoods southwest of the intersection of East Street and West Kentucky Avenue that are planned for residential infill development in the flood hazard area.

Until a comprehensive flood solution is implemented, infill development in the flood hazard area is permitted to proceed provided that it mitigates risk from flooding to an urban flood level of protection, consistent with FEMA and State requirements, and does not create flood impacts on other properties. In Specific Plan areas, no residential development may occur until a comprehensive flood solution has been identified with funding certain, which reduces risk from flooding to an urban level of flood protection, consistent with State law (see 2035 General Plan Policy 2.B.2).

Table 4.9-2. Estimated Residential Development in Proposed Project Potentially in 200-Year Flood Hazard Area

Area	Units
SP-3A	200
TOTAL	**200**

Source: Dyett and Bhatia 2016.

a. East Alternative–In addition to the impact disclosed in the general analysis presented above, there are flood hazard areas outside of the Flood Study Area under the East Alternative, including portions of SP-3B and all of SP-2, as shown in Exhibit 4.9-5. Under the East Alternative , it is expected that approximately ten new residential units will be built in SP-3B and 1,600 in SP-2. In Specific Plan areas, no residential development may occur until a comprehensive flood solution has been identified with funding certain, which reduces risk from flooding to an urban level of flood protection, consistent with State law (see Policy 2.B.2). Table 4.9-3 shows an estimate of the amount of new residential development anticipated in new growth areas that are mostly or entirely located in the 200-year flood hazard area under the East Alternative.

Table 4.9-3. Estimated New Residential Development Potentially in 200-Year Flood Hazard Area – East Alternative	
Area	Units
SP-2	1,600
SP-3B	10
TOTAL	**1,610**
Source: Dyett and Bhatia 2016.	

b. South Alternative–Under the South Alternative, it is expected that approximately 50 new residential units will be built in SP-3B. Table 4.9-4 shows an estimate of the amount of new residential development anticipated in new growth areas that are mostly or entirely located in the 200-year flood hazard area under the South Alternative.

Table 4.9-4. Estimated New Residential Development Potentially in 200-Year Flood Hazard Area – South Alternative	
Area	Units
SP-3B	50
TOTAL	**50**
Source: Dyett and Bhatia 2016.	

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

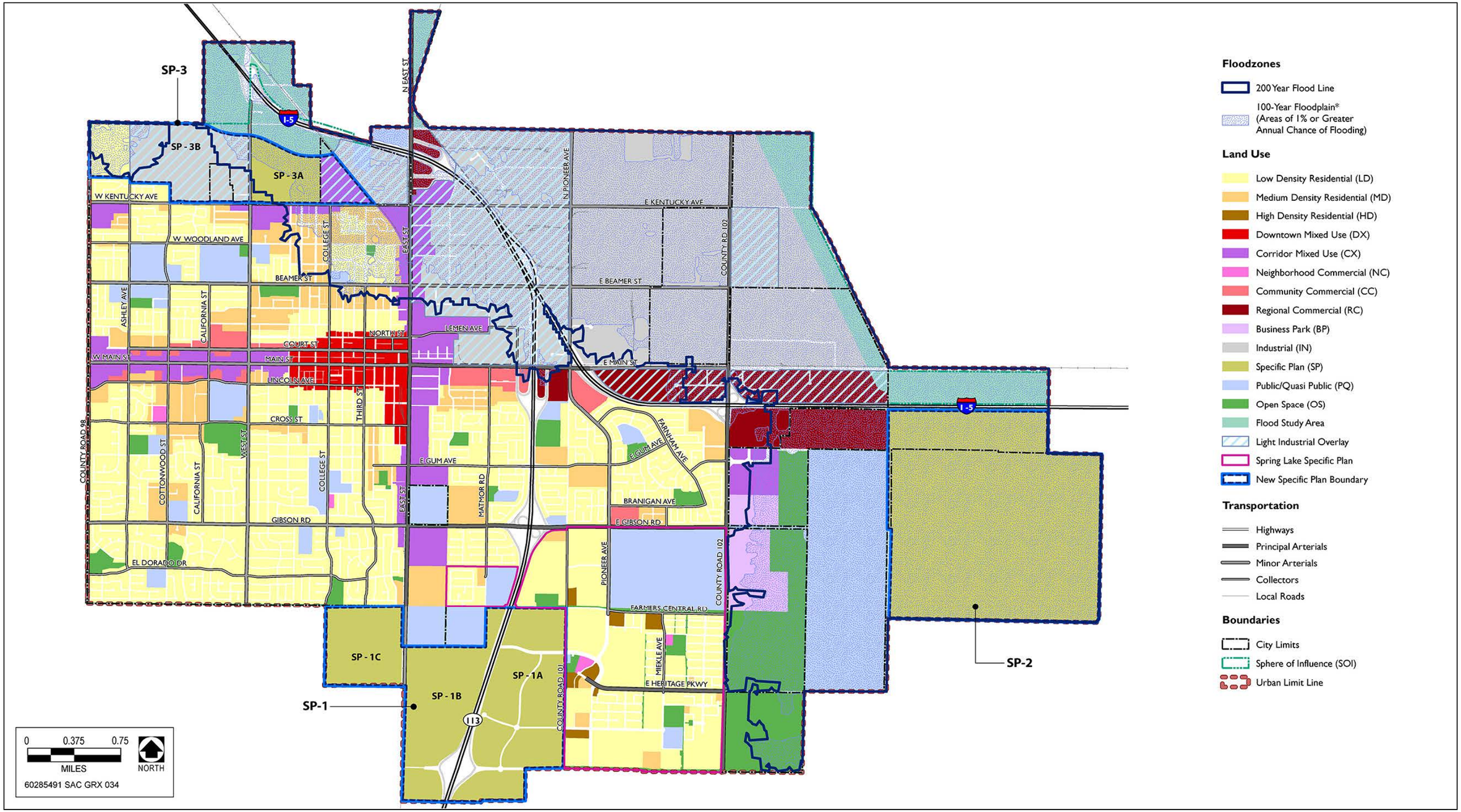
Detailed above in the Regulatory Framework, existing laws and regulations reduce the potential environmental impact, including at the federal level (FEMA and Executive Order 11988) and at the State level (2007 Flood Legislation, Central Valley Flood Protection Plan, and California Department of Water Resources regulations).

In addition to State and federal regulations, the Yolo County 2030 General Plan includes a number of goals, policies, and implementation actions that reduce the potential environmental impact, including Goal HS-2; Policies HS-2.1, HS-2.2, HS-2.3, and HS-2.4; and Implementation Actions HS-A5, HS-A6, HS-A7, HS-A11, HS-A30, HS-A31, and HS-A32. The County's Floodplain Management Ordinance also reduces the potential environmental impact by regulating development in flood hazard areas.

Locally, the City of Woodland Municipal Code reduces the potential environmental impact by regulating flood control and development in flood hazard areas. Additionally, the City of Woodland 2002 General Plan provides goals and policies to protect from flood hazards, which reduce the potential environmental impact, including Goal 8.B and Policies 8.B.1, 8.B.2, 8.B.3, and 8.B.6.

Proposed Project

The 2035 General Plan contains the following goals, policies, and implementation programs that reduce the potential environmental impact. The 2035 CAP focuses on greenhouse gas emissions reduction and does not directly address hydrology or water quality.



Source: City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013, Dyett & Bhatia 2013

Exhibit 4.9-5. **200-Year Flood Hazard Area and Proposed Land Use Diagram**

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- **Policy 2.B.2 Development in the Floodplain**. A residential Specific Plan for SP-3A in either Alternative may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and federal flood protection criteria

- **Policy 2.L.6 Specific Plan-3A.** Promote development in SP-3A to contain a mix of residential, commercial, office, and light industrial uses. Provide parks/greenbelts, grocery stores, community services and other amenities that benefit new residents and existing residents in nearby neighborhoods. Require that SP-3A include within its boundaries any unincorporated residential areas (consistent with the General Plan Land Use Diagram) and include a strategy for financing any necessary infrastructure upgrades to these areas. A Specific Plan for SP-3A may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria. Residential development may only occur once a Specific Plan has been adopted.

- **Goal 8.B. Flood Hazards and Protection.** Protect the lives and property of the citizens of Woodland from hazards and manage floodplains for their open space and natural resource values.

- **Policy 8.B.1 Floodplain Zoning.** Continue to implement floodplain zoning and undertake other actions appropriate and/or required to comply with State flood risk management requirements, and to maintain the City's eligibility under the Federal Flood Insurance Program.

- **Policy 8.B.2 Flood Hazard Evaluation.** Require evaluation of potential flood hazards prior to approval of development projects. Require proponents of new development to submit accurate topographic and flow characteristics information. This will include depiction of the 200-year floodplain boundaries under fully-developed, pre- and post-project runoff conditions.

- **Policy 8.B.3 New Development in Flood Hazard Zones.** No subdivisions, development agreements, or permits that would place development within a flood hazard zone can be approved unless the City makes explicit findings that either existing flood management facilities provide an adequate level of protection from flooding, the City has conditioned the project to provide an adequate level of protection, or the local flood management agency has made adequate progress on the construction of a flood protection system that will provide adequate protection.

Specifically, the City is prohibited from:

- Approving a discretionary permit or other discretionary entitlement for all development projects;

- Approving a ministerial permit that would result in the construction of a new residence for a project (Government Code Section 65962);

- Approving a tentative map consistent with the Subdivision Map Act for all subdivisions;

- Approving a parcel map for which a tentative map is not required, consistent with the Subdivision Map Act for all subdivisions (Government Code Section 66474.5); or

- Executing a development agreement for any property development (Government Code Section 65865.5), unless the city finds, based on substantial evidence in the record, one of the following:

    - Flood management facilities provide 200-year level of protection;

    - The City has imposed conditions on the development action sufficient to provide 200-year level of protection;

    - The local flood management agency has made adequate progress on the construction/improvement of flood facilities that will provide 200-year level of protection by 2025; or

    - For property in areas without a finding of 200-year protection, the property meets the 200-year level of protection.

These findings must be based on substantial evidence in the record and will require (among other things) an engineer's report demonstrating the technical basis for making the finding.

- **Policy 8.B.4 Properties within CVFPB Jurisdiction.** Require applicants to secure an encroachment permit from the CVFPB for any project that falls within the jurisdiction of the Board (e.g. levees, regulated streams, and designated floodways).

- **Policy 8.B.5 Protective Structures.** Require installation of protective structures or other design measures to protect proposed building and development sites from the effects of flooding.

- **Policy 8.B.6 Facilities for Emergencies and Large Public Assembly.** Prohibit the construction of facilities essential for emergencies (including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communication facilities) and large buildings of public assembly in the 200-year floodplain, unless the structure and road access are free from flood inundation, and all required findings of fact can be made based on substantial evidence in the record.

- **Policy 8.B.7 Adjacent Property.** Require that new flood management projects or development within areas subject to flooding ensure that floodwaters will not be diverted into adjacent property to increase flood hazards on properties located elsewhere unless secured through a flood easement or fee title buyout.

- **Policy 8.B.8 Coordination.** Coordinate with other local regional, State, and federal agencies to improve flood risk management. Maintain the City's membership on the Reclamation District 2035 Board.

- **Policy 8.B.9 Flood Management Funding.** Participate in efforts to secure adequate flood management funding and investments.

- **Policy 8.B.10 Public Awareness.** Promote public awareness activities that communicate the requirements and risks associated with owning land and living within a floodplain. Maintain, update, and make available to the public, community flood evacuation and rescue maps.

- **Policy 8.B.11 Levee Inundation Areas.** Require new development in levee inundation areas to conduct an analysis of risk from levee failure.

- **Implementation Program 8.2.** Adopt a locally preferred flood protection alternative and associated funding strategy for the Lower Cache Creek Flood Control Project.

- **Implementation Program 8.3.** Participate in regional efforts for flood management improvements for the Yolo Bypass and support flood management improvements for the Yolo Bypass West Levee.

  a. East Alternative–In addition to the goals, policies, and implementation programs discussed above, there are two additional policies that are specific to the East Alternative that would reduce the potential environmental impact.

     - **Policy 2.B.2 Development in the Floodplain.** A residential Specific Plan for SP-2 in the East Alternative or SP-3A in either Alternative may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and federal flood protection criteria.

     - **Policy 2.L.5 Specific Plan-2.** Encourage SP-2 to develop as a sustainable "complete neighborhood" with a town center so that most daily needs can be met within the Specific Plan area. Promote the use of renewable energy sources and water conservation tools to achieve zero net energy buildings. Secure an alternate site for processing waste from the Pacific Coast Producers tomato processing plant prior to adoption of a Specific Plan for SP-2. If development occurs within the boundary of the odor buffer depicted in Figure 7-6, the developer must bear all costs associated with odor mitigation. A Specific Plan for SP-2 may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria. Through 2035, development shall be limited to a maximum of 25 percent (265 acres) of the total Specific Plan area, located in the northwest portion of SP-2 and adequately buffered from the Water Pollution Control Facility.

  b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Policies 2.B.2 and 2.L.6 of the 2035 General Plan prohibit development in SP-3A unless a comprehensive flood solution and supporting funding have been secured. Therefore, implementation of proposed Policies 2.B.2 and 2.L.6 will result in less than significant impacts related to placing housing within a 200-year flood hazard area. In addition, 2035 General Plan Goal 8.B strives to protect the lives and property of the citizens of Woodland. 2035 General Plan Policies 8.B.1, 8.B.4, 8.B.8, 8.B.9, and 8.B.10 ensure that development will be compliant with State flood risk management requirements and that the City will coordinate with local, regional, State, and federal agencies; make efforts to secure adequate funding for flood management; and work to increase public awareness

of flood risks. 2035 General Plan Policies 8.B.2, 8.B.3, 8.B.5, 8.B.7, and 8.B.11 establish requirements for approval of new development to ensure the project approvals are based on thorough evaluations and that projects are in compliance with existing regulations and protected from the effects of flooding. Policy 8.B.6 prohibits any new emergency facilities in the 200-year floodplain in areas subject to deep flooding unless certain requirements are met. Additionally, the 2035 General Plan includes two Implementation Programs, 8.2 and 8.3, to protect from flood hazards and improve flood management for Lower Cache Creek and for Yolo Bypass.

Compliance with existing and future State and federal regulations and implementation of the 2035 General Plan policies would reduce potential impacts.

a. East Alternative–Policies 2.B.2 and 2.L.5 of the 2035 General Plan prohibit development in SP-2 unless a comprehensive flood solution and supporting funding have been secured. Therefore, implementation of proposed Policies 2.B.2 and 2.L.5 will result in less than significant impacts related to placing housing within a 200-year flood hazard area. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.9-6 Place Within a 200-year Flood Hazard Areas Structures Which Would Impede or Redirect Flood Flows. *Implementation of the Proposed Project would place structures within a 200-year flood hazard area; however, policies in the Proposed Project prohibit diversion of flood flows onto adjacent properties. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

See discussion of impacts in Impact 4.9-5. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

In addition to residential growth, non-residential growth is expected in SP-3 and as infill development in existing neighborhoods. However, as discussed in Impact 4.9-5, before a Specific Plan can be processed for SP-3, a comprehensive flood solution must be identified with funding secured.

Table 4.9-5 shows an estimate of the amount of new residential and non-residential development anticipated in the northeastern portion of the Planning Area designated Industrial, which is almost entirely located in the 200-year flood hazard area. New development in infill areas may be within the flood hazard areas, as well.

Table 4.9-5. Estimated New Development Potentially in 200-Year Flood Hazard Area

Area		Non-Residential Square Feet
Industrial (Northeastern portion of Planning Area)		8,552,316
TOTAL		**8,552,316**

Source: Dyett and Bhatia 2016.

a. East Alternative–In addition to the impact disclosed in the general analysis presented above, new residential and non-residential growth is expected in SP-3 and SP-2 under the East Alternative. However, as discussed in Impact 4.9-5, before a Specific Plan can be processed for a flood hazard area, a comprehensive flood solution must be identified with funding secured.

In addition to development shown in Table 4.9-5, Table 4.9-6 shows an estimate of the amount of new residential and non-residential development anticipated in new growth areas that are mostly or entirely located in the 200-year flood hazard area under the East Alternative.

Table 4.9-6. Estimated New Development Potentially in 200-Year Flood Hazard Area – East Alternative

Area	Units	Non-Residential Square Feet
SP-2	1,600	864,695
SP-3	210	937,000
TOTAL	**1,810**	**1,801,695**

Source: Dyett and Bhatia 2016.

b. South Alternative– In addition to the impact disclosed in the general analysis presented above, new residential and non-residential growth is expected in SP-3 and SP-2 under the East Alternative. However, as discussed in Impact 4.9-5, before a Specific Plan can be processed for a flood hazard area, a comprehensive flood solution must be identified with funding secured.

In addition to development shown in Table 4.9-5, Table 4.9-7 shows an estimate of the amount of new residential and non-residential development anticipated in new growth areas that are mostly or entirely located in the 200-year flood hazard area under the South Alternative.

Table 4.9-7. Estimated New Development Potentially in 200-Year Flood Hazard Area – South Alternative

Area	Units	Non-Residential Square Feet
SP-3	250	1,043,000
TOTAL	**250**	**1,043,000**

Source: Dyett and Bhatia 2016.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing federal, State, and regional laws and regulations that reduce the impact are listed above under Impact 4.9-5. In addition, the Yolo County 2030 General Plan includes a number of goals, policies, and implementation actions that reduce the potential environmental impact, including Goal HS-2; Policies HS-2.1, HS-2.2, HS-2.3, and HS-2.4; and Implementation Actions HS-A5, HS-A6, HS-A7, HS-A11, HS-A30, HS-A31, and HS-A32. The County's Floodplain Management Ordinance also reduces the potential environmental impact.

Local regulations that reduce the potential environmental impact include regulations in the City of Woodland Municipal Code. Additionally, the City of Woodland 2002 General Plan provides goals and policies that reduce the environmental impact, including Goal 8.B and Policies 8.B.1, 8.B.2, 8.B.3, 8.B.5, and 8.B.6.

Proposed Project

As Policy 8.B.5 in the 2035 General Plan requires structures to protect new development from the effects of flooding, implementation of the Proposed Project could place within a 200-year flood hazard area structures which would impede or redirect flood flows. However, Policy 8.B.7 directly addresses this threat and minimizes the impacts. There are no CAP objectives or strategies that relate to this impact.

- **Policy 8.B.7 Adjacent Property.** Require that new flood management projects or development within areas subject to flooding ensure that floodwaters will not be diverted into adjacent property to increase flood hazards on properties located elsewhere unless secured through a flood easement or fee title buyout.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

The 2035 CAP focuses on greenhouse gas emissions reduction and does not directly address flooding.

Summary of Impact Analysis

Through compliance with existing and future regulations and implementation of the 2035 General Plan policies, impacts would be **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.9-7 Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Flooding, Including Flooding as a Result of the Failure of a Levee or Dam. *The Proposed Project plans for infill and new growth development in areas within the levee and dam inundation areas. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Implementation of the Proposed Project could expose people or structures to significant risks due to flooding, including flooding as a result of the failure of a levee or dam. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

As discussed in the Environmental Settings section, the lower Cache Creek levee system does not provide adequate protection from storm events greater than approximately the 30-year storm. The levee inundation area is

shown in Exhibit 4.9-2 and includes the northeast portion of the Planning Area, which the 2035 General Plan designates Industrial.

With regard to failure of the Indian Valley Dam, portions of Woodland are at risk of dam failure, as discussed in the Environmental Setting section and shown in Exhibit 4.9-2. The event of dam failure is unlikely, and currently, people and structures in western, northern, and eastern areas of Woodland are already exposed to the risk.

a. East Alternative–In addition to the impact disclosed in the general analysis presented above, under the East Alternative, all of SP-2 is at risk of levee inundation, including the eastern areas of SP-2 that are at risk of inundation up to 20 inches.

b. South Alternative–The South Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing federal and State laws and regulations that reduce the impact are listed above under Impact 4.9-5. In addition, the Yolo County 2030 General Plan includes a number of goals, policies, and implementation actions that reduce the potential environmental impact, including Goal HS-2; Policies HS-2.1, HS-2.2, HS-2.3, and HS-2.4; and Implementation Actions HS-A16, HS-A18, HS-A19, HS-A22, HS-A23, and HS-A37. The County's Floodplain Management Ordinance also reduces the potential environmental impact.

Local regulations that reduce the potential environmental impact include regulations in the City of Woodland Municipal Code. Additionally, the City of Woodland 2002 General Plan provides goals and policies that reduce the environmental impact, including Goal 8.B and Policies 8.B.1, 8.B.2, 8.B.3, 8.B.6, 8.B.9 and 8.B.10.

Proposed Project

See Impact 4.9-5 and Impact 4.9-6 for a discussion of the existing regulations and 2035 General Plan goals, policies, and implementation programs that minimize the impacts from flooding. In addition, Policy 8.B.11 in the 2035 General Plan directly addresses the risk of levee failure by requiring new development in levee inundation areas to conduct an analysis of risk. Policy 8.A.4 in the 2035 General Plan requires the City to work with the Yolo County Flood Control and Water Conservation District to protect against dam failure. There are no CAP objectives or strategies that relate to this impact.

- **Policy 8.B.11 Levee Inundation Areas.** Require new development in levee inundation areas to conduct an analysis of risk from levee failure.

- **Policy 8.A.4 Indian Valley Dam.** Work with the Yolo County Flood Control and Water Conservation District to ensure the continued maintenance of the Indian Valley Dam in order to protect against potential dam failure. Require new development in inundation areas to consider risks from dam failure.

    a. East Alternative–In addition to the policies discussed above, Policy 2.B.2 of the 2035 General Plan under the East Alternative prohibits development in SP-2 unless a comprehensive flood solution has

been identified with funding secured. However, it is unclear whether a comprehensive flood solution would protect against inundation resulting from levee.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

The 2035 CAP focuses on greenhouse gas emission reduction and does not directly address flooding.

Summary of Impact Analysis

Large-scale inundation of the areas downstream of levees could be caused by catastrophic failure resulting from extreme storm, earthquake, or erosion of the embankment and foundation, which the City of Woodland cannot control. Although there is a remote chance that levees will fail, the Proposed Project requires development in levee inundation areas to conduct risk analyses.

The Indian Valley Dam is outside of the jurisdiction of the City of Woodland and located outside of the Planning Area. Therefore, the City of Woodland has limited ability to reduce the risk of dam failure. Large-scale inundation of the areas downstream of the dam could be caused by catastrophic dam failure resulting from extreme storm, earthquake, or erosion of the embankment and foundation. Similar to the levee inundation area, the 2035 General Plan anticipates growth in the dam inundation area, and cannot guarantee that the Indian Valley Dam will not fail.

However, the threat of dam inundation is an existing risk, and new development in the dam inundation area will continue to comply with federal, State, and regional laws and regulations. In addition, new property owners for property that lies within the dam inundation area will be made aware of the risk, as required by State real estate disclosure laws. Considering these measures and the remote risk of dam failure, the impact is **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

4.10 LAND USE PLANNING, POPULATION, AND HOUSING

4.10.1 INTRODUCTION

This section presents the environmental setting and evaluates the potential impacts related to land use in the Planning Area from implementation of the Proposed Project. This section also identifies population, housing conditions, and employment in Woodland and analyzes the potential for the Proposed Project to affect population, housing conditions, and employment in the Planning Area.

The impact analysis is based on the existing land uses in Woodland according to Yolo County Assessor's data from 2013 and the proposed land uses and policies in the Proposed Project. The information presented on population, housing, and employment is based on a review of the adopted City of Woodland General Plan 2013 Housing Element ("2013 Housing Element") (City of Woodland 2013). The 2013 City of Woodland Housing Element relied primarily on 2010 U.S. Census data, California Department of Finance (DOF) population and housing data, the California Employment Development Department employment data, and the most recent 2012 Sacramento Area Council of Governments (SACOG) housing element data profiles. Additional background information on population, housing, and employment was obtained from the City of Woodland General Plan Update 2035 Economic and Fiscal Background Report (BAE Urban Economics 2013) and the most recent DOF 2015 data. Baseline information has been updated in this section, where it is available.

NOP comments related to land use included the following: consider use of the Yolo County Fairground site; support more walkable neighborhoods and greenbelts; and recognize that the city has potential for infill and smarter growth. The use of the Yolo County Fairground site is considered in at a programmatic level similar to any other parcel in the Planning Area and addressed in 2035 General Plan Policy 2.A.7 and 4.F.2. See Section 4.12 of this EIR, "Public Services and Recreation" for discussion of impacts relevant to parks and recreational facilities, including those that are organized as greenbelts. The impacts of the Proposed Project related to walkable neighborhoods and infill is discussed in Impact 4.10-1 below. Transportation impacts (related to walking and other forms of transportation) are comprehensively addressed in Section 4.13 of this EIR, "Transportation and Circulation" and impacts associated with infill development are comprehensively addressed in the relevant environmental topic-specific section of Chapter 4 of this EIR.

The Yolo County LAFCo commented that it has adopted standards of evaluation that would be used to analyze and evaluate future annexation proposals. In addition, LAFCo commented that the planning area includes disadvantaged unincorporated communities per SB 244 and LAFCo would require these areas for future annexation requests.

No NOP comments were received on population and housing.

4.10.2 ENVIRONMENTAL SETTING

The Planning Area occupies approximately 20 square miles of generally flat land in the central portion of Yolo County within the Sacramento Valley. Woodland is situated approximately 20 miles northwest of Sacramento and 12 miles north of Davis. Unincorporated agricultural lands immediately surround the Planning Area. In addition, the Yolo Bypass of the Sacramento River lies approximately three miles to the east, Willow Slough is located about one mile to the southeast, and Cache Creek flows two miles to the north.

4.10.2.1 EXISTING LAND USE

Exhibit 4.10-1 and Table 4.10-1 show existing land uses in the Planning Area. Existing land uses were identified from City and County data, windshield reconnaissance, and aerial photography. Vacant and agricultural land are the largest existing land uses, each occupying about 18 percent of the total land area, and thus together account for more than one-third of the Planning Area acreage. Nearly 86 percent of vacant land is located inside city limits, whereas nearly 86 percent of agricultural land is located outside city limits, concentrated in the eastern and southern sections of the Planning Area. A large concentration of agricultural land is also located in the northwest corner of the Planning Area. Vacant land within the city limits is concentrated in the Northeast Industrial Area (generally north of Main Street and east of East Street) and in the Spring Lake Specific Plan area.

Table 4.10-1. Existing Land Uses in the Planning Area

Land Use	Inside City Limits		Outside City Limits		Total Planning Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Low Density Residential *(1-8 du/ac)*	1,997	20.8%	102	3.2%	2,099	16.4%
Medium Density Residential *(9-16 du/ac)*	443	4.6%	0	0.0%	443	3.5%
High Density Residential *(>16 du/ac)*	180	1.9%	0	0.0%	180	1.4%
Commercial	405	4.2%	6	0.2%	411	3.2%
Office	111	1.2%	3	0.1%	114	0.9%
Industrial (Warehousing)	596	6.2%	0	0.0%	596	4.7%
Industrial (Other)	773	8.0%	190	6.0%	963	7.5%
Park and Open Space	358	3.7%	41	1.3%	400	3.1%
Public/Institutional	960	10.0%	338	10.7%	1,298	10.2%
Agricultural	315	3.3%	1,924	60.9%	2,238	17.5%
Vacant	1,923	20.0%	323	10.2%	2,246	17.6%
Right of Way[1]	1,500	15.6%	215	6.8%	1,715	13.4%
Railroad	58	0.6%	19	0.6%	77	0.6%
Total	9,619	100.0%	3,161	100.0%	12,781	100.0%

Note:
"Right of Way" acreage is estimated by subtracting the sum of the existing land use acreages for parcels from the total Planning Area acreage.
Source: Dyett & Bhatia 2013.

Approximately 21 percent of the total land area is residential (16.4 percent low density, 3.5 percent medium density, and 1.4 percent high density). Industrial uses occupy about 12 percent of the Planning Area, including warehouse uses, which account for more than a third of all industrial land. Public and institutional uses such as schools, City buildings, and hospitals account for 10 percent of the Planning Area. Additionally, about 13 percent of the land in the Planning Area is allocated to right-of-way uses such as roads, highways, interchanges, sidewalks, and railroads. The majority of commercial and office uses are located within the city of Woodland and account for a little more than 5 percent of land within the city limits.

Land Use Pattern

Vacant

Approximately 18 percent of the land within the total Planning Area is currently vacant – that is, it has no active use. Vacant land totals 2,246 acres and consists of a wide range of parcel sizes, from small infill sites less than an

acre in size near downtown, to larger sites of up to 460 acres. Vacant land is generally scattered throughout the Planning Area; however a large amount of the vacant land is located in the northeastern quadrant (generally north of Main Street and east of East Street) in Woodland's industrial area and in the southeastern quadrant (in the Spring Lake Specific Plan Area and east of County Road 102).

Agriculture

Land in active agriculture use also comprises about 18 percent of the land (2,238 acres) within the Planning Area. The vast majority of farmland – 86 percent– is located outside the city limits along the northwestern, northeastern, and southern (primarily in the Master Plan Remainder area) boundaries of the city. Agricultural land located inside city limits is primarily located in the western portion of the Spring Lake Specific Plan Area.

Residential

After agricultural, residential land uses are the most prevalent within the Planning Area, at 21 percent or 2,722 acres. More than 96 percent of residential development is located within the city limits. Only a small amount of residential land – 102 acres – is located outside of the city, primarily in the northwest corner of the Planning Area.

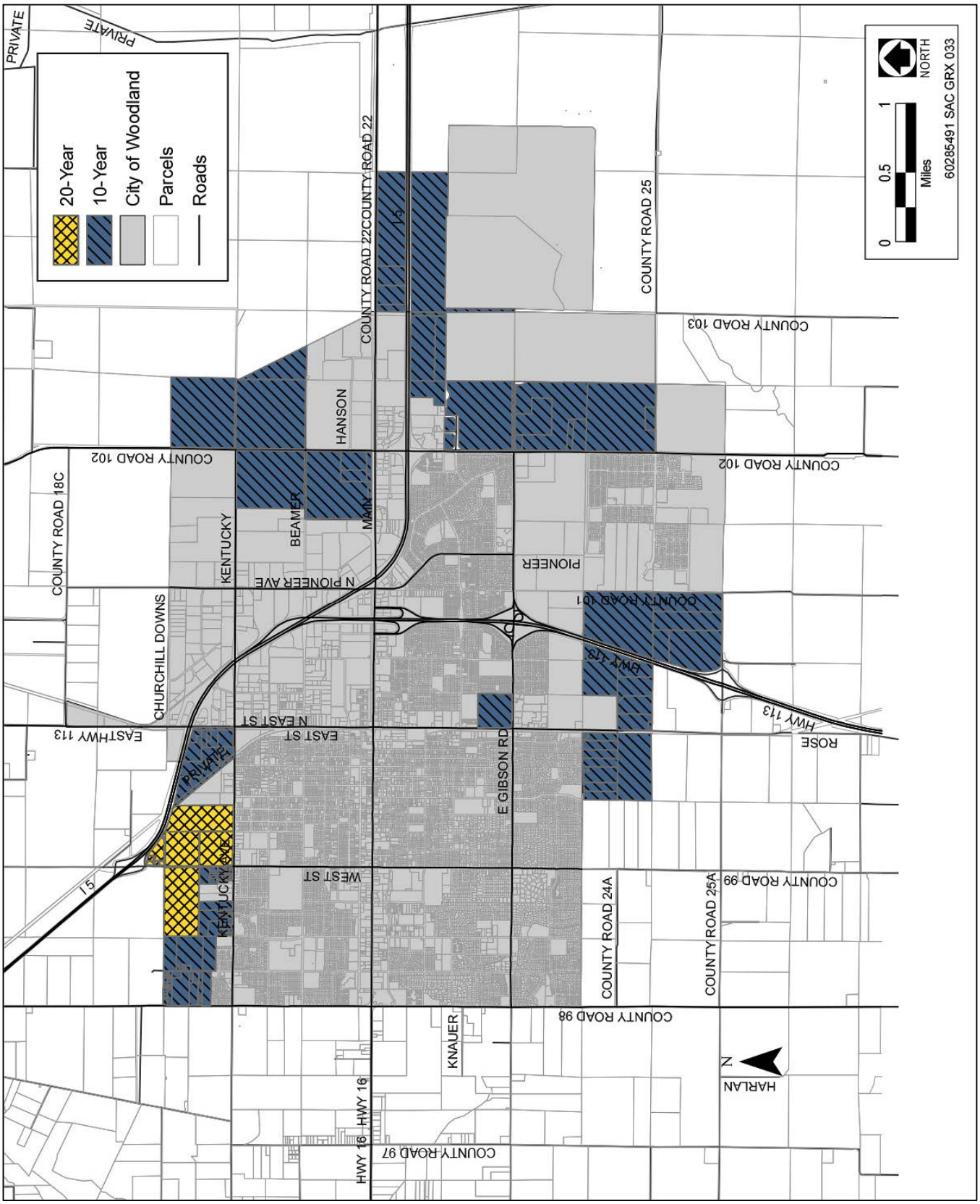
Residential land makes up about 27 percent of land inside the city limits. The majority of residential uses – 76 percent – is low-density residential (defined as one to eight dwelling units per acre). Medium density (defined as nine to sixteen units per acre) comprises 17 percent, and the remaining 7 percent is high-density residential (defined as more than 16 units per acre). Residential development is located primarily in the western (west of East Street) and central (south of East Street and west of County Road 102) parts of the city, with a smaller, but growing residential concentration in the Spring Lake Specific Plan Area along the southern city boundary.

Industrial

Woodland's industrial land is concentrated primarily in the northeast quadrant (north of Main Street and east of East Street) of the Planning Area and consists of a mix of automotive, industrial, and warehouse uses. Total industrial land within the Planning Area is 1,559 acres, of which approximately 88 percent is located within the city limits. Warehouse uses (44 percent) make up the majority of existing industrial land, followed by light and heavy industrial (38 percent), automotive (7 percent), and other miscellaneous industrial (11 percent) uses. Smaller concentrations of industrial land are located in the northwest quadrant of the Planning Area (primarily outside city limits) and along the southern segment of East Street (south of Main Street).

Public, Semi-Public, and Community Facilities

There are 1,298 acres of public, semi-public, and institutional uses in the Planning Area, making up more than 10 percent of the total. Within the city limits, public, semi-public, and institutional uses account for about 10 percent



Source:

Exhibit 4.10-1. **Woodland SOI in 2011 MSR**

of the total existing land uses. These uses include schools and Woodland Community College, city and county government facilities, utilities, and medical facilities. Many of these uses occupy very large parcels (e.g. Woodland Community College, Pioneer High School, Woodland High School, and Yolo County Fair Grounds (located outside city boundaries)) and are activity centers in the community. Another large public facility in the Planning Area is the Yolo County Jail.

Commercial

Commercial uses (including office uses) comprise four percent of land (525 acres) in the Planning Area. The majority of this acreage – more than 98 percent– is located within the city limits. Commercial land uses are generally concentrated in the downtown along Main Street, with a large amount of neighborhood and service related commercial along west Main, a large amount of office, with a high concentration of commercial and retail uses located east of Main Street adjacent to the Interstate 5 (I-5) corridor. Commercial uses also generally front East Street to the north and south as well as Kentucky Avenue in the northwest quadrant. Pockets of smaller, neighborhood-serving commercial establishments are scattered throughout otherwise residential areas.

4.10.2.2 POPULATION

SACOG estimates that the City of Woodland's total population increased from 49,151 in 2000 to 55,468 in 2010, or a 12.9-percent increase over the 10-year period (City of Woodland 2013:17). As of January 1, 2015, DOF estimates that the population of the City of Woodland was 57,525, or an approximately 4 percent increase from the 2010 population (DOF 2015).

SACOG estimates that the population in the City of Woodland will increase to 66,041 by 2035 (City of Woodland 2013:21). This represents an increase of approximately 15 percent over the 2015 estimated population.

4.10.2.3 HOUSING

SACOG estimates that the City of Woodland's total number of housing units increased from 17,101 in 2000 to 19,845 in 2010, or a 16 percent increase over the 10-year period (City of Woodland 2013:17). The number of households increased from 16,751 in 2000 to 18,721 in 2010, which represents an 11.8 percent increase in the number of households between 2000 and 2010. The average household size increased from 2.89 to 2.91 during this 10-year period.

According to the DOF, the total number of housing units in the City of Woodland was 20,160 in 2015, with an average household size of 2.96 persons per unit (DOF 2015). Approximately 69 percent of these housing units were attached and detached single-family homes (DOF 2015).

SACOG estimates the number of housing units in the city of Woodland is forecast to increase to 24,452 by 2035, which represents an increase of 21 percent over the 2015 estimated number of housing units (City of Woodland 2013:21). SACOG further estimates the number of households is anticipated to increase from approximately 18,721 households in 2010 to 23,347 households in 2035 (City of Woodland 2013:21). This is an approximately 35 percent increase in the number of households.

4.10.2.4 EMPLOYMENT

SACOG estimates that the City of Woodland had 21,347 jobs in 2012 (SACOG 2016a). Based on the current employment totals and projections, the City of Woodland would have approximately 33,368 jobs by 2035 (City of Woodland 2013:21). This represents an increase of approximately 27 percent over the number of jobs in 2008.

As shown in Table 4.10-2, the City of Woodland has 25,291 persons in the civilian labor force (age 16 years and over) employed. The largest employment sector of 23 percent is in the educational, health, and social services category, which saw an annual increase of 2.5 percent between 2000 and 2010. Retail jobs employ approximately 14 percent of city residents and approximately 8 percent work in construction. Between 2000 and 2010, city residents made proportional gains in jobs in arts, entertainment, recreation, accommodation, and food services (5.8 percent); agriculture, forestry, fishing, hunting and mining (3.7 percent); and public administration (4 percent); and had declines in the proportion of residents employed in the wholesale, information, and manufacturing sectors.

Table 4.10-2. City of Woodland Employment by Industry, 2010

Industry	Jobs of Resident Population	Percent	Annual Percentage Change from 2000 Census
Employee Civilian population 16 years and over	25,291	100.0	1.7
Agriculture, forestry, fishing and hunting and mining	1,260	5.0	3.7
Construction	2,002	7.9	2.1
Manufacturing	1,258	5.0	-3.1
Wholesale	743	2.9	-4.8
Retail Trade	3,553	14.0	2.2
Transportation and warehousing and utilities	1,108	4.4	-0.4
Information	262	1.0	-4. 4
Finance, insurance, real estate, and rental and leasing	1,612	6.4	4.1
Professional, scientific, management, administrative, and waste management services	2,391	9.5	3.2
Educational, health, and social services	5,793	22.9	2.5
Arts, entertainment, recreation, accommodation, and food services	2,130	8.4	5.8
Other services (except public administration)	1,239	4.9	2.7
Public administration	1,940	7.7	4.0

Source: City of Woodland 2013:20

As of 2014, the City's largest employers were the County of Yolo, Target Distribution Center, Woodland Joint Unified School District, Woodland Healthcare (Dignity Healthcare System), Walgreens Distribution, and Rite Aid Distribution Center.

Approximately 54 percent of employed Woodland residents worked within the city in 2012. The next largest employment destination for residents was the city of Davis, at 10.2 percent, followed by unincorporated Yolo County at 9.2 percent (BAE Urban Economics 2013:9). A substantial number of people in the city are employed

at UC Davis and at the Cache Creek Casino, Yolo County's largest private employer, located in the Capay Valley west of Woodland (BAE Urban Economics 2013:9).

Employees commuting to jobs in Woodland are from a diverse area, including Sacramento County (14.5 percent), unincorporated Yolo County (7.3 percent), Davis (6.1 percent), and West Sacramento (3.0 percent) (BAE Urban Economics 2013:10).

Unemployment

Unemployment rates in Woodland have historically exceeded unemployment rates throughout Yolo County and California. In 2015, the unemployment rate for people who live in the city who are considered part of the labor force (i.e., people who are not employed but seeking jobs) was 6.8 percent (Employment Development Department [EDD] 2015). The County's unemployment rate in 2015 was 6.4 percent while California's unemployment rate was 6.2 percent (EDD 2015).

A portion of the city's high unemployment rate is likely attributable to the seasonal nature of activity in the agricultural areas that surround Woodland and that influence businesses located within the city, such as food processors and agricultural services and supplies companies, all of which tend to have lower labor needs during winter months (BAE Urban Economics 2013:8).

Jobs/Housing Relationship

The relationship between the location of jobs and housing can have important environmental ramifications. A better match between the number and types of jobs and the number of households and interests/skills of the local labor force can help to alleviate traffic congestion, shorten commute times, and reduce vehicle miles traveled (VMT) and the associated air pollutant emissions and noise associated with vehicular travel. Balancing jobs and housing in a smaller area can provide increased opportunities to use transit, bike, or walk to work in lieu of driving. Commuting can result in more traffic congestion, air quality degradation, greenhouse gas generation, and noise generation.

In the broadest sense, the balance of jobs and housing is defined as an adequate supply of housing for workers employed in a defined geographic area. It is also important to consider the housing types and costs relative to the incomes associated with local jobs. Alternatively, a jobs/housing balance can be defined as adequate provision of employment in a defined area that generates enough local workers to fill the housing supply. An area that has too many jobs relative to its housing supply is likely (in the absence of offsetting factors) to experience substantial in-commuting, escalations in housing prices, and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to the number of employed residents, many of the workers are required to commute to jobs outside of their area of residence. In order to maximize the environmental benefits of a jobs/housing balance, there needs to be a nexus between the types and cost of housing proposed to be located near jobs to be provided, the education/skills required by those jobs relative to the local labor force, and the wages associated with those jobs.

Another subtlety related to jobs-housing balance has to do with the concentration and location of basic (primary, exporting) and non-basic (population based) jobs. As discussed in SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (SACOG 2016):

> "At the full regional scale, this principle is discussed as "jobs-housing balance," and means a balance of jobs and households so that the region does not have to import or export either jobs or housing, beyond the normal out- and in-commuting that happens in a mobile society. For the large sub-regions, especially around the three largest employment centers, it is also desirable to attempt to replicate the regional jobs-housing balance number. At smaller scales, sometimes the best, most realistic, mix focuses more on population-serving jobs (e.g., schools, retail, etc.) and less on base, or primary, sector jobs. It is, however, still a worthy goal to try to have a strong jobs-housing mix through as many subareas of the region as possible."

Beyond the relationship between jobs and housing, there is also an important relationship between jobs and workers. Housing has long been used as a proxy for workers and worker residences. In reality, the number of workers per household varies widely across the regions, and different housing types have the capacity for accommodating different numbers of workers. Additionally, workers in areas with a "good" jobs-housing balance may still have longer commutes if available housing in the area is unaffordable to workers filling local jobs (SACOG 2016).

The simplest measure of jobs/housing balance is an index based on the ratio of employed residents (which is influenced by the number of homes) to jobs in the area. An index of 1.0 indicates that the supply of jobs and housing are balanced. An index above 1.0 indicates that there are more jobs than employed residents, and may suggest that many employees are commuting in from outside the community. An index below 1.0 indicates that there are more employed residents than jobs and may suggest that many residents are commuting to jobs outside the community. The six-county SACOG region has a current and projected ratio of 1.2 jobs per household. SACOG's goal is to move communities in each county closer to the regional ratio of 1.2 jobs per household for growth between 2012 and 2036, including existing and new development (SACOG 2016).

The anticipated trend in the jobs/housing index for the City of Woodland is based primarily on data from SACOG. The jobs/housing index for the City of Woodland was estimated to be 1.1 in 2012 (SACOG 2015). It is anticipated that the jobs/housing index would increase to 1.5 in 2035, indicating job growth would outpace housing growth and there would more jobs than employed residents in the city of Woodland (City of Woodland 2013:21).

4.10.3 REGULATORY FRAMEWORK

4.10.3.1 FEDERAL

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

4.10.3.2 STATE

California Relocation Law, Public Resources Code Section 7260 et seq.

The California Relocation Law requires the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity. The law requires agencies to prepare a relocation plan, provide relocation payments, and identify substitute housing opportunities for any resident that is to be displaced by a public project.

Government Code Sections 65919 to 65919.11

Government Code Sections 65919 to 65919.11 summarize procedures related to interagency referrals for different types of lead agency actions, including general plan updates. Among other referrals, this part of the Government Code provides a procedure and protocols for requesting counties keep cities informed regarding land use actions within the unincorporated portions of spheres of influences and planning areas.

4.10.3.3 REGIONAL

Sacramento Area Council of Governments 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy

Sacramento Area Council of Governments (SACOG), the Metropolitan Planning Organization (MPO) for the Sacramento region (including Yuba, Placer, El Dorado, Sacramento, Yolo, and Sutter counties), adopted its second Metropolitan Transportation Plan/ Sustainable Community Strategy (MTP/SCS) in February 2016. The Regional Transportation Plan (called the Metropolitan Transportation Plan in the Sacramento region) is a long-term plan for a region's transportation system adopted by an MPO. It includes a list of specific projects and is a prerequisite for receiving State and federal transportation funding.

Under the California Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State sets target greenhouse gas emissions reductions from passenger vehicles for each region. SB 375 requires each major region in the state to integrate transportation, land use, and climate planning by adding an SCS to its Regional Transportation Plan. The SCS must demonstrate attainment of regional greenhouse gas (GHG) emissions reduction targets while accommodating the full projected population of the region. The region's second MTP/SCS (prepared pursuant to SB 375) was adopted in 2016.

The land use plan in the 2016 MTP/SCS is largely based on existing local general plans. The 2016 MTP/SCS land use scenario assumes development in downtown Woodland and in the southern portion of the city. In the MTP/SCS, SACOG categorized the urbanized land within its jurisdiction into four Community Types according to land use and density/intensity. According to the MTP/SCS, three Community Types are represented in Woodland, as follows:

- **Center and Corridor Communities.** Land uses are typically higher density and more mixed than surrounding land uses. These areas are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region. ***In Woodland, this Community Type designation is applied to the Downtown and East Street Corridors.***

- **Developing Communities.** These areas are typically, though not always, situated on vacant land at the edge of existing urban or suburban development; they are the next increment of urban expansion. Areas are identified in local plans as special plan areas, specific plans, or master plans and may be residential-only, employment-only, or a mix of residential and employment uses. Transportation options in Developing Communities often depend, to a great extent, on the timing of development. ***In Woodland, this Community Type designation is applied to the Spring Lake Specific Plan Area.***

- **Established Communities.** Typically, these areas are adjacent to, or surrounding, Center and Corridor Communities. Local land use plans aim to maintain the existing character and land use pattern. Land uses are typically made up of existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers. ***This Community Type represents all areas of Woodland outside those noted in the Community Types above***.

The fourth Community Type, which is not represented in Woodland, is Rural Residential. Rural Residential communities are typically located outside of urbanized areas and are predominately very low-density residential, with some small-scale hobby or commercial farming. While some unincorporated areas within Woodland's ULL may currently exhibit characteristics similar to Rural Residential communities (specifically in unincorporated farmland areas), SACOG recognizes that most of these areas have the potential to transition to higher intensity uses during the planning period due to their location within the ULL.

SACOG has not identified any Transit Priority Areas within Woodland. These are defined as areas within one-half mile of a rail station stop or a high-quality (minimum headways, or time between trains/buses, of 15 minutes during peak hours) transit corridor. Woodland has no rail transit, and bus headways all exceed 15 minutes.

Sacramento International Airport Land Use Compatibility Plan

Public Utilities Code Section 21675 requires each airport land use commission to formulate an airport land use compatibility plan (ALUCP). ALUCPs are intended to promote compatibility between airports and the land uses that surround them by addressing noise, overflight, safety, and airspace protection concerns. Each ALUCP prevents exposure to excessive noise and safety hazard within an airport influence area. California Government Code Section 65302.3 further requires that general plans be consistent with an adopted ALUCP. The 2013 Sacramento International (SMF) ALUCP was prepared by the Sacramento Area Council of Governments (SACOG), which serves as the Airport Land Use Commission for the region. The western boundary of the SMF Influence Area travels north-south through Woodland, following the western edge of the property that houses the City's Water Pollution Control Facility (wastewater treatment plant). The Sacramento International Airport ALUCP is described further in Section 4.8.2 Regulatory Section of Section 4.8 of this EIR.

Local Area Formation Commission 2011 City of Woodland Municipal Service Review

The Yolo Local Agency Formation Commission (LAFCo) is an independent agency. Yolo County LAFCo is empowered to review, approve, or deny boundary changes, city annexations, consolidations, special district formations, incorporations for cities and special districts, and to establish local Spheres of Influence (SOI). The Sphere of Influence for each governmental agency is a plan for its future boundary and service area. The LAFCo function is outlined in Government Code, Section 56000 et seq., known as the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. State Government Code Sections 56425 and 56430 require that when the LAFCO updates a SOI, a Municipal Service Review (MSR) must be prepared. The most recent MSR for Woodland was prepared in 2011. The constraints to growth identified in the MSR include flooding, state and local agricultural preservation policies, and City growth policies.

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. Yolo County's General Plan was most recently updated in 2009. The anticipated growth within towns and

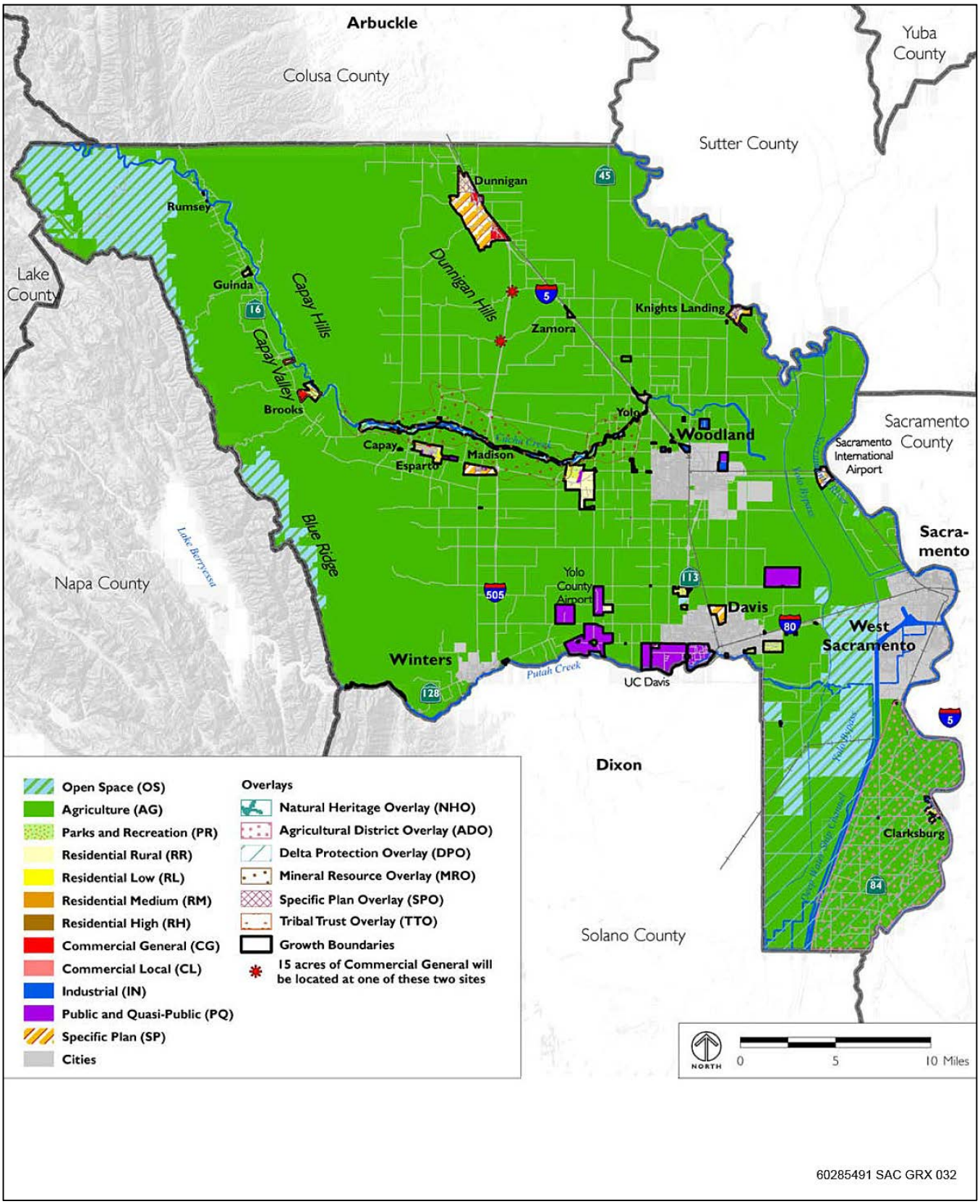
unincorporated areas of the county is given in Table 4.10-3. In unincorporated land throughout the county, the 2030 General Plan anticipates a total of approximately 22,000 housing units and approximately 3,000 square feet of non-residential development by 2030. Although there is development in the county, the focus of the Land Use and Community Character Element of the Yolo County 2030 Countywide General Plan is to support the rural character of the county, as well as establish "goals for regional collaboration and equity, green building standards, sustainable community design and net community benefits from new growth." (Yolo County, 2009)

Table 4.10-3. Yolo County 2030 General Plan Anticipated Residential and Non-Residential Growth

	Total Allowed	
Town	Residential Units[1]	Commercial and Industrial Acres
Capay	629	131.6
Clarksburg	199	137.3
Dunnigan	8,621	822.4
Esparto	2,411	60.0
Knights Landing	1,793	60.4
Madison	1,633	157.7
Monument Hills	608	24.7
Yolo	211	45.9
Zamora	28	14.8
Elkhorn Property	N/A	348.3
County Airport	N/A	302.0
I-505/CR-14 or 12A	N/A	15.1
Spreckels Property	N/A	142.6
Covell/Pole Line	N/A	383.7
Remaining Unincorporated	5,928	337.3
TOTAL	**22,061**	**2,983.8**

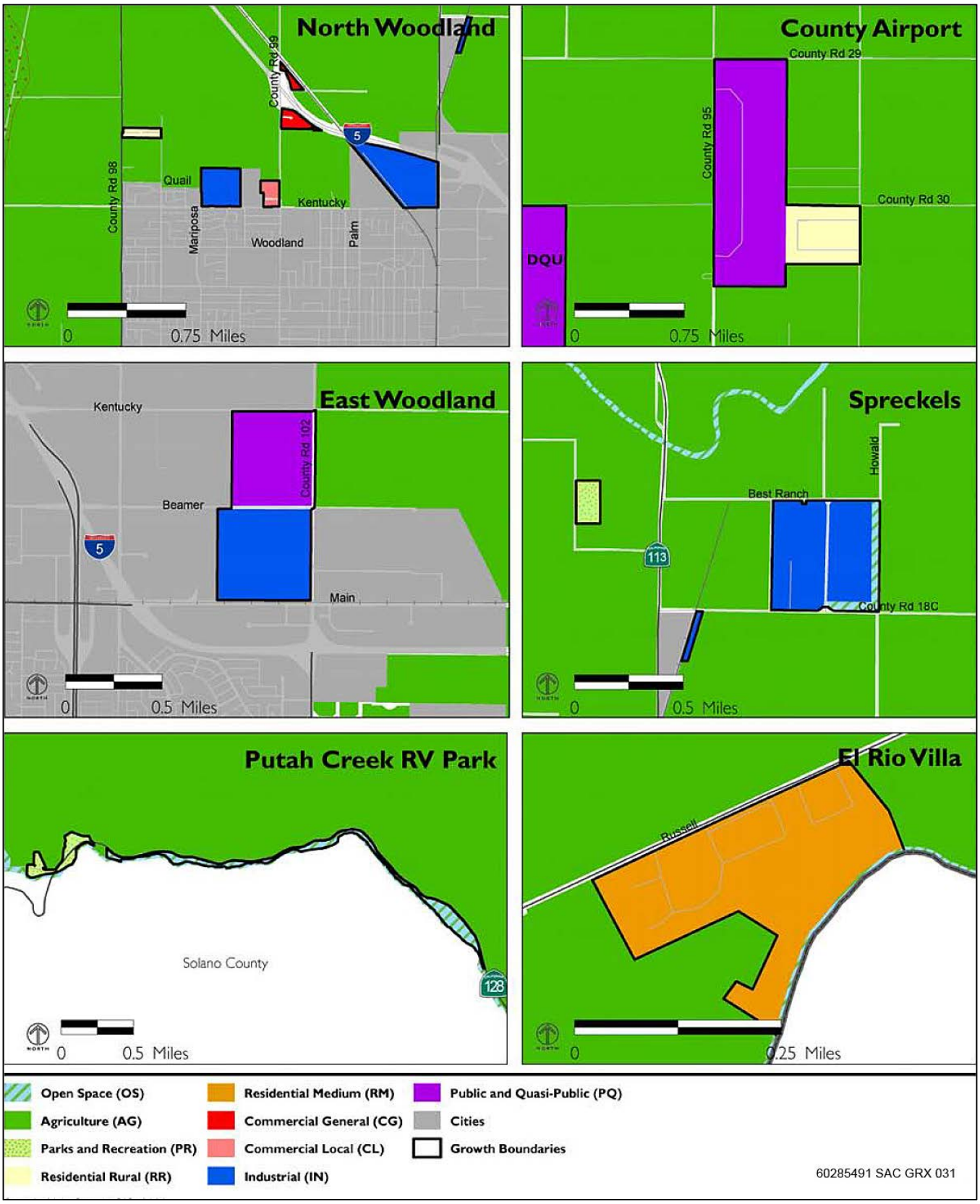
Notes:
[1] Sum of existing on-the-ground units, buildout allowed under 1983 General Plan, and added new units under the 2030 General Plan.
Source: Yolo County, 2009.

The City of Woodland's Urban Limit Line (ULL) extends beyond the existing city boundary primarily toward the east and south, as well as in the northwest. Therefore, there is Yolo County unincorporated land within the Woodland ULL. In order to better plan future growth, all unincorporated areas in Woodland's ULL are proposed for city land use designations. However, these areas remain under county jurisdiction and land use control until and unless they are annexed by the City. The majority of land surrounding Woodland is designated Agriculture in the Yolo County General Plan. There are some parcels to the east and northwest of Woodland that are designated Industrial, Public and Quasi-Public, Commercial General, or Residential Rural. The entire General Plan Land Use Map is shown in Exhibit 4.10-2, and the areas of the County Land Use Map that are within the 2035 General Plan Planning Area are shown in Exhibit 4.10-3.



Source: Yolo County 2009

Exhibit 4.10-2. **Yolo County 2030 General Plan Land Use Map**



Source: Yolo County 2009

Exhibit 4.10-3. Yolo County 2030 General Plan Land Use Map Inserts

In addition, there is an area of unincorporated county land within the borders of the Woodland city limits located at the intersection of East Street and Gibson Road. As Woodland is the Yolo County seat, several County facilities, such as the courthouse, the jail, and the juvenile detention center, are also located in the city.

The following policies from the Yolo County 2030 General Plan address growth and development in unincorporated areas, encouraging infill and high-quality design.

- **Policy LU-6.5** Encourage schools and other special districts to locate new school and other appropriate service facilities within the growth boundaries of the unincorporated communities.

- **Policy CC-2.4** Emphasize the unincorporated communities as retail, service and employment centers for local residents, as well as residents of surrounding rural (agricultural) areas. Where appropriate, include economic development in the unincorporated communities that serves intra-county and regional tourism.

- **Policy CC-2.6** Encourage infill development and the appropriate redevelopment of vacant and underutilized properties within existing unincorporated communities and prioritize infill projects over development on land at the planned community edge.

- **Policy CC-2.7** Provide for higher density housing and mixed-use development in the downtown areas of the unincorporated communities to support commercial uses, create more pedestrian travel, extend activity into the evening, increase the variety of housing opportunities to include affordable and special needs housing, enhance safety, reduce traffic and support regular, frequent fixed-route transit service.

- **Policy CC-2.8** Encourage a range of commercial, civic and cultural uses in the downtown areas of the unincorporated communities to encourage pedestrian travel, extend activity into the evening hours and create activities that involve all ages and groups. This shall include a diversity of retail uses within downtown areas, including retail shops that serve daily household needs, essential services and tourism, such as a bank or post office, lodging, restaurants and entertainment.

- **Policy CC-2.9** Locate County offices and other civic facilities in the downtown area of the unincorporated communities, whenever possible.

- **Policy CC-2.10** Strive to achieve a minimum jobs/housing balance of 1.2 jobs for every dwelling unit on average within each unincorporated community, to the greatest extent feasible.

- **Policy CC-2.11** Strive to achieve a match between the prices of dwelling units and the salaries of the jobs provided within each unincorporated community, to the greatest extent feasible.

- **Policy CC-2.13** Require 5 acres of turn-key neighborhood parks for every 1,000 people within each unincorporated community, proximate to residential neighborhoods. Ensure that the provisions of neighborhood parks is phased concurrently with residential growth in the specific plan and community plan areas to meet and maintain this threshold.

- **Policy CC-2.16** Require the following sustainable design standards as appropriate for projects located within the growth boundaries of the unincorporated communities:

A. Imaginative and comprehensive planning that seeks to make best use of existing community features and fully integrate new development.

B. Compact and cohesive communities that promote walking, bicycling and public transit.

C. Well defined neighborhoods served by parks, schools, greenbelts and trails.

D. The fiscal impacts of development projects shall be revenue neutral or positive in terms of impacts to the County General Fund. Appropriate exceptions for socially beneficial projects such as affordable housing, parks, etc. may be allowed.

E. Distinct neighborhood focal points such as a park

F. Narrow streets lined with evenly-spaced trees of the same or alternating species forming a shade canopy.

G. Vertical curbs and sidewalks separated from the street by landscaping.

H. Street lighting and trail lighting, as appropriate, at a scale appropriate for pedestrians and bicycles.

I. Maximum block lengths of 600 feet.

J. Schools within walking distance of a majority of the homes served.

K. A wide range of housing types, densities, sizes and affordability.

L. Where housing is not near the downtown area, allow small neighborhood commercial nodes that provide retail and small office opportunities for neighborhood residents with the goal of accommodating routine daily needs within walking distance of most residents.

M. Incorporate a grid street network that provides safe and efficient travel for all modes throughout the community with multiple connections to exterior routes.

N. Orient the grid pattern of new streets to align north/south and east/west, to give a sense of place and direction in new community areas, as well as to maximize solar access.

O. Downtown streets shall have parking on both sides.

P. Downtown areas shall have one or more civic nodes such as a central park, town square, fountain plaza, etc.

Q. Homes that do not back onto roads, parks, schools, greenbelts, trails, or water bodies. Instead, homes that front on these features shall access by way of single-loaded streets or other designs to improve public aesthetics and neighborhood security.

R. Development regulations and design standards shall emphasize healthy community design and safe neighborhoods.

S. Avoid noise walls to the greatest possible extent.

T. Entry features shall be provided at all main community entrances and exits and shall announce the community by name.

U. Except for parking provided onsite for individual residential lots, and screened from public view. Parking shall be landscaped to achieve a minimum of 50 percent shading.

V. Development and incorporation of community art and activities.

W. Encourage specific land uses and designs that support community diversity.

X. Protect and preserve to the greatest feasible extent creeks, riparian areas and other biological values within or adjoining an area.

Y. Incorporate low-water use appliances, drought tolerant landscaping and other water efficient features.

Z. Provide convenient and secure bicycle parking in downtown areas.

AA. To the greatest possible extent, avoid cul-de-sacs that create barriers for pedestrian and bicycle access to adjacent areas.

BB. Include recharging stations, preferred parking, and other incentives for alternative energy vehicles.

CC. Limit the amount of turf in yards for new residential developments to a maximum of 25 percent of the yard area.

DD. Require the installation of low output sprinklers, such as drip, soaker hoses, and microspray in new residential development whenever possible.

EE. Use recycling systems for chillers and cooling towers.

FF. Demonstrate adherence to LEED Neighborhood Design Standards or the equivalent, for new development, including Specific Plans.

GG. Demonstrate consistency with the County's Greenhouse Gas Emissions Reduction/Climate Action Plan(s), upon adoption.

HH. Provide multiple connections for all modes through the community and with existing and planned development so that individual development projects are integrated with the surrounding communities.

4.10.3.4 LOCAL

City of Woodland 2002 General Plan

The 2002 General Plan includes goals, policies, and implementation programs to set standards and policies for future development and redevelopment in Woodland, focusing on high-quality, orderly growth to achieve a balance in residential, commercial, and industrial development. Policies include an Urban Limit Line designed to

contain future urban development through the year 2020, encourage development in a compact and cohesive pattern, promote a mix of development where appropriate, provide high-quality neighborhoods, and to promote Downtown Woodland as an important part of Woodland's small-town character and community heritage.

The Land Use and Community Design Element of the City of Woodland 2002 General Plan focuses on "high-quality, orderly growth to achieve a balance in residential, commercial, and industrial development… consistent with the City's ability to assimilate growth and maintain the small-town feeling and quality of life in Woodland" (Woodland 2002a). See Table 3.11-4 in Chapter 3 of this EIR, "Project Description" for the land use designations in the City of Woodland 2002 General Plan. The 2002 General Plan incorporated the same new areas for urban development and same intensity of development as the 1996 General Plan (City of Woodland 2002b). Based on the land use designations and land use diagram of the 2002 General Plan, the population, housing, and employment projections for Woodland in 2020 are given in Table 4.10-4.

Table 4.10-4. Population, Housing, and Employment Projections (2020)

	Total (2020)
Population	65,860
Housing Units	25,272
Employment	35,006

Source: City of Woodland General Plan FEIR, 1996.

Policy 1.A.7.of the 2002 General Plan requires the City to manage growth via an annual cap residential building permits:

- **Policy 1.A.7.** The City of Woodland shall manage residential growth at an even and reasonable pace so that single family residential construction in new planned residential neighborhoods does not exceed 5,000 houses by the year 2020 per approved Specific Plans. The intent is to limit the number of building permits each year, adjusting for market fluctuations. The intent is not to limit infill and multi-family development, including multi-family development approved in planned neighborhoods shall manage residential growth at an even and reasonable pace, so as not to exceed a population of 60,000 in the year 2015.

City of Woodland General Plan 2013 Housing Element

The State of California Department of Housing and Community Development (HCD) is responsible for determining the regional housing need for all jurisdictions in California and ensuring the availability of affordable housing for all income groups.

Article 10.6 of the California Government Code outlines the State's Housing Element requirements. The Housing Element must analyze existing and projected housing needs, examine special housing needs within the population, evaluate the effectiveness of current goals and policies, identify governmental and other constraints, determine compliance with other housing laws, and identify opportunities to incorporate energy conservation into the housing stock. The element must also establish goals, policies and programs to maintain, enhance, and develop housing.

Government Code Section 65584 requires designated regional agencies or councils of government to prepare regional housing needs plans. The Sacramento Area Council of Governments (SACOG) is the agency that develops the regional housing strategy for Yolo County and its incorporated cities. SACOG issued its final RHNP and Regional Housing Needs Allocations (RHNA) on September 20, 2012 for the Housing Element compliance period of January 1, 2013 through October 31, 2021. The RHNA determines potential locations for future housing stock based on projected population growth, employment trends, and development suitability. The RHNA also designates the number of housing units that that should be accommodated by local governments at different affordability levels to ensure that all jurisdictions provide a fair share toward the region's affordable housing need.

As shown on Table 4.10-5, the City of Woodland's RHNA for the planning period (2013 through 2021) projected a need for the construction of an additional 1,877 housing units, allocated as follows: 195 extremely low income units, 195 very low income units, 274 low income units, 349 moderate income units, and 864 above moderate income units.

The City submitted the 2013 Housing Element to the State Department of Housing and Community Development and received a letter dated August 8th, 2013 informing the City that the Housing Element met the statutory requirements of State housing element law. The City Council adopted the 2013 Housing Element on October 15, 2013.

Table 4.10-5. City of Woodland Regional Housing Needs Allocation for 2013–2021

Income Grouping	Projected Housing Units (2013)	Percent of Housing Need
Extremely low[1]	195	10.4
Very low[1]	195	10.4
Low	274	14.6
Moderate	349	18.6
Above-moderate	864	46.0
Total	**1,877**	**100.0**

Notes:

[1] The very low income housing need allocation provided by SACOG was 380 units, and the City has chosen to distribute 50 percent of this total into the extremely low income category.

Source: City of Woodland 2013:40

The Woodland City Council adopted the 2013 Housing Element on October 15, 2013. The California Department of Housing and Community Development reviewed the Housing Element and issued a letter on August 8th, 2013 indicating that the Housing Element meets the statutory requirements of State housing law. The 2013 Housing Element establishes the City's goals, policies, and programs for housing through 2021, focusing on the following:

- promoting the provision of adequate housing for all persons in the City, including those with special housing needs and to emphasize the basic human need for housing as shelter;
- encouraging the preservation, maintenance and improvement of existing housing and the replacement of unsafe or dilapidated housing;

- assuring that housing opportunities are open to all without regard to income, source of income, marital status, familial status, age, sex, sexual orientation, religion, creed, color, race, national origin, ancestry, or disability; and

- establishing development and construction standards which encourage energy conservation and sustainable development practices in residential development.

Table 4.10-6 presents the City's quantified objectives for construction, rehabilitation, and preservation for the 2013–2021 period that will be achieved through the policies and programs described in the 2013 Housing Element.

Table 4.10-6. Summary of Quantified Objectives

Program	Extremely Low	Very Low	Low	Moderate	Above-Moderate	Total
New Construction	75	80	90	349	864	1,458
Rehabilitation	10	20	25			55
Conservation / Preservation	-	-	-	-	-	-

Source: City of Woodland 2013:3

Specific Plans

Spring Lake Specific Plan (2001, Revised 2007)

The Spring Lake Specific Plan (SLSP) was adopted in 2001 and has been amended numerous times, most recently in 2007. The Plan covers more than 1,000 acres in southeast Woodland south of Gibson Road and east of SR 113 and includes parks, schools, and neighborhood commercial areas in addition to more than 4,000 housing units. Pockets of higher density housing are interspersed throughout this Plan area. This Plan, accompanied by a separate set of design standards (adopted in 2003), calls for a "neo-traditional" land use pattern and architectural design in order to foster greater pedestrian connectivity and community interaction. Currently, the Plan area is only partially built out.

East Street Corridor Specific Plan, 1998, Revised 2005

The East Street Corridor Specific Plan was adopted in 1998, with a minor revision in 2005. The intent of this Plan is to enhance the East Street Corridor as a mixed-use residential, shopping, service, and community district. East Street functions as an important north-south connection through Woodland's eastern neighborhoods and provides access to the city's northeast industrial sector. Generally, this Plan focuses on encouraging new types of development that create an active community node, enhancing the public realm to make it a more attractive place to gather and conduct business.

Downtown Specific Plan, 1993, Revised 2003

The Downtown Specific Plan was originally adopted in 1993 with the intention of revitalizing Woodland's core Historic Downtown and reestablishing it as the specialty retail, business, entertainment, cultural, and government center for the community. This Plan was revised in 2003, following a very extensive public process. The Specific Plan revision was developed concurrently with the 2002 General Plan Update, and as such, is consistent with the

existing General Plan goals and policies. The Downtown Specific Plan identifies numerous "Plan Concepts" that serve as guiding principles for implementation and cover topics ranging from economic viability and physical environment to circulation and historic preservation.

Southeast Area Specific Plan, 1990, Revised 1995

The Southeast Area Specific Plan, adopted in 1990 and amended most recently in 1995, covers the portion of Woodland directly south of I-5 and east of State Route 113 (SR 113) and was intended to implement a major expansion of the city's eastern urban footprint. In addition to land use and circulation programs, this Plan includes design guidelines and standards relevant to residential, commercial, and industrial development. Over the last 20 years, this neighborhood has been completely built out and generally reflects the land use pattern articulated in this Plan. Southeast Woodland is a primarily low- and medium-density residential neighborhood with some large format commercial uses along Gibson Road and Pioneer Avenue as well as public uses, including an elementary school, recreational fields, and two public parks.

City of Woodland Municipal Code

Woodland Subdivision Ordinance, Chapter 21 of the Municipal Code

Woodland's Subdivision Ordinance includes regulations for all matters related to the division or subdivision of land in the city. The subdivision regulations found in the Municipal Code meet the requirements of the Subdivision Map Act (Government Code Division 2, Chapter 4, Article 1).

Woodland Zoning Ordinance, Chapter 25 of the Municipal Code

Woodland's Zoning Ordinance is the key regulatory tool meant to implement the General Plan, specifically the Land Use Element. It consists of a zoning map defining the location of districts and a code detailing requirements for each district.

The Zoning Ordinance establishes specific, enforceable standards with which development must comply such as minimum lot size, maximum building height, minimum building setback, and a list of allowable uses. Zoning applies lot-by-lot, whereas the General Plan has a community-wide perspective. State law requires the City's Zoning Code to be consistent with the General Plan. If a property happens to have a zoning designation that is not consistent with the General Plan land use designation, only the General Plan land use designation is enforceable.

Woodland's Zoning Ordinance includes various zones for residential, commercial, industrial, open space, and agricultural uses, as well as several overlay zones that apply to specific conditions (e.g. floodplain overlay, transition overlay, entryway overlay, planned development overlay, and similar). Provisions pertaining to landscaping, signs, and parking are covered in separate sections. The Zoning Ordinance also includes administrative provisions describing the processes for variances, conditional use permits, amendments, and modifications.

4.10.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.10.4.1 METHODOLOGY

This analysis considered policies and implementation programs of the Proposed Project, existing and proposed land use within the Planning Area, and applicable regulations and guidelines. It also compared the 2035 General Plan land use diagram to existing land use conditions to determine whether implementation of the Proposed Project would result in any environmental impacts. This analysis is detailed throughout Chapter 4 of this EIR, "Environmental Impact Analysis," which is organized into environmental topic-specific sections.

The examination of population, employment, and housing conditions in this section is based on information from review of land use changes under the 2035 General Plan, as well as a review of available population, employment, and housing projections from the adopted *City of Woodland General Plan 2013 Housing Element* (City of Woodland 2013), *City of Woodland General Plan Update 2035 Economic and Fiscal Background Report* (BAE Urban Economics 2013), and the SACOG *2016 Metropolitan Transportation Plan/Sustainable Communities Strategy* (SACOG 2016).

Population and employment growth under the 2035 General Plan are not, in and of themselves, an environmental impact. However, there are indirect impacts associated with increased population and employment, such as increased travel demand that requires additional roadways and other transportation infrastructure and the associated air pollutant emissions and traffic noise, impacts related to public facilities and utilities expansions needed to serve new growth, and other impacts, each of which is addressed in each technical section of this EIR. These technical sections provide analysis of relevant environmental effects of implementing the General Plan. The indirect effects associated with the General Plan's potential for inducing additional regional growth from the extension or construction of infrastructure and public services to serve population growth are discussed in Chapter 6.0 of this EIR, "Other CEQA Considerations."

The 2035 CAP does not relate to land use changes or changes in population, housing, or employment.

4.10.4.2 THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. Implementation of the Proposed Project would have a significant adverse impact if it would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with any applicable habitat conservation plan or natural community conservation plan;
- Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure);

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.10.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to land use planning, population, or housing are discussed in detail below. Conflict with an applicable HCP/NCCP is addressed in Section 4.4, Biological Resources, see Impact 4.4-7.

4.10.4.4 IMPACT ANALYSIS

IMPACT 4.10-1 Physically Divide an Established Community. *Implementation of the Proposed Project would not physically divide an established community. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

Implementation of the Proposed Project would not result in impacts that would physically divide any of Woodland's established communities. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The type of linear project most likely to have this effect would be a major new road, highway, or similar infrastructure, none of which are proposed as a part of the 2035 General Plan. While the Proposed Project does include improvements to existing roadways and similar infrastructure, these improvements would not introduce new physical divisions. See Section 4.13 of this EIR, "Transportation and Circulation," for further detail. The Circulation Element establishes policies designed to improve mobility and connectivity amongst existing development and new development including a focus on pedestrian, bicycle, and transit mobility. New roadway improvements are mostly in undeveloped areas that where new infrastructure would not divide existing communities. Planned infrastructure improvements in the 2035 General Plan include a new freeway ramp connecting SR 113 and I-5 near the center of the Planning Area, as shown in Figure 3-2 of the 2035 General Plan. This is in an area designated Industrial with a Light Industrial Overlay. The extensions of Maxwell Avenue in the East and the South Alternatives are in undeveloped areas, as with the extensions of Matmor Road and Parkland Avenue in the southern portion of the Planning Area.

a. East Alternative–New growth areas in SP-A1 and SP-3 share boundaries with existing communities. SP-1A is surrounded by existing residential neighborhoods to the north and east and by farmland to the south and west. SP-3 is surrounded by existing neighborhoods on the south and farmland and vacant land on the west, north, and east.

   Development in SP-2 will be separated by open space, public/quasi-public, and commercial uses from existing residential neighborhoods. However, SP-2 is in close proximity to regional commercial uses on the south side of Main Street in the center of the City and to jobs in the industrial area in the northeast of Woodland.

b. South Alternative–New growth areas in SP-1 and SP-3 share boundaries with existing communities. SP-1 is surrounded by existing residential neighborhoods to the north and east and by farmland to the

south and west. SR 113 separates SP-1A from SP-1B, but both SP-1A and SP-1B are planned for mixed use residential development so that a variety of services can be provided locally within the neighborhoods. In addition, SR 113 already exists with neighborhoods growing around it, rather than SR 113 being built through an existing neighborhood. SP-3 is surrounded by existing neighborhoods on the south and farmland and vacant land on the west, north, and east.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no existing laws and regulations that would reduce this impact.

Proposed Project

The following 2035 General Plan goals and policies reduce the potential impact of physically dividing an established community. There are no 2035 CAP objectives or strategies that relate to this impact.

- **Policy 2.A.8 Gateways and Corridors.** Transform the city's main corridors to become lively mixed use places that connect the city's neighborhoods. Create distinctive, thriving gateway centers at I-5 and SR113 that serve as inviting entrances to the city while maximizing the economic potential of these assets.

- **Goal 2.E Pattern and Scale.** Foster a cohesive, healthy community through patterns and scales of development that encourage active living and neighborhood interaction.

- **Policy 2.I.6 Rail Relocation.** Pursue opportunities to move the railroad from its current right-of-way in order to open new opportunities for public open space and revitalization along East Street. If relocation occurs, update the Zoning Ordinance or develop a new East Street master plan to maximize infill potential created by the relocated rail spur.

- **Policy 3.A.8 Six Lane Roads.** Prohibit the expansion to, or construction of, six-lane roads to mitigate projects that would cause or exacerbate LOS E or F conditions. Auxiliary lanes beyond a four land road cross section are allowed.

- **Policy 3.A.10 Overcome Barriers and Remove Gaps.** Eliminate barriers and gaps in the existing roadway, bikeway, and pedestrian networks by doing the following:

    - Pursue funding to construct grade-separated crossings of freeways, rail lines, and other barriers to improve connectivity.

    - Construct new pedestrian and bike paths in existing neighborhoods and strive to ensure that bike and sidewalk networks within communities are at least as efficient (e.g. miles traveled, connectivity, etc.) as the network for motorists.

    - Remove barriers to pedestrian travel, such as utility poles, as feasible.

    - Prioritize the construction of the SR 113 bike and pedestrian overcrossing at Sports Park Drive and redesign of the Gibson Road/SR 113 overpass to provider safer and more

- **Policy 3.I.1 Truck Route Designation.** Designate routes for trucks within the city to minimize the impact of truck traffic on residential neighborhoods and shall work with Yolo County to develop a system of truck routes for adjacent areas to the city.

- **Policy 3.I.5 Rail Relocation.** Support the ongoing efforts to relocate the California Northern and Yolo Shortline railroads towards the east of the city and northeast of the industrial areas.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Goal 2.E establishes that the City must foster patterns and scales of development that encourage neighborhood interaction, which will reduce the potential for isolation and division of communities. Policy 2.A.8 requires the City to transform corridors to connect the city's neighborhoods, and Policy 3.A.10 requires the City to eliminate barriers and gaps in the existing transportation network to improve multi-modal connectivity. Policies 2.I.6 and 3.I.5 require the City to pursue the option of relocating the railroads in the city to locations outside of existing neighborhoods. Policy 3.A.8 discourages the construction of six-lane roads, which due to their width have the potential to divide communities. Policy 3.I.1 requires the City to work with Yolo County on developing truck routes for areas adjacent to the city, rather than through the city, which would otherwise have a greater potential to impact existing communities.

The Proposed Project does not include new investment in infrastructure or development that would physically divide existing communities. In addition, the 2035 General Plan includes policies that reduce the potential for impact, by requiring the City to use corridors to connect neighborhoods, discourage wide highways, and locate truck routes outside of the city.

    a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above The impact is considered **less than significant**.

    b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

Mitigation Measures

No mitigation required.

IMPACT 4.10-2 Conflict with Any Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction over the Project (Including, but not Limited to the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect. *Implementation of the Proposed Project would differ from the Yolo County 2030 General Plan, which has jurisdiction over unincorporated land in the Proposed Project Planning Area. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 General Plan proposes land use designations for all parcels within the Planning Area, including on unincorporated county land. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Yolo County has jurisdiction over unincorporated land, including that which lies inside the Planning Area. The Yolo County 2030 General Plan and county regulations apply in these unincorporated areas within the Planning Area (see Exhibits 4.10-2 and 4.10-3). Some of the City's proposed land use designations are consistent with those of the County, including parcels in the northwest of the Planning Area designated Industrial. Other land use designations in the 2035 General Plan differ from the County General Plan. For example, there is a large parcel west of County Road 102 and north of Beamer Street, which the County designates Public and Quasi-Public and the 2035 General Plan designates Industrial. Through the master planning and annexation process, this discrepancy will be rectified. Until such time as growth in unincorporated areas is pursued, these areas will be governed by the Yolo County General Plan, and the 2035 General Plan land use designations will conflict.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County 2030 General Plan includes policies guiding the pattern, standards, and design of development in unincorporated areas. As discussed in the Regulatory Settings section above, the Yolo County 2030 General Plan also includes a Land Use Map with land use designations for all unincorporated land within the county.

Proposed Project

The 2035 General Plan prevents conflict between land use designations by requiring annexation before provision of City services to unincorporated areas.

- **Policy 2.B.6** Other Development in Unincorporated Areas within the ULL. Prior to the provision of City services to unincorporated areas within the ULL, require those unincorporated properties to be annexed into the City, or that a conditional service agreement be executed agreeing to annex when deemed appropriate by the City.

  a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

  b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The 2035 General Plan proposes land use designations of unincorporated county land that differ from the land use designations in the Yolo County 2030 General Plan. Until the unincorporated land in the Planning Area is annexed, the County's general plan and land use regulations apply.

c. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

d. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

None required.

Summary of Impact Analysis

IMPACT 4.10-3 Impacts Related to Inducing Population Growth. *Implementation of Proposed Project would induce population growth substantially higher than that projected in the SACOG regional population projections and introduce Specific Plan Areas that are not anticipated to be fully developed by 2035, the planning horizon for the 2035 General Plan. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project plans for population growth associated with future development of residential land uses and indirectly through future development of commercial, retail, office, and industrial uses throughout the Planning Area. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The General Plan Land Use Element encourages infill development – particularly in the Downtown Area and along mixed-use transportation corridors. There is no guarantee that infill opportunity sites would be developed or redeveloped within the planning period.

Table 4.10-7 shows the new and overall development expected by 2035 based on an analysis of existing conditions, demographic and economic trends, and opportunity sites. The General Plan assumes a total population of approximately 19,300 people, 7,000 dwelling units, 18,210 local jobs, and approximately 17 million square feet of nonresidential development over the planning horizon (Table 4.10-7).

Table 4.10-7. Existing and Anticipated Growth through the General Plan Horizon			
	Existing (2013)	New Land Use under 2035 General Plan	Total (2035)
Population	55,690	19,300	74,990
Housing units	19,980	7,000	26,980
Nonresidential square footage	19,824,000	17,000,000*	36,509,000
Jobs	26,000	18,210	44,210
Overall jobs-housing index	1.3	2.60	1.64

Source: data compiled by AECOM, 2016

Note: *This would be approximately 16,685,000 under the South Alternative and 17,386,000 under the East Alternative .

SACOG has developed population and employment projections that inform land use and transportation planning throughout the region. According to these projections, the city's population is expected to increase to 66,041 people in 2035 and the number of housing units is expected to increase to 24,452 (City of Woodland 2013:21). SACOG expects employment in the city to increase to 33,368 jobs. As indicated in Table 4.10-4 the population, housing, and employment projections under the General Plan would be substantially higher than the SACOG projections for 2035. The methodology and purpose of the City's estimate of development capacity under the Proposed Project is different from the methodology and purpose of SACOG's forecast for the purposes of the MTP/SCS. The SACOG projections are market based growth estimates that project the amount and location of likely growth in the region based on a variety of socio-economic factors that are updated every four years. The City's general plan is a long range planning tool that seeks to create opportunities for growth and provide a range of land use options to encourage economic investment. Given these different purposes it is reasonable to expect variations in the growth forecasts between the two.

The General Plan promotes a diversified economic base and seeks to capitalize on Woodland's location and access to I-5, Sacramento International Airport, rail service, prime farmland, and U.C. Davis. The General Plan provides sites in a variety of infill and new growth locations to attract new commercial, office, and industrial uses, which in turn will provide jobs. To support population growth, the City would increase employment opportunities and expand its employment base. It is anticipated that the number of jobs in Woodland would increase to 44,210 jobs by 2035 and result in an overall jobs-housing index of 1.64, indicating employment growth would outpace housing growth and there would more jobs than employed residents. This total is greater than the SACOG projection of 33,368 jobs by 2035 and jobs-housing index of 1.5. The City's estimate of total jobs total reflects the anticipated addition of new industries and businesses in Woodland on sites designated for commercial, office, and industrial uses, such as the new Southern Gateway business park. The City anticipates that future jobs could require a range of education and specialized training – with some jobs requiring little by way of advanced degrees and training – and other jobs with greater requirements. The City's intent is to increase the number and diversity of locally available jobs that could be filled from the local employment pool, including the unemployed and those commuting to jobs outside of the city. However, the City cannot dictate the residential location of future employees of Woodland employers.

It is possible that the City's objective to expand its employment base is very successful during the 2035 General Plan time horizon and that either the number or type of jobs would involve employees that do not live within the Planning Area. This could lead to a secondary growth-inducing impact related to demand for housing, goods and services associated with the population beyond that planned as a part of the Proposed Project.

As noted, the increase in housing and employment growth related to the Proposed Project exceeds the forecast included in SACOG's current MTP/SCS. This could be considered a growth-inducing impact if the City is successful in attracting more development between present and 2035 than forecast by SACOG and if this, in turn, results in less overall development locating in other parts of the region. This may produce positive or negative environmental results. In addition, if growth in Woodland does exceed the forecasts in the SACOG MTP/SCS, but the total amount of development included in the MTP/SCS are correct for the region as a whole, this could make locations near Woodland relatively more attractive to development.

As detailed throughout this EIR, two Alternatives are analyzed for planning horizon year (2035). The Alternatives offer different approaches regarding the timing, location, and sequence under which the Planning Area could build out through 2035, particularly in terms of "greenfield" growth. One Alternative introduces new greenfield growth in the East while the other continues to concentrate new greenfield growth in the South. The two Alternatives have different phasing of new growth. This could be considered a type of growth-inducing impact, as well, if in adopting a 2035 General Plan for one Alternative, the greenfield development that had been envisioned within only the Alternative somehow becomes more attractive or likely. This is not an outcome that could be environed under the auspices of the 2035 General Plan, since there is very specific policy regarding phasing that would not allow this to occur, but the City has elected in this case to conservatively disclose this possible indirect effect notwithstanding the countervailing policy language.

The 2035 General Plan anticipates development of currently undeveloped areas, which would result in infrastructure being extended into areas that are currently undeveloped and result in pressure to plan for and entitle development beyond that anticipated under the 2035 General Plan. The 2035 General Plan includes policies for both infill and new development that would avoid unplanned development that could be induced through infrastructure expansions into new growth areas. This reduces the potential for unplanned, induced growth. In addition, the City's ultimate boundaries are circumscribed by a permanent urban limit line established by a vote of the people in 2006. The Urban Limit Line may only be modified by another vote by the people, and the initiative measure also places restrictions on the provision of services outside of the Urban Limit Line. This provides an effective constraint to induced growth outside of the boundary.

Growth inducement may indirectly lead to environmental effects. Such environmental effects may include increased traffic, degradation of air quality, conversion of agricultural land to urban uses directly from population and employment growth and indirectly from development associated with goods and services needed by such growth. The actual level of buildout and the timing of construction and development activities is subject to market conditions, economic trends, and other factors beyond the City's control.

a. East Alternative–The East Alternative anticipates 19,300 new residents and 19,340 new jobs by 2035 in both infill areas and the new growth areas labeled SP-1A, SP-2, and SP-3. While the East Alternative expects that the entire acreage of SP-1A and SP-3 would develop, it only assumes 25 percent of land designated as SP-2 would develop by 2035. No new residential development is anticipated to occur in SP-1B or SP-1C through 2035. Development of SP-3B and the Southern Gateway business park in SP-1B can proceed at any time. Development of the remainder of SP-1B and SP-1C is not permitted prior to 2035 without a comprehensive General Plan Update and accompanying EIR. If there were some type of growth inducement associated with the East Alternative, it would relate to the non-Southern Gateway portion of SP-1B, SP-1C, or the balance of SP-2.

b. South Alternative–The South Alternative anticipates 19,300 new residents and 18,210 new jobs by 2035 in both infill areas and the new growth areas labeled SP-1 (areas A, B, and C) and SP-3. No development is anticipated to occur in SP-2 through 2035. If there were some type of growth inducement associated with the South Alternative, it would relate to SP-2.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The General Plan identifies policies for strategic growth and change that preserves and enhances existing neighborhoods; prioritizes new growth in infill areas through the revitalization of Downtown, key corridors, and employment centers; provides for orderly expansion to "greenfield" new growth areas; and supports the creation of employment-generating opportunities. The General Plan contains the following policies to manage growth in the City of Woodland in an orderly manner.

- **Policy 2.A.1 Urban Limit Line.** Do not allow urban development outside of the Urban Limit Line around Woodland, which sets a permanent growth boundary and preserves surrounding agricultural lands, as depicted on Figure 2-2 and prescribed by Woodland Measure A, Urban Limit Line, approved by voters June 2006. Refrain from extending public services and facilities beyond the permanent Urban Limit Line. Continually reevaluate residential land use densities, housing policies, and zoning to determine the potential for increased residential densities for both infill sites and undeveloped land within the permanent Urban Limit Line. Continually review existing non-residential zoning to determine the potential for conversion to higher density residential uses within the permanent Urban Limit Line. This policy enacts Woodland Measure A, Urban Limit Line, and can only be altered by another ballot measure.

- **Policy 8.C.2 Infill Development.** Encourage infill development that makes use of existing infrastructure and services by establishing a priority infill development program that supports and incentivizes infill development, particularly in areas that provide the City with higher proportions of tax revenue (see Figure 8-2).

- **Policy 8.C.5 Strategic Land Inventory.** Maintain an adequate amount of land properly zoned, consistent with the General Plan, and ready to be expeditiously developed, redeveloped, and/or revitalized for economic development and job creation purposes. The land inventory should include parcels of a range of sizes, locations, and job-supporting land use designations in order to support a wide variety of industries and development needs.

    a. East Alternative–For SP-1A, development cannot occur in a way that would compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing (such as the Spring Lake Specific Plan Area). Development of SP-1B and SP-1C is not permitted without a comprehensive General Plan Update and accompanying EIR. The exception within SP-1A and SP-1B to these restrictions is the Southern Gateway area (which exists in both areas) and where there are no restrictions to development. For SP-2, a Specific Plan may not be approved until a comprehensive flood

solution and supporting funding have been secured. Similarly, for SP-3A, a Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured.

b. South Alternative– For SP-1A, SP-1B, and SP-1C, development cannot occur in a way that would compromise the completion of infrastructure and amenities within existing Specific Plan Areas that are still developing (such as the Spring Lake Specific Plan Area). There are no restrictions to development within the Southern Gateway area (which exists in both SP-1A and SP-1B). SP-2 development is not permitted without a comprehensive General Plan Update and accompanying EIR. For SP-3A, a Specific Plan may not be approved until a comprehensive flood solution and supporting funding have been secured.

Summary of Impact Analysis

Based on Section 65300 of the Government Code, the 2035 General Plan is required to serve as a comprehensive, long-term plan for physical development and conservation in the City's Planning Area. Revisions to the General Plan are required in order to address long-range goals related to land use, transportation, public health and safety, housing, open space and conservation, economic development, fiscal sustainability, climate change, and other topics that are a focus of the 2035 General Plan. The General Plan is an expression of the City of Woodland's vision for future physical growth within the Planning Area and consists of a series of policies and implementation programs necessary for achieving that vision. However, the level of population and employment growth under the General Plan is substantially higher than that projected in the SACOG regional population projections.

The goals, policies, and implementation programs of the 2035 General Plan provide a framework to accommodate long-term growth and conservation within the City's Planning Area. Projected growth is described in Chapter 3, "Project Description." Physical impacts associated with development of residential and nonresidential land uses, such as traffic, air quality degradation, noise generation, greenhouse gas emissions, and increased demand for public services and utilities, are evaluated throughout this EIR since these land uses are considered to be part of the development of the General Plan. For the factors identified above, the Proposed Project could also induce growth that could have additional indirect effects.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

Mitigation Measures

The purpose of the Proposed Project itself is to provide for future development of new housing and employment opportunities. There is no feasible mitigation to reduce this impact to a less-than-significant level without changing the purposes of the Proposed Project.

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative– The impact is considered **significant and unavoidable**.

IMPACT 4.10-4 Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. *The Proposed Project does not propose converting established residential areas to a nonresidential land use or changing the land use or development character of existing developed residential areas. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project does not propose to displace substantial numbers of housing or people necessitating the construction of replacement housing elsewhere. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The Proposed Project does not propose converting established residential areas to a nonresidential land use or changing the land use or development character of existing developed residential areas. Rather, the Proposed Project proposes policies and programs that facilitate additional residential development opportunities and a variety of housing types on undeveloped land, vacant land, underutilized parcels, and through infill and redevelopment within opportunity sites. However, it is possible that some housing could be removed resulting in the displacement of people.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The Proposed Project proposes the following policies related to housing opportunity.

- **Goal 9.A Development of Housing.** To promote the provision of adequate housing for all persons in the City, including those with special housing needs and to emphasize the basic human need for housing as shelter.

- **Policy 9.A.3 Variety.** Ensure that there is sufficient land zoned for a variety of housing types, residential densities, and housing prices with convenient access by various travel modes to services, schools, parks, and other community amenities.

- **Policy 9.A.10 Age in Place.** The City shall allow housing options that allow residents to age in place such as multi-generational housing.

- **Goal 9.B Maintenance of Housing.** To encourage the preservation, maintenance, and improvement of existing housing and the replacement of unsafe or dilapidated housing.

- **Policy 9.B.1 Rehabilitation.** Continue to support rehabilitation of substandard residential units using federal and state subsidies for lower income households.

- **Policy 9.D.2 Infill, Adaptive Reuse, and Mixed Use.** Promote infill development, adaptive reuse, mixed-uses in new development, and densification where possible.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Policy 9.A.3 promotes the provision of adequate housing for all persons in the city by ensuring there is sufficient land for residential development and that it is zoned for a variety of housing types. Policies 9.B.1 and 9.D.2 promote infill development and the repair, rehabilitation, and retention of existing housing in the city thereby conserving existing housing stock and minimizing the displacement of existing people.

Compliance with the Proposed Project policies would ensure that new development pursuant to the Proposed Project would not displace substantial numbers of people. Implementation of the Proposed Project would result in the construction of 7,000 residential dwelling units on the project site. Although the Proposed Project is not expected to result in substantial displacement, if there is unanticipated displacement, construction of 7,000 residential dwelling units would provide housing for any displaced residents.

In addition, should any redevelopment of existing housing units be proposed, California Public Resources Code Section 7260(b), the California Relocation Law, establishes "a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity." The law requires public entities to prepare a relocation plan, provide relocation payments, and identify substitute housing opportunities for any resident that would be displaced by a proposed project. Privately funded projects would have no such requirement.

    a. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

    b. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

a. East Alternative–Any analysis specific to the East Alternative is included below the general analysis.

b. South Alternative–Any analysis specific to the South Alternative is included below the general analysis.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing applicable laws and regulations (federal, state, regional, and local) that would reduce the impact are briefly highlighted.

Proposed Project

Relevant 2035 General Plan goals, policies, and implementation programs and 2035 CAP strategies that would reduce the impact are summarized.

a. East Alternative–Any policies specific to the East Alternative are included.

a. South Alternative–Any policies specific to the South Alternative are included.

Summary of Impact Analysis

The text provides information on how both existing laws and regulations and Proposed Project goals, policies, and implementation programs would reduce the impact.

a. East Alternative–How any policies specific to the East Alternative would reduce the impact. Finally, an impact conclusion (less than significant or significant).

b. South Alternative–How any policy specific to the South Alternative would reduce the impact. Finally, an impact conclusion (less than significant or significant).

Mitigation Measures

If the impact is found to be less than significant, no mitigation measures are required. If mitigation measures are required, they are numbered to match the impact number, using "a," "b," "c," and so on if there are more than one, as described above.

Mitigation Measure 4.1-1a – The 2035 General Plan (or the 2035 CAP) shall be amended to include the following new (or modified) policy:

- Policy xx-y: …New policies will be in regular text. Modifications to proposed polices will be in strike-out/underline text

Summary of Impact after Mitigation

This text provides a summary of the impact assuming mitigation is implemented. There are two different outcomes:

1. Less than significant with mitigation incorporated: this would be the finding if the incorporation of all mitigation measures indicated above reduced the impact to less than significant.

2. Significant and unavoidable: this would be the finding if the City has presented all feasible mitigation (in the form of General Plan policies and programs) and the impact is still significant.

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4.11 NOISE AND VIBRATION

4.11.1 INTRODUCTION

This section describes the existing conditions and evaluates the potential impacts from development of the Proposed Project related to noise and vibration.

Baseline conditions were developed using data obtained during noise monitoring within the Planning Area, along with research to determine the locations of noise-sensitive receptors and noise-generating land uses. Noise measurements from 2013 were used to support the analysis in this section. For some roadways, traffic volumes have changed since noise measurements were taken, which could alter ambient noise levels in certain locations near roadways. For example, average daily traffic volumes along State Route 113 (SR 113) through Woodland increased by between 4 and 9 percent between 2013 and 2014. Some segments of Interstate 5 decreased between 2013 and 2014, while other segments increased (ranging from a 17 percent-decrease to a 6 percent increase) (Caltrans 2016). For this EIR, baseline conditions for vehicular transportation and traffic noise are from 2013 and impacts attributable to the Proposed Project are compared to 2013 baseline levels. Traffic volume changes of this magnitude would have only a minor effect on ambient noise levels assumed for the baseline. A 20 percent increase or decrease in traffic volumes would be expected to change the 24-hour averaged noise level by less than 1 decibel.

There was one response to the City's NOP that suggested the EIR should consider noise impacts, which are addressed throughout this section. This respondent also suggested that the EIR should take into account the County Fairgrounds site, which is described as an existing noise source in this section.

4.11.2 ENVIRONMENTAL SETTING

This section describes the existing conditions in the Planning Area. Primary linear noise sources in Woodland include Interstate 5 (I-5), State Route 113 (SR 113), and the California Northern Railroad (CFNR), which runs north to south. The Sierra Northern Railway and a section of I-5 split the northeast and southeast quadrants of the City, running west to east. Exhibit 4.11-1 shows the location of these noise sources. Other noise sources in the City include stationary sources, and natural sources (wind, birds, etc.).

4.11.2.1 FUNDAMENTALS OF ENVIRONMENTAL NOISE

Below is a brief description of certain terminology used throughout this report to characterize the noise environment in Woodland.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is the physics of sound.

In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path(s) between the two. The loudness of the sound source and obstructions or atmospheric factors affecting the propagation of the sound to the receiver determines the sound level and characteristics of the sound perceived by the receiver. Acoustics primarily addresses the propagation and control of sound.

Frequency

The number of sound pressure peaks travelling past a given point in space during a single second is referred to as the frequency, expressed in cycles per second or Hertz (Hz). A given sound may consist of energy at a single frequency (pure tone) or in many frequencies over a broad frequency range (or band). Human hearing is generally affected by sound frequencies between 20 Hz and 20,000 Hz (20 kHz).

A-Weighted Decibels

Exhibit 4.11-2 illustrates sound levels associated with common sound sources. The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental sound levels, perception of loudness is relatively predictable, and can be approximated using the A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard descriptor for environmental noise assessment, and noise levels shown in this report are A-weighted.

Human Response to Changes in Noise Levels

Under controlled conditions in a laboratory setting a human is able to discern 1 dB changes in sound levels when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency range (1,000 Hz-8,000 Hz). In typical noisy environments, changes in noise level of 1-2 dB are generally not perceptible. However, people are able to begin to detect sound level changes of 3 dB in typical environments. A 5-dB change is readily noticeable, a 6-dB change is clearly noticeable, and a 10-dB change is generally perceived as a doubling or halving of loudness (Caltrans 2013, Egan 1988). Please refer to Table 4.11-1 for the relationship between increases in environmental noise level and human perception.

Noise Descriptors

Noise in our daily environments fluctuates over time. Some fluctuations are minor, but some are substantial. Some noise levels occur in regular patterns, but others are random. Some noise levels fluctuate rapidly, but others fluctuate slowly. Some noise levels vary widely, but others are relatively constant. Various noise descriptors have been developed to help describe noise exposure as it relates to time:

- **Equivalent Sound Level (L_{eq}):** The L_{eq} represents an average of the sound energy occurring over a specified time period. In effect, the L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour, A-weighted equivalent sound level (L_{eq}[h]) is the energy average of A-weighted sound levels occurring during a 1-hour period, and is the basis for noise abatement criteria (NAC) used by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA).

- **Percentile-Exceeded Sound Level (L_n):** The L_n represents the sound level exceeded "n" percentage of a specified period.[1]

[1] For example, L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time.

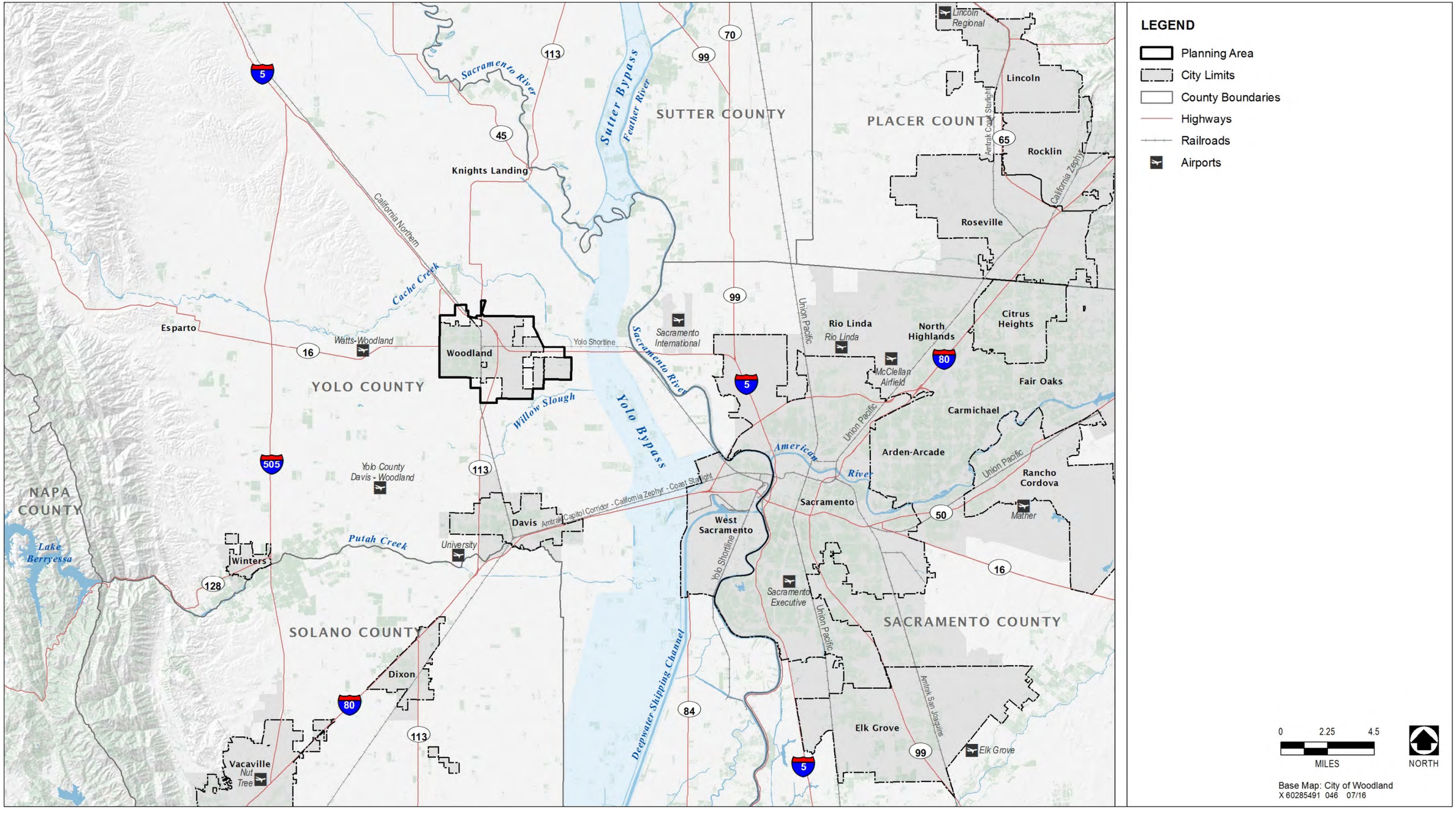

Exhibit 4.11-1. **Vicinity Map**

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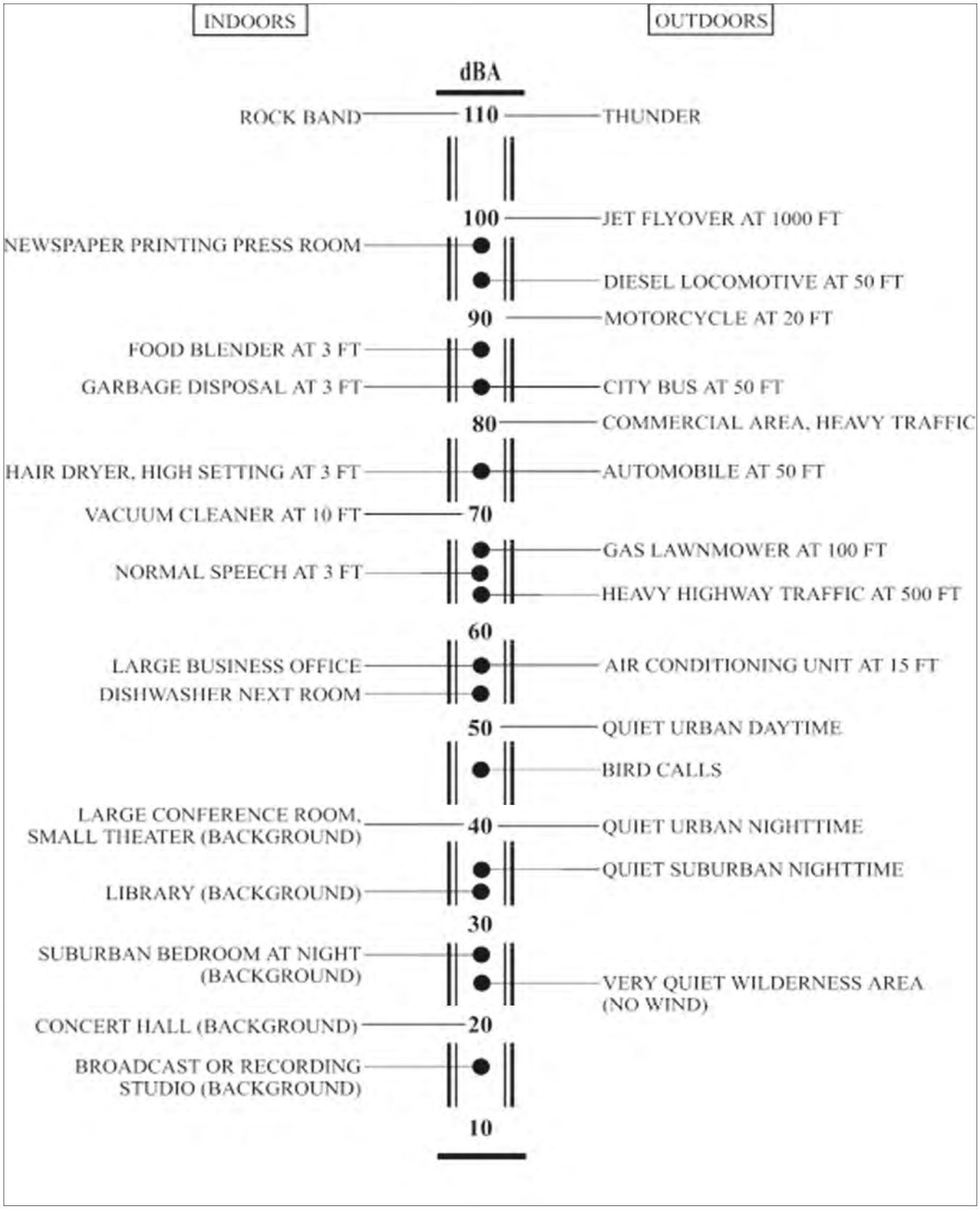

Source: Caltrans, 2013

Exhibit 4.11-2. Decibel Scale and Common Noise Sources

- **Maximum Sound Level (L_{max}):** The L_{max} is the highest instantaneous sound level measured during a specified period.

- **Day-Night Average Level (L_{dn}):** The L_{dn} (or DNL) is the energy-average of A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during nighttime hours (10 p.m.–7 a.m.).

- **Community Noise Equivalent Level (CNEL):** Similar to L_{dn}, CNEL is the energy-average of the A-weighted sound levels occurring over a 24-hour period, with a 10 dB penalty applied to A-weighted sound levels occurring during the nighttime hours (10 p.m.–7 a.m.), and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours (7 p.m.–10 p.m.). The CNEL is usually within 1 dB of the L_{dn}, and the two are basically interchangeable. As it is easier to compute and of more common use, the L_{dn} is used as the long-term noise measure in this study.

4.11.2.2 NOISE-SENSITIVE LAND USES AND NOISE SOURCES

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Places where people live, sleep, worship, and study are considered to be sensitive to noise because intrusive sound can be disruptive to these activities. Noise-sensitive uses include residentially designated areas, nursing homes, schools, libraries, and places of worship. Noise sources include highway and surface streets, railways, aircraft, and stationary noise sources such as commercial and industrial uses, construction sites, as well as neighborhood parks and schools. Exhibit 4.11-3 identifies existing noise sensitive uses in Woodland. Exhibit 4.11-4 identifies residential areas that represent noise sensitive uses, along with commercial, agricultural, industrial, and other uses that could be sources of noise.

Noise conflicts can occur when larger-scale commercial and industrial uses are located near or adjacent to residential neighborhoods, but recreational and other non-residential land uses can also create conflicts. Whether or not the juxtaposition of different land uses creates a noise conflict depends on the design, scale, character, and operation of both the noise-generating use and the noise-sensitive use.

Residential neighborhoods are located throughout Woodland, while large-scale commercial and industrial uses are somewhat concentrated in the northeastern portion of the City, in an area that is largely separated from most residences. In portions of the Planning Area north of East Main Street and east of East Street, where most of the City's industrial uses are focused, there are few noise-sensitive uses. The area north of Kentucky Avenue in the northwestern portion of the Planning Area, west of East Street, also has industrial uses with residential uses in closer proximity compared to the northeastern industrial area. The Armfield Avenue area, which is north of Main Street and east of East Street has a mix of commercial service and light industrial uses that may represent noise sources in an area relatively close to some residential uses. Commercial uses are located throughout the Planning Area, with a focus on primary transportation corridors, such as Main Street, East Street, and West Street, and the I-5 corridor.

Developed parks can represent a source of noise, particularly parks that accommodate organized sports. Parks in Woodland are interspersed throughout residential areas. Similarly, public and institutional uses can emit noise. For example, the Yolo County Fairgrounds, which is located in the central portion of the Planning Area and is surrounded by residential uses to the north, east, and west, can represent a source of noise during special events.

Ambient Noise Level Measurements

A community noise survey was conducted to document noise exposure in areas with noise-sensitive land uses. For the purposes of this analysis, noise-sensitive land uses include residential areas, parks, and schools. Noise measurement sites were selected to be representative of typical residential conditions. The community noise survey was conducted at three of the same sites that were previously selected (in 1995) to support the 1996 General Plan, in order to understand any changes over time. Comparisons of background noise levels are summarized in Table 4.11-2, to provide an indication of changes in ambient noise levels in Woodland. Noise measurement sites are shown in Exhibit 4.11-5.

Short-term ambient noise level measurements were conducted at 11 sites on March 21-25, 2013.[2] The measurement duration was 15 minutes, and at three different times of the 24-hour day in order to best estimate the 24-hour, day-night average noise level (L_{dn}). Three continuous 96-hour ambient noise level measurements were completed to record day-night statistical noise level trends. These measurements were completed from March 21-25, 2013. Noise measurement sites, measured noise levels, and estimated L_{dn} levels for each site are summarized in Table 4.11-3.

The community noise survey results indicate that typical noise levels in noise-sensitive areas range from 51 dB to 69 dB L_{dn}. Traffic on local roadways and I-5, distant industrial activities, and neighborhood activities are the controlling factors for background noise levels in the majority of the study area.

The L_{eq} values presented in Table 4.11-2 represent the average measured noise levels during the sample periods (15 minutes). The L_{eq} values were the basis of the estimated L_{dn} values. L_{max} values show the maximum noise levels observed during measurement periods. The values in parentheses show sound levels measured in 1995 for the previous background noise study.

As shown in Table 4.11-3, ambient noise levels have increased by approximately 2 to 8 dB (L_{dn}) since 1995. As noted previously, changes in noise level of 1-2 dB are generally not perceptible. People are able to begin to detect sound level changes of 3 dB. A 5-dB change is readily noticeable and a 6-dB change is clearly noticeable. The continuous noise level measurement data shows that ambient noise levels at the measurement sites ranged from 55 to 63 dB L_{dn}.

Existing Sources of Noise

Major transportation routes are dominant sources of noise in the city. These include traffic on Interstate 5 (I-5), State Route 113 (SR 113), and other local arterials and streets; aircraft overflights from Sacramento International Airport, Yolo County Airport, and Watts-Woodland Airport; and train operations on the California Northern Railway and Sierra Northern Railway. Stationary sources in the city include construction sites, farming activities, and commercial and industrial facilities. These noise sources are discussed individually below.

[2] Noise level measurements were completed using Larson Davis Laboratories (LDL) Model 820 and 824 precision integrating sound level meters. The meters were calibrated prior to the measurements using an LDL Model (CAL 200) acoustical calibrator. The equipment used complies with all pertinent requirements of the American National Standards Institute for Class 1 sound level meters (ANSI S1.4).

Traffic

Traffic operations data was used to estimate existing traffic noise levels at a distance of 50 feet from the centerline of the studied roadways.[3] Additionally, the 60 dB L_{dn}, 65 dB L_{dn}, and 70 dB L_{dn} traffic noise contour distances were determined. Please see Table 4.11-4 for a summary of traffic noise levels and contour distances for the existing condition.[4]

Traffic noise contours were prepared using the Federal Highway Administration's (FHWA) traffic noise prediction model (FHWA-RD-77-108) for Interstate 5 (I-5), State Route 113 (SR 113), major and minor arterials, and collector roadway segments. Please see Exhibit 4.11-6a. Contours for I-5 and SR 113 are listed in Table 4.11-4 and shown on Exhibit 4.11-6b.

FHWA Model Accuracy/Calibration

The purpose of FHWA Model calibration is to "fine-tune" the prediction model to actual site conditions that are not adequately accounted for by the FHWA Model. The effects of factors such as roadway curvature and grade can be determined from site specific traffic noise measurements. The noise measurement results can be compared to the FHWA Model results by entering the observed traffic volumes, speed and distance as inputs to the FHWA Model.[5] Short-term noise level measurements and concurrent traffic counts were conducted at Sites ST-02, ST-03, and Site ST-05. Vehicle counts, speed, distance to measurement site, and intervening ground type information was input to the Model to calculate traffic noise exposure for the given measurement session. The modeled noise level was then compared to the measured noise level to determine FHWA Model accuracy relative to the actual site conditions. As shown in Table 4.11-4, the results of this exercise show FHWA Model accuracy within 1 dB of the measured results. Therefore, no calibration offsets/adjustments were applied to the modeling results for this study.

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[3] Existing noise levels in the City have been characterized thru traffic noise modeling. The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108), existing traffic volumes, and posted traffic speed, day/night traffic distribution, and assumption regarding the traffic fleet mix (i.e., percentage of automobiles, medium trucks, and heavy trucks) were used to assess existing traffic noise exposure for both highways and major roadways in the City of Woodland General Plan study area. Traffic volumes and truck percentages for I-5 and SR 113 were obtained from Caltrans 2011 Traffic counts, and are Annual Average Daily Traffic (AADT) values. The FHWA Model is the standard model recommended by the FHWA and is the analytical method presently favored for traffic noise prediction by most state and local agencies, including Caltrans. The current version of the Model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model predicts day-night average noise levels (L_{dn}), and hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB of the measured condition. Traffic data representing average daily traffic volumes for existing conditions were obtained from Caltrans and Fehr & Peers Associates. Day/night traffic distribution for all studied roadways was based upon the day-night average daily traffic volumes. Posted traffic speeds, and vehicle mixes provided by Caltrans (for highways) and observed during the Model calibration noise level measurements, were assumed for the traffic noise modeling effort.

[4] In some cases, the actual distances to noise level contours may vary from the distances predicted by the FHWA Model. Factors such as roadway curvature, roadway grade, shielding from local topography or structures, roadway elevations, or elevation of receivers may affect actual sound propagation. Therefore, the distances reported in Table 3.7-7 are estimates of noise exposure along roadways in the City of Woodland.

[5] Calibration is performed by algebraically adding a constant, or K-factor, to the noise level calculated by the FHWA Model. The magnitude of K-factors initially is determined by the difference between measured and modeled noise levels at specific measurement/modeling.

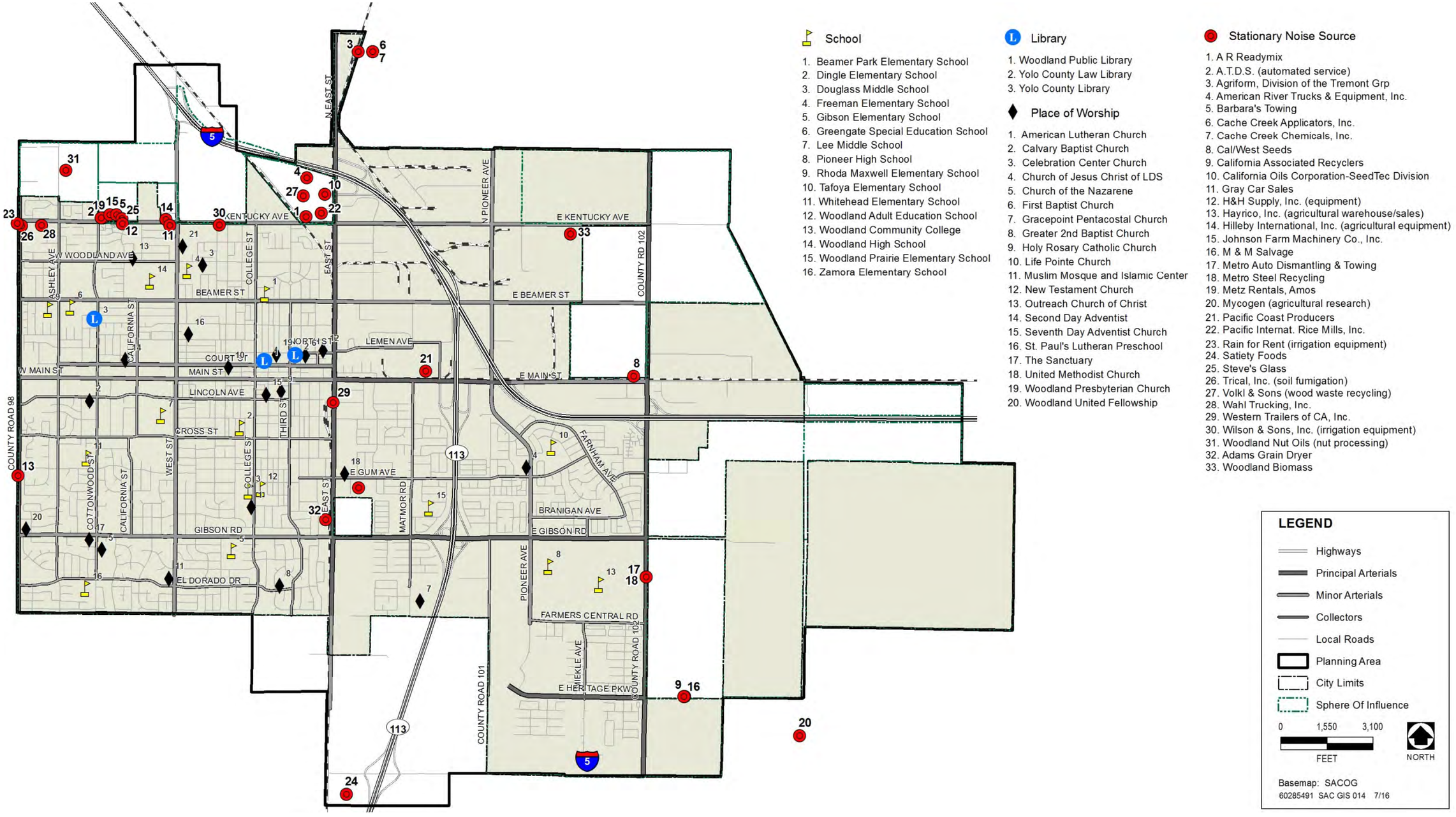

Exhibit 4.11-3. **Noise Sensitive Uses**

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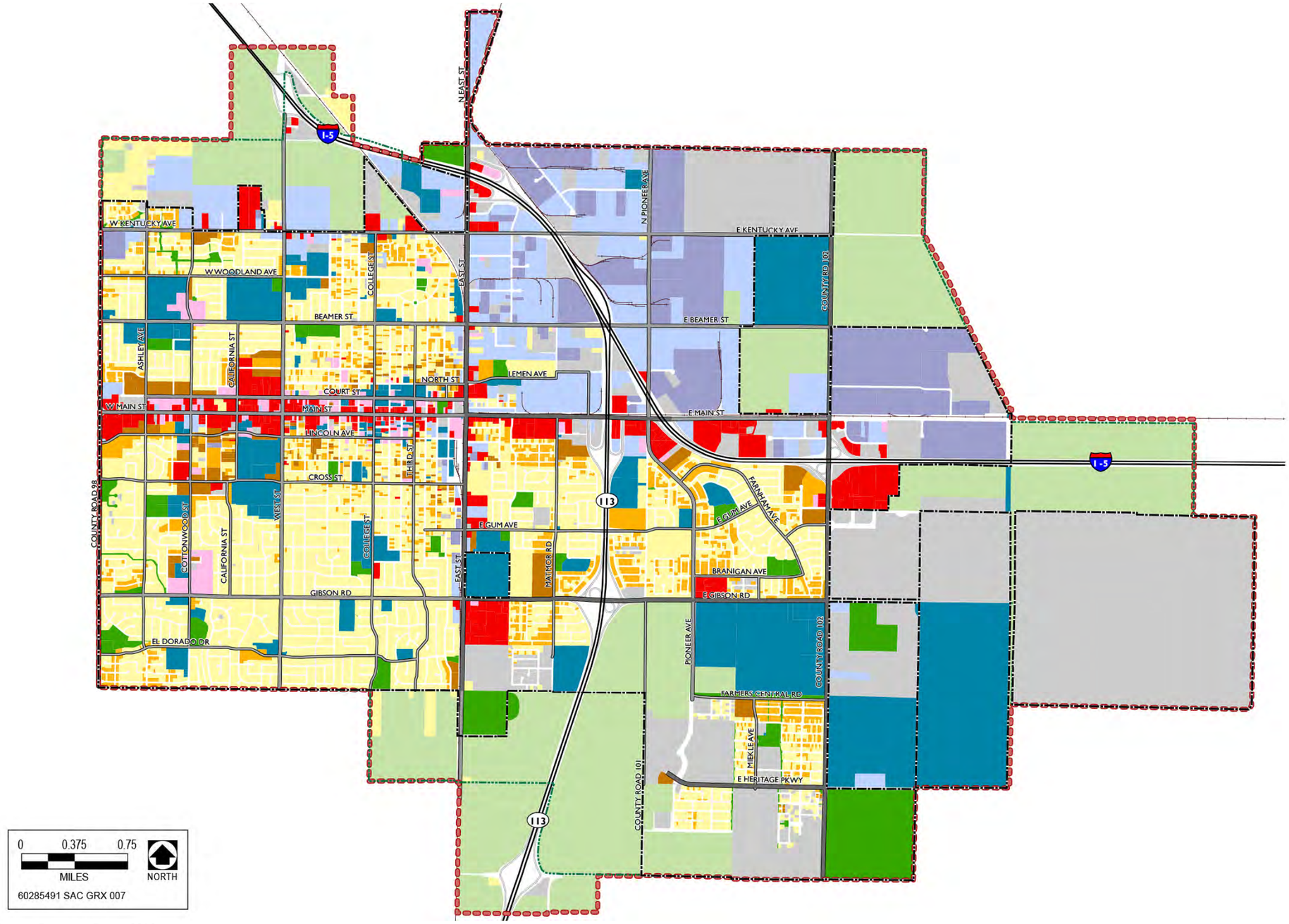

Existing Land Use

Existing Uses

- Low Density Residential (0-8 du/acre)
- Medium Density Residential (8-16 du/acre)
- High Density Residential (Over 16 du/acre)
- Commercial
- Office
- Industrial (Warehousing)
- Industrial (Other)
- Parks & Open Space
- Public/Institutional
- Agricultural
- Vacant
- Highways
- Principal Arterials
- Minor Arterials
- Collectors
- Ramps
- Railroads
- City Limits
- Sphere of Influence
- Planning Area

Source: Dyett and Bhatia 2016.

Exhibit 4.11-4. **Existing Land Uses**

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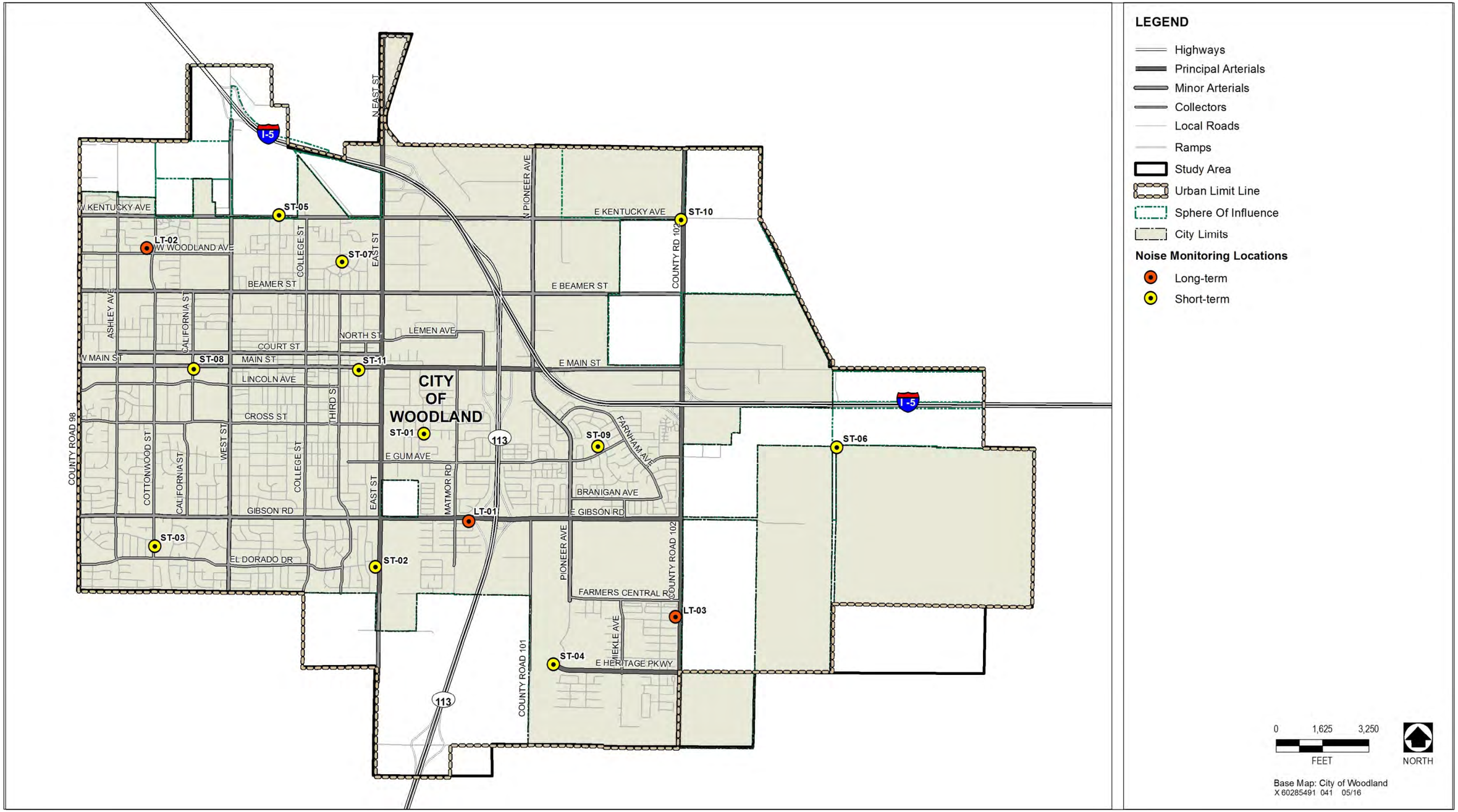

Exhibit 4.11-5. **Noise Measurement Sites**

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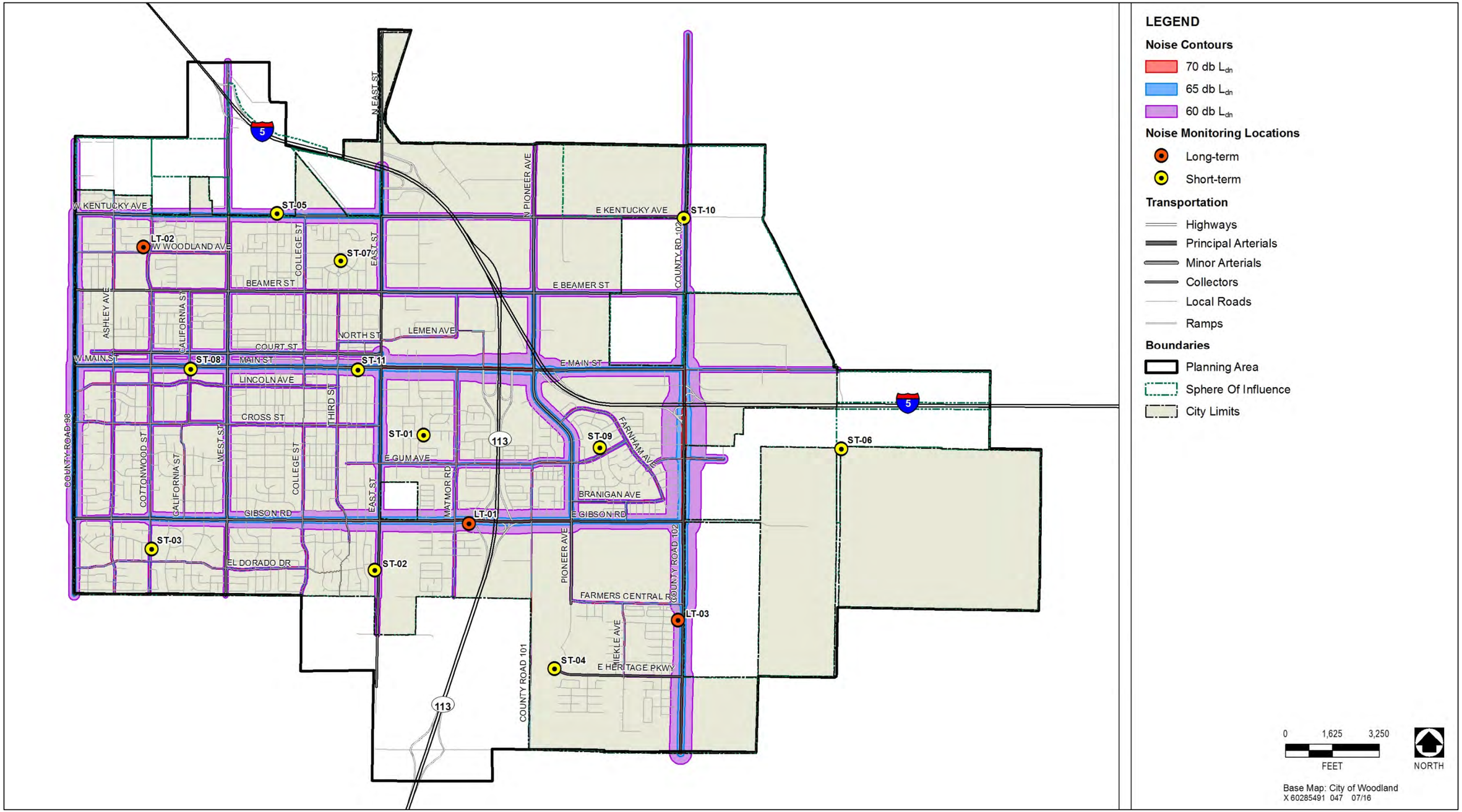

Exhibit 4.11-6a. **Existing Conditions Traffic Noise Contours**

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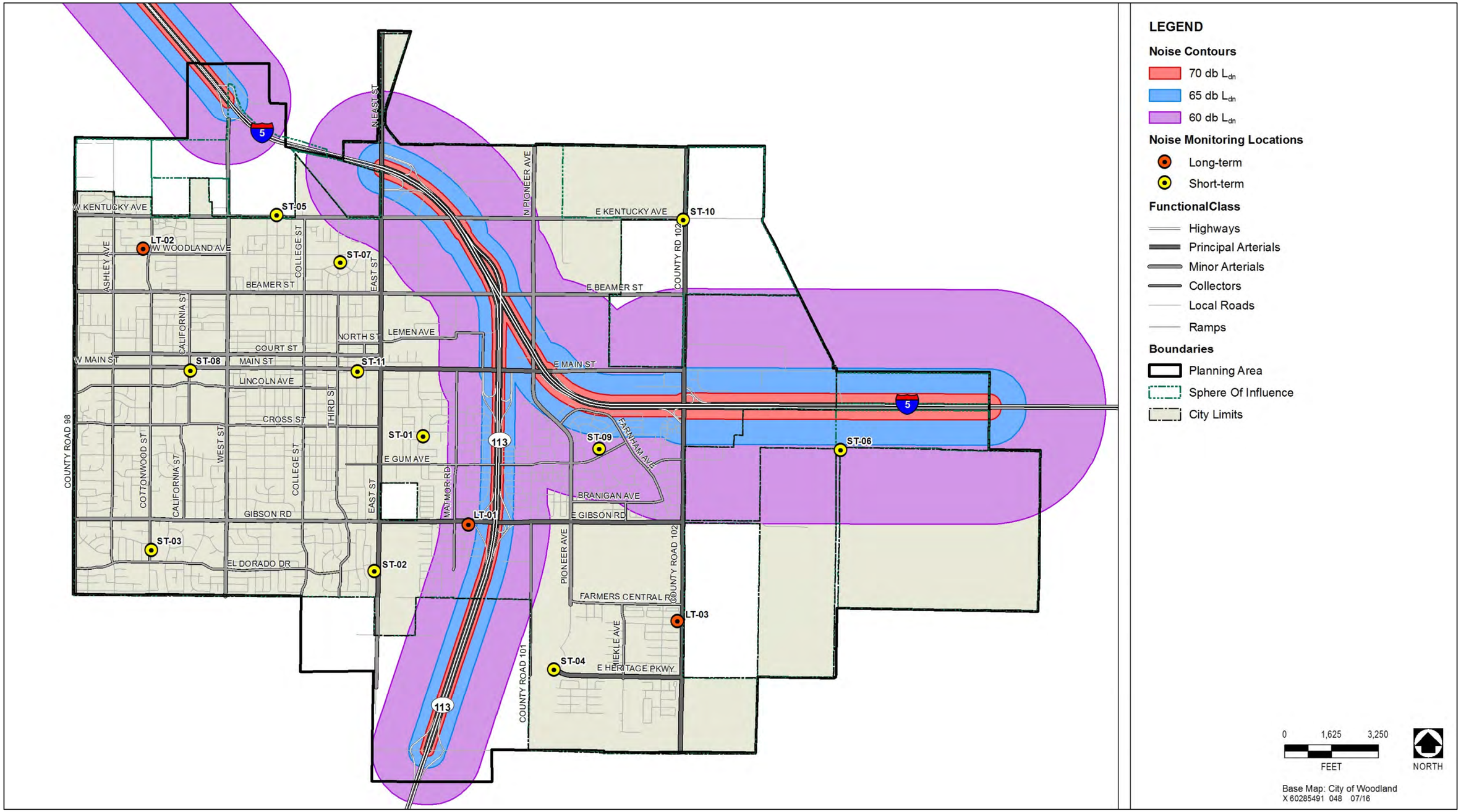

Exhibit 4.11-6b. **Existing Highway Traffic Noise Contours**

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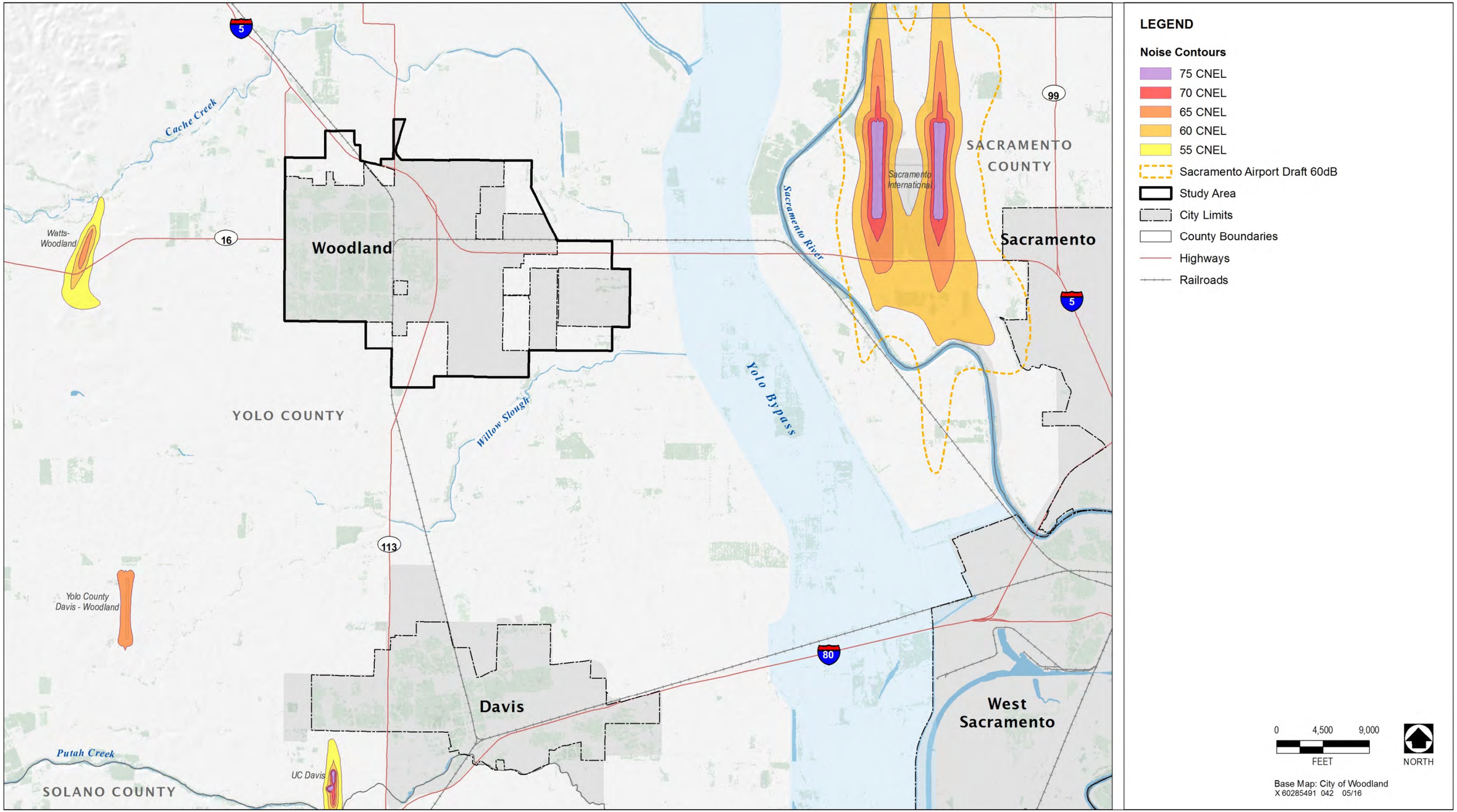

Exhibit 4.11-7. **Existing Conditions Airports Noise Contours**

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Railroads

Railroad activity in the Woodland area generally occurs on the California Northern track, between Road 25A and Kentucky Avenue. Approximately two to three trains per day originate in Woodland and travel to Davis, while approximately one train per day originates in Woodland and travels to the north. Discussions with representatives from California Northern indicate that all operations generally occur between the hours of 7:00 am and 7:00 pm.

The City of Woodland has two active rail lines: The California Northern and the Sierra Northern Railway (Yolo County General Plan, 2009). Following is additional information on each rail line.

- **California Northern Railway.** The California Northern Railway is a freight line that runs through Woodland and Davis, and along I-5 past the City of Corning. The freight line schedule varies depending on agricultural/seasonal demands. The rail line carries an average of two trains daily, using between one and 50 rail cars and one or two locomotives, traveling at an average speed of 15 miles per hour. The estimated railroad noise level at 100 feet from the railway centerline is approximately 45 dB L_{dn}. The estimated distances to the 65 and 60 dB L_{dn} contours are 11 and 22 feet from the rail line, respectively.

- **Sacramento River Train.** The Sacramento River Train is operated by the Sierra Northern Railroad Company as an entertainment passenger train that runs from Woodland to West Sacramento. According to Sierra Northern Railroad personnel, one River Train round trip usually occurs per day. The trains typically have between two and 25 rail cars with one or two locomotives, traveling at an average speed of 15 miles per hour. Assuming two daily train passes, each with 25 cars and two locomotives traveling at 15 miles per hour, the estimated railroad noise levels at 100 feet from the railroad centerline is approximately 44 dB L_{dn}. The estimated distances to the 65 and 60 dB L_{dn} contours are 10 and 20 feet from the rail line, respectively.

Train noise levels and contours distances were calculated following Federal Transportation Administration guidelines (FTA 2006).

Aircraft

Aircraft operations in the vicinity of an airport can be a significant source of noise. The nearest airport is Watts Woodland Airport, which is located 3.7 miles from the western city limits. The Sacramento International Airport is located approximately five miles northeast and Yolo County Airport approximately five miles southwest of the City limits. Noise contours for the Sacramento International Airport, Watts-Woodland Airport, and Yolo County Airport are depicted in Exhibit 4.11-7.

Based upon the most recent noise contours for the Watts Woodland and Yolo County Airports contained within the Yolo County 2030 General Plan EIR (April 2009) and recent noise contours obtained from Sacramento International Airport Master Plan 2004, the Planning Area is located outside of the 60 dB CNEL contours of all three airports.[6]

[6] Contours from two departure tracks associated with runways 16R and 16L come within close proximity of the northeastern corner of the Urban Limit Line

Other Fixed Noise Sources

Commercial and industrial facilities are also a source of noise within Woodland. Mechanical equipment and trucking are the primary sources of noise associated with these facilities. Industrial processes can generate noise, even when the best available noise control technology is applied. Noise exposure within industrial facilities are controlled by federal and State employee health and safety regulations (OSHA and Cal-OSHA), but exterior noise levels can be guided by local standards. These noise sources can be continuous and may contain tonal components that may be annoying to individuals who live nearby. In addition, noise generation from fixed noise sources may vary based upon climatic conditions, time of day, and existing ambient noise levels.

From a land use planning perspective, fixed-source noise control issues focus upon two goals: to prevent the introduction of new noise-producing uses in noise-sensitive areas and to prevent encroachment of noise-sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise level performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses in near proximity to existing noise-producing facilities include mitigation measures to reduce noise exposure for the new noise-sensitive use.

Fixed noise sources that are typically of concern include, but are not limited to, the following:

- Air Compressors
- Blowers
- Boilers
- Conveyor Systems
- Cooling Towers/Evaporative Condensers
- Cutting Equipment
- Drill Rigs
- Emergency Generators
- Fans
- Gas or Diesel Motors
- Generators
- Grinders
- Heavy Equipment
- HVAC Systems
- Lift Stations
- Outdoor Speakers
- Pile Drivers
- Pump Stations
- Steam Turbines
- Steam Valves
- Transformers
- Welders

These noise sources may be found in all kinds of industrial facilities, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.

Numerous industrial facilities are dispersed throughout the study area. Exhibit 4.11-4 shows the location of existing land uses, including those that may represent noise sources.

The following provides descriptions of existing fixed noise sources in the Planning Area and, in some cases, noise level data associated with operations. The information is intended to be representative of the noise sources and noise levels associated with such uses.

Pacific Coast Producers: 1376 Lemen Avenue

Pacific Coast Producers (formerly Contadina Foods) operates a food processing and packaging plant. The facility operates 24 hours per day, from mid-June through September. Processing and limited operations occur during the remainder of the year. Noise producing activities at the plant include canners, conveyers, turbines, and additional packaging equipment.

Adams Grain Dryer: 1030 East Street

Operations at the Adams Grain facility include drying, cleaning, and storing of grain and feeds. Current work hours are 8:00 am to 5:00 pm, but shifts have been extended during peak harvest times. Noise sources at this facility include drying equipment, a roller mill, conveyers, and fans. Heavy truck traffic also contributes to the noise environment.

Pacific International Rice Mill, Inc. (PIRMI): 845 Kentucky Avenue

Operations at the PIRMI plant include the drying, packaging, and milling of rice. Typical hours of operation are 8:00 am to 4:00 pm, Monday through Friday. Plant operations increase to 24 hours per day with seasonal demands from mid-September through November. Noise sources at this facility include grain elevators, dryers and conveyers.

Woodland Biomass: 1786 E Kentucky Avenue

Major noise sources associated with the operation of the biomass plant are the boiler, fans, high pressure air/steam releases, and metal-on-metal contact of rotating machinery.

Tire and Muffler Shops - Various Locations

Tire and muffler shops are typically identified as potential stationary noise sources. Major noise sources associated with muffler and tire stores include impact wrenches and hammers, compressors, and tire breakers. BBA conducted noise level measurements of each of these noise sources, under previous study.

Impact wrenches and hammers produce sound levels of about 89 dB at a distance of 10 feet. The average duration for use of an impact wrench is approximately 15 seconds for each wheel. Pneumatic tire breakers produce significant noise levels due to the release of air pressure through a number of small holes adjacent to the tire sidewall. Noise due to the tire breaker reaches a maximum level of about 105 dB at a distance of 10 feet. The high noise levels due to tire breakers last less than one second. Air supply compressors emit about 60 dB at a distance of 50 feet, and are operated intermittently during the work day.

It is not possible to determine a generalized location of an average hourly noise level contour for tire and muffler shops. Noise levels due to these operations vary based upon the locations of the equipment, shielding from building facades, and frequency of use.

Farming Activities

The primary sources of noise related to farming activity include tractors, harvesters, and crop-dusting aircraft. Typical noise levels from tractors, as measured at a distance of 50 feet, range from about 75 dB to 95 dB with an average of 84 dB (Toth 1979). These noise levels should be representative of noise levels from other wheeled and

tracked farm equipment. Using a source level of 84 dB at 50 feet, and assuming nominal point-source at attenuation of 6 dB per doubling of distance, the distance to noise level contours are as shown in Table 4.11-5.

Yolo County Fairgrounds

The Yolo County Fair is a five-day event held during August at the Yolo County Fairgrounds in Woodland. More than 207,000 people attend the Yolo County Fair annually (KPMG 2003). Activities include amusement rides, concerts, horse shows, rodeo, pig racing, various demonstrations, judging in livestock, craft, art, cooking, agriculture produce, destruction derby, and other activities and events. Noise levels within the County Fairground and at the boundaries vary and depend on the type and location of the event(s). The Fairgrounds also hosts year-round events, which attract approximately 70,000 people per year (KPMG 2003).

Other Stationary and Area Noise Sources

The following provides descriptions of other stationary and area noise sources in the Planning Area and, in some cases, noise level data associated with operations. The information is intended to be representative of the noise sources and noise levels associated with such uses.

Landscape and Building Maintenance Activities

Landscape maintenance activities include the use of leaf blowers, power tools, and gasoline-powered lawn mowers, and could result in intermittent noise levels of approximately 88 dB at 6 feet. Based on an equipment noise level of 88 dB, the use of such equipment, assuming a noise attenuation rate of 6 dB per doubling of distance from the source, would result in exterior noise levels of approximately 70 dB at 50 feet. If these activities occur during noise-sensitive hours, such as early in the morning, this results in compatibility issues for nearby noise-sensitive uses.

Mechanical Equipment

The operation of mechanical equipment (e.g., pumps, generators; heating, ventilation, and cooling systems) could result in intermittent noise levels of approximately 90 dB at 3 feet (EPA 1971). Based on this equipment noise level, the operation of such equipment, assuming a noise attenuation rate of 6 dB per doubling of distance from the source, may result in exterior noise levels of approximately 60 dB at 95 feet. These types of equipment are typically shielded from direct exposure (e.g., housed on rooftops, in equipment rooms, or in exterior enclosures), which can help to avoid noise compatibility issues.

Garbage Collection Activities

Garbage collection activities (e.g., emptying large refuse dumpsters, possible multiple times per week, and the shaking of containers with a hydraulic lift), could result in instantaneous maximum noise levels of approximately 89 dB L_{max} at 50 feet. Such activities are anticipated to be very brief, intermittent, and would occur during daytime hours, which are considered to be less noise-sensitive times of day. Garbage collection activities are infrequent, and therefore would not be expected to exceed daily noise standards. Noises would typically emanate from public rights-of-way, which would normally be separated from outdoor gathering spaces associated with residential uses. Noise associated with garbage collection would not be expected to create single-event noise that would be substantially disruptive to daily activities or cause sleep disturbance.

Parking Lots

Parking lots and parking structures include noise sources such as vehicles entering/exiting the lot, alarms/radios, and doors slamming. Neither the size (i.e., capacity) or location of parking lots that could be constructed under the 2035 General Plan is known at this time. However, according to the FHWA, parking lots with a maximum hourly traffic volume of approximately 1,000 vehicles per hour either entering or exiting the lot could result in a peak hour and daily noise levels of approximately 56 dB L_{eq} and 63 dB L_{dn} at 50 feet.

Commercial, Office, and Industrial Activities

Commercial, office, and industrial noise sources include loading dock activities, air circulation systems, delivery areas, and the operation of trash compactors, air compressors, and public address systems (i.e., amplification and speakers used in drive-through retail establishments or sporting events). Such activities could result in intermittent noise levels of approximately up to 91 dB L_{max} at 50 feet (EPA 1971) and high single-event noise levels from backup alarms from delivery trucks during the more noise-sensitive hours of the day. Neither the exact hours of operation nor the location of such potential noise sources are known at this time. Thus, land use related noise levels could exceed the applicable standards at existing and proposed noise-sensitive receptors, especially if such activities were to occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning) and create a substantial increase in ambient noise levels at existing noise-sensitive receptors. In addition, if such activities were to occur during these more noise-sensitive hours, project-generated noise levels may result in annoyance and/or sleep disruption to occupants of the on-site (e.g., existing and proposed) noise-sensitive land uses.

Other Residential, School, and Recreation Activities and Events

Noise sources typical of residential, school, recreation, and event uses could include voices and amplified music/speaker systems. Such sources could result in noise levels of approximately 60–75 dB L_{eq} at 50 feet.

Although such activities would likely occur primarily during the daytime hours, neither the hours of operation nor location of such sources are known at this time. It is possible that noise levels could exceed the applicable standards at existing and proposed noise-sensitive receptors, especially if such activities were to occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning) and create a substantial increase in ambient noise levels at existing noise-sensitive receptors. In addition, if such activities were to occur during these more noise-sensitive hours, project-generated noise levels may result in annoyance and/or sleep disruption to occupants of the existing and proposed noise-sensitive land uses.

Agricultural Activities

Agricultural activities within the Planning Area and its immediate surroundings involve the use of various types of heavy-duty equipment. Agricultural operations involve crop and orchard operations, which can occur during noise sensitive times of the day and involve substantial noise levels. The operation of heavy-duty equipment associated with agricultural activities typically results in noise levels of approximately 75 dB L_{eq} at 50 feet (EPA 1971). The closest distances between proposed noise-sensitive land uses and agricultural land uses would be approximately 50 to 200 feet in several locations. Based on the above noise levels and a typical noise-attenuation rate of 6.0 dB per doubling of distance, exterior noise levels at noise-sensitive receptors approximately 50 to 200 feet from agricultural activities could exceed 75 and 63 dB L_{eq}, respectively. It is important to note that the closest noise-sensitive receptors would not be exposed to this noise level for extended periods, given the mobile nature of

agricultural activities (e.g., disking, plowing, harvesting). If, for instance, residential land uses were exposed to 75 dB L_{eq} for one entire hour during the daytime, and ambient noise levels were 50 dB L_{eq} during the rest of the daytime hours and 45 dB L_{eq} during the nighttime hours, the 24-hour noise level would be 62 dB L_{dn}.

4.11.3 REGULATORY FRAMEWORK

Various agencies have established noise guidelines and standards to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise and vibration. Following is a discussion of federal, State, and local noise regulations and guidelines. This information is intended to provide the regulatory context against which existing and future noise conditions can be compared.

4.11.3.1 FEDERAL

Although not directly applicable to many projects under the Proposed Project, the research that supported the development of federal community noise standards is broadly applicable in understanding human response to different noise levels and is summarized below for the reader's edification.

Below is a list of federal agencies with noise exposure criteria.

- U.S. Environmental Protection Agency (EPA): Noise standards to protect public health and welfare
- Housing and Urban Development (HUD): Noise standards for federally funded housing projects
- Federal Aviation Administration (FAA): Noise standards for aircraft noise
- Federal Highway Administration (FHWA): Noise standards for federally funded highway projects
- Federal Transit Administration (FTA): Noise standards for federally funded transit projects
- Federal Railroad Administration (FRA): Noise standards for federally funded rail projects

U.S. Environmental Protection Agency Noise Control Act (Public Law 92-574)

The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare.[7] Although the EPA was given a major role in disseminating information to the public and coordinating federal agencies, each federal agency retains authority to adopt noise regulations pertaining to agency programs.[8]

In 1974, in response to the requirements of the federal Noise Control Act, the EPA identified indoor and outdoor noise level limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor and indoor noise exposure limits of 55 dB L_{dn} and 45 dB L_{dn}, respectively, are identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and healthcare areas. The sound-level criterion identified to protect against hearing damage in commercial and industrial areas is 70 dB 24-hour L_{eq} (both outdoors and indoors).

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[7] The U.S. Environmental Protection Agency (EPA) was given the responsibility for providing information to the public regarding identifiable effects of noise on public health and welfare, publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety, coordinating federal research and activities related to noise control, and establishing federal noise emission standards for selected products distributed in interstate commerce. The Noise Control Act also directed that all federal agencies comply with applicable federal, State, interstate, and local noise control regulations.

[8] The EPA can, however, require other federal agencies to justify their noise regulations in terms of the Noise Control Act policy requirements.

U.S. Department of Housing and Urban Development Noise Abatement and Control (24 CFR Part 51, Subpart B)

The U.S. Department of Housing and Urban Development (HUD) has established guidelines for evaluating noise impacts on residential projects seeking financial support under various grant programs (HUD 2013), as summarized below:

- **Acceptable ≤ 65 dB.** Sites are generally considered acceptable for residential use if they are exposed to outdoor noise level of 65 dB L_{dn} or less.
- **Normally Unacceptable 65-75 dB.** Sites are considered "normally unacceptable" if they are exposed to outdoor noise levels of 65-75 dB L_{dn}.
- **Unacceptable > 75 dB.** Sites are considered "unacceptable" if they are exposed to outdoor noise levels above 75 dB L_{dn}.

The HUD goal for the interior noise levels in residences is 45 dB L_{dn} or less.

Federal Aviation Administration Airport Noise Compatibility Planning (14 CFR Part 159)

14 CFR Part 150, "Airport Noise Compatibility Planning" prescribes the procedures, standards, and methodology to be applied to airport noise compatibility planning activities. Noise levels below 65 dB L_{dn} are normally considered to be acceptable for noise-sensitive land uses.

Federal Highway Administration Procedures for Abatement of Highway Traffic Noise and Construction Noise Regulations (23 CFR 772)

FHWA regulations (23 CFR 772) specify procedures for evaluating noise impacts associated with federally funded highway projects and determining whether these impacts are sufficient to justify funding noise abatement. The FHWA noise abatement criteria are based on worst hourly L_{eq} sound levels, not 24-hour average values (e.g., L_{dn} or CNEL). The worst-hour L_{eq} criteria for residential, educational, and healthcare facilities are 67 dB outdoors and 52 dB indoors. The worst-hour L_{eq} criterion for commercial and industrial areas is 72 dB (outdoors).

Federal Transit Administration Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06)

Federal Transit Administration (FTA) procedures for the evaluation of noise from transit projects are specified in the document entitled, "Transit Noise and Vibration Impact Assessment" (FTA, 2006). The FTA Noise Impact Criteria address the following categories:

- **Category 1:** Buildings or parks, where quiet is an essential element of their purpose.
- **Category 2:** Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost importance.
- **Category 3:** Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, churches, and active parks.

The L_{dn} noise level descriptor is used to characterize noise exposure for residential areas (Category 2). For other noise sensitive land uses, such as outdoor amphitheaters and school buildings (Categories 1 and 3), the maximum hourly L_{eq} during the facility's operating period is used. Noise impacts are identified based on absolute predicted noise levels and increases in noise associated with the subject project.

Federal Railroad Administration

The Federal Railroad Administration (FRA) noise standards are the same as those specified by the FTA.

4.11.3.2 STATE

State of California General Plan Guidelines, Government Code Section 65302 et seq.

In 1971, the State required cities and counties to include noise elements in their general plans (Government Code Section 65302 et seq.). The State of California General Plan Guidelines (Office of Planning and Research 2003) identify guidelines for the noise elements of local general plans, including a sound level/land-use compatibility chart. The noise element guidelines identify the "normally acceptable" range of noise exposure for low-density residential uses as less than 60 dB L_{dn}, and the "conditionally acceptable" range as 55-70 dB L_{dn}. The "normally acceptable" range for high-density residential uses is identified as below 65 dB L_{dn}, and the "conditionally acceptable" range is identified as 60-70 dB L_{dn}. For educational and medical facilities, levels below 70 dB L_{dn} are considered "normally acceptable," and levels of 60-70 dB L_{dn} are considered "conditionally acceptable." For office and commercial land uses, levels below 70 dB L_{dn} are considered "normally acceptable," and levels of 67.5–77.5 dB L_{dn} are considered "conditionally acceptable." Overlapping noise level ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

State law intended that noise elements guide policy makers in making land use determinations and in preparing noise ordinances that would limit exposure of their populations to excessive noise levels. In 1984, State noise element provisions were revised to "recognize" guidelines prepared by the Office of Noise Control of the California Department of Health Services and to analyze and quantify, "to the extent practicable, as determined by the legislative body," noise from the following sources: highways and freeways; primary arterials and major local streets; passenger and freight on-line railroad operations and ground rapid transit systems; commercial, general aviation, heliport, helistop and military airport operations, aircraft overflights, jet engine test stands, and other ground facilities and maintenance functions related to airport operation; local industrial plants, including, but not limited to, railroad classification yards; and other ground stationary noise sources identified by local agencies as contributing to the community noise environment. As noted in the draft update to the General Plan Guidelines, the Office of Planning and Research notes that the Department of Health Services Office of Noise Control no longer exists, and the guidelines have been incorporated into the General Plan Guidelines for Noise Elements (OPR 2015).

Also a part of the draft General Plan Guidelines is a discussion regarding the balance between environmental noise and other planning objectives, including recognition that developed infill locations may experience higher levels of noise but are often desirable places to live and work for the very reason that they are active. Moreover, there are design strategies that can reduce adverse exposure to noise even in areas with relatively higher ambient noise levels (OPR 2015).

California Noise Insulation Standards, California Code of Regulations Part 2, Title 24

Part 2, Title 24 of the California Code of Regulations "California Noise Insulation Standards" establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels attributable to exterior noise sources should not exceed 45 dB L_{dn} in any habitable room.[9]

Division of Aeronautics Noise Standards, California Code of Regulations Title 21, Chapter 5000

Title 21, Chapter 5000 of the California Code of Regulations identifies noise compatibility standards for airport operations. Section 5014 of the Code states that the standard for the acceptable level of aircraft noise for persons living in the vicinity of airports is established to be 65 dB CNEL. Residences, schools, hospitals, or places of worship exposed to aircraft noise levels exceeding 65 dB CNEL are deemed to be in a noise impacted area. Airports operating within a noise impacted area require a variance, as prescribed in Article 5 of Title 21, Chapter 5000 of the California Code of Regulations.

4.11.3.3 REGIONAL

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The Yolo County General Plan includes best management practices and protection for certain land uses. It also notes that, although it is the County's intent to meet specific noise thresholds, residential growth pursuant to the general plan may exceed noise guidelines. Key policies and actions include:

- **Policy HS-7.3** Protect important agricultural, commercial, industrial, and transportation uses from encroachment by land uses sensitive to noise and air quality impacts.
- **Policy HS-7.4** For proposed new discretionary development, where it is not possible to reduce noise levels in outdoor activity areas to 60 dB CNEL or less using practical application of the best-available noise reduction measures, greater exterior noise levels may be allowed, provided that all available reasonable and feasible exterior noise level reduction measures have been implemented.
    - **Action HS-A64** Require the preparation of a noise analysis/acoustical study, including recommendations for attenuation, for all proposed projects which may result in potentially significant noise impacts to nearby sensitive land uses.
    - **Action HS-A65** Require a noise analysis/acoustical study, with recommendations for attenuation, for all proposed development within noise-impacted areas that may reasonably be expected to be exposed to levels that exceed the appropriate Noise Compatibility Guidelines standards.
    - **Action HS-A66** Require architectural design and site planning techniques to meet interior noise attenuation requirements in a manner that does not discourage allowed density or intensity, architectural quality, or pedestrian connectivity, such as:

[9] Where such residences are located in an environment where exterior noise is 60 dB L_{dn} or greater, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dB L_{dn} interior standard.

- Locating noise-sensitive interior spaces, such as living rooms and bedrooms, furthest from noise sources.
- Orienting buildings to shield noise sensitive outdoor spaces from a noise source.
- Using noise insulating windows and building materials.
- Providing open space, berms or walls, or landscaped areas between occupied dwellings and noise generators.
- Locating dwellings as far as possible from noise generators.
- Requiring effective sound barriers for new residential developments adjacent to existing freeways and highways.
- Avoid sound wall to the greatest possible extent. Where used, sound walls shall be screened with vegetation, berms and similar methods of mitigation, and shall be screened with a landscape buffer.

4.11.3.4 LOCAL

City of Woodland 2002 General Plan

Noise is addressed in the City's 2002 General Plan Health and Safety Element, which provides guidance for new development to avoid adverse impacts through sound planning, as well as those that must be addressed through mitigation.

Non-Transportation Noise

The existing General Plan prohibits the development of noise-sensitive land uses in areas where the maximum noise level attributable to non-transportation noise sources exceeds 70 dB during the day or 65 dB at night, or where the hourly noise level exceeds 50 dB during the day and 45 dB at night (see Table 4.11-6).

The Health and Safety Element clarifies that the above referenced standards apply only to new development and will not be applied to existing noise-sensitive land uses. The General Plan requires acoustical analysis for projects that could generate noise at noise-sensitive land uses in excess of these standards.

- **Goal 8.G:** To protect Woodland residents from the harmful and annoying effects of exposure to excessive noise.
- **Policy 8.G.1:** The City shall prohibit development of new-noise sensitive uses where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 8-1 [Table 4.11-7] as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards set out in Table 8-1 [Table 4.11-7].

- **Policy 8.G.2:** The City shall require that noise created by new non-transportation sources be mitigated so as not to exceed the noise level standards of Table 8-1 [Table 4.11-7] as measured immediately within the property line of lands designated for noise-sensitive uses.

- **Policy 8.G.4:** Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 8-1 [Table 4.11-7] at existing or planned noise-sensitive uses, the City shall require an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design. The acoustical analysis shall meet the following requirements:

    a. It shall be the financial responsibility of the Project Applicant.

    b. It shall be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.

    c. It shall include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.

    d. It shall include estimates of existing and projected cumulative (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table 8-1 [Table 4.11-7], and compare those levels to the policies and standards of this section of the General Plan.

    e. It shall recommend appropriate mitigation to achieve compliance with the policies and standards of this section of the General Plan, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.

    f. It shall include estimates of noise exposure after the prescribed mitigation measures have been implemented.

    g. It shall describe a post project assessment program, which could be used to evaluate the effectiveness of the proposed mitigation measures.

Transportation Noise

The Element also addresses transportation noise by providing standards for noise-sensitive land uses in both outdoor gathering areas and interior spaces, with exceptions for the Southeast Area Specific Plan Area, where a 5-dB increase in outdoor activity areas will be permitted (Table 4.11-8).

- **Policy 8.G.5:** The City shall evaluate the general feasibility of proposed projects with respect to existing and future transportation noise levels shown in Figure 8-1 [Table 4.11-6].

- **Policy 8.G.6:** The City shall prohibit new development of noise-sensitive land uses in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels set out in Table 8-2 [Table 4.11-10], unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels set out in Table 8-2 [Table 4.11-8]. Exceptions to this standard

will be permitted within the Southeast Area Specific Plan Area, where a 5 dB increase in outdoor activity areas will be permitted.

- **Policy 8.G.7:** The noise created by new transportation noise sources shall be mitigated so as not to exceed the levels specified in Table 8-2 [Table 4.11-8] at outdoor activity areas or interior spaces of existing noise-sensitive land uses.

- **Policy 8.G.8:** New roadway improvement projects will be needed to accommodate development permitted according to the Land Use Diagram. Where existing noise-sensitive uses may be exposed to increased noise levels due to increased roadway capacity and increases in travel speeds associated with roadway improvements, the City will apply the following criteria to determine the significance of increases in noise related to roadway improvement projects:

  a. Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant;

  b. Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant; and

  c. Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.

- **Goal 8.H:** To protect the economic base of the City by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.

- **Policy 8.H.2:** Where noise mitigation measures are required to achieve the standards of Table 8-1 [Table 4.11-6] and Table 8-2 [Table 4.11-8], the emphasis in such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.

Approach to Mitigation

The 2002 General Plan establishes the City's preference for land use planning, site design, and other proactive measures to reduce adverse impacts related to noise over barriers (City of Woodland 2002):

> "Where mitigation measures are required to achieve the standards of Tables 8-1 and 8-2 [Table 4.11-6 and Table 4.11-8], the emphasis in such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project."

Agricultural Protections

The City has also indicated support for ongoing agricultural operations that otherwise could be adversely affected by noise-sensitive land uses "coming to the nuisance." Policy 8.H.3 indicates that the "City shall support the County's right-to-farm ordinance, especially as it relates to noise emanating from the agricultural operations adjacent to urban uses" (City of Woodland 2002).

City of Woodland Municipal Code

The City's Municipal Code also addresses environmental noise, but with more of a focus on the operation of land uses and ongoing activities (as opposed to the guidance for proposed developments, which is the focus of the General Plan). According to the Municipal Code, "it shall be unlawful for any person to make, continue or cause to be made or continued, any loud, unnecessary or unusual noise or any noise which either annoys, disturbs, injures or endangers the comfort, repose, health, peace."[10] The following acts, among others, are declared to be loud, disturbing, and unnecessary noises in violation of this section, but such enumeration shall not be deemed to be exclusive, namely:

a) **Motor Noises.** Any noise made by the motor of any automobile, truck, tractor or motorcycle, not reasonably required in the operation thereof under the circumstances and shall include but not be limited to backfiring and motor racing.

b) **Horns and Signaling Devices.** The sounding of any horn or signaling device on any automobile, motorcycle, trolley coach or other vehicle on any street or public place of the city, except as a danger warning; the creation by means of any such signaling device of any unreasonably loud or harsh sound and the sounding of any such device for an unnecessary and unreasonable period of time. The use of any signaling device except one operated by hand or electricity; the use of any horn, whistle, or any other device operated by engine exhaust, and the use of any such signaling device when traffic is for any reason held up.

c) **Yelling and Shouting.** Yelling, shouting, hooting, whistling, singing, or blowing of horns on the public streets, particularly between the hours of 10:00 P.M. and 7:00 A.M., or any time or place so as to annoy or disturb the quiet, comfort, or repose of persons in any office, or in any dwelling, hotel, apartment, or other type of residence, or of any persons in the vicinity.

d) **Construction or Repairing of Buildings.** The erection (including excavation), demolition, alteration, or repair of any building other than between the hours of 7:00 A.M. and 6:00 P.M. on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between 9:00 A.M. and 6:00 P.M. on Sunday, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or less while the emergency continues, and which permit may be renewed for a period of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or the excavation of streets and highways within the hours of 6:00 P.M. and 7:00 A.M. on weekdays and 6:00 P.M. and 9:00 A.M. on Sundays, and if he shall further determine that loss or inconvenience would result to any party in interest, he may grant permission for

[10] Please refer to Sec. 15-26. Loud, unnecessary, etc., noises prohibited; enumeration of such noises for more detail.

such work to be done within the hours of 6:00 P.M. and 7:00 A.M. on weekdays and 6:00 P.M. and 9:00 A.M. on Sundays, upon application being made at the time the permit for the work is awarded or during the progress of the work.

e) **Pile Drivers, Hammers, Etc.** The operation between the hours of 10:00 P.M. and 7:00 A.M. of any pile driver, steam shovel, pneumatic hammer, derrick, steam and electric hoist or other appliance, the use of which is attended by loud or unusual noise.

f) **Tools.** The use of or operation between the hours of 10:00 P.M. and 7:00 A.M. of any power saw, power planer, or other powered tool or appliance or saw or hammer, or other tool, so as to disturb the quiet, comfort or repose of persons in any dwelling, hotel, apartment or other type of residence, or of any person in the vicinity.

g) **Blowers.** The operating of any noise-creating blower or power fan or any internal combustion engine the operation of which causes noise due to the explosion of operating gases or fluids unless the noise from such blower or fan is muffled and such engine is equipped with a muffler device sufficient to deaden such noise.

h) **Street Sweepers.** The operation of any type of suction sweeper or cleaner between the hours of 10:00 P.M. and 7:00 A.M., the use of which is attended by loud or unusual noise which disturbs the quiet, comfort or repose of persons in any dwelling, hotel, apartment or other type of residence, or of any person in the vicinity.

i) **Exhausts.** The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motor boat or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.

j) **Hawkers, Peddlers and Vendors.** The shouting and crying of peddlers, hawkers and vendors which disturb the peace and quiet of persons in the neighborhood.

k) **Musical Instruments.** The use of any drum or other instrument or device for the purpose of attracting attention by creation of noise to any performance, show or sale.

l) **Animals, Birds, Fowl.** The keeping of any animal, fowl or bird which by causing frequent or long continual noise shall disturb the comfort or repose of persons in the vicinity.

The City requires a permit for the use of amplification and limits the use of loudspeakers and amplification to the hours between 10:00 A.M. and 10:30 P.M.[11]

[11] From the Woodland Municipal Code Section 15-26: Permit Required. It shall be unlawful for any person to broadcast from a radio, phonograph or similar instrument, using voice or sound amplifiers, either into a public thoroughfare from a fixed location, from a movable vehicle or in connection with any public celebration or public function on public holidays or in connection with the broadcast of events of interest to the general public without first obtaining a permit from the chief of police. Hours of Operation. It shall be unlawful for any person including any service club, church, school and other nonprofit organizations to have in operation or permit to be in operation any loudspeaker or sound-amplifying device or radio, television or musical instrument between the hours of 10:30 P.M., of any day and 10:00 A.M. the following day (Ord. No. 673, § 1).

4.11.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.11.4.1 METHODOLOGY

This EIR considers the impacts associated with implementation of the Proposed Project, including new noise policies and the development of both noise-sensitive and noise-generating land uses. The analysis considers the implementation of 2035 CAP Strategies that would reduce vehicle transportation and associated noise, such as Strategy T/LU-4, T/LU-5, T/LU-7, MO-3, and MO-4. Noise impacts were identified for new noise-sensitive developments located within areas affected by substantial existing or future noise sources (e.g., aircraft, automobile or truck traffic, railroad lines, and industrial uses). Noise impacts were also identified for noise-producing projects proposed near existing or proposed noise-sensitive areas. Finally, noise impacts were evaluated by comparing traffic noise generation associated with implementation of the Proposed Project relative to existing conditions.

Baseline conditions were compared to future anticipated conditions under the Proposed Project. Information related to the various land uses from Chapter 3 of this EIR, "Project Description," and data obtained during on-site noise monitoring were used to determine the potential locations of noise-sensitive receptors and noise-generating land uses in the Planning Area. Noise-sensitive land uses and major noise sources were identified based on existing documentation (e.g., equipment noise levels and attenuation rates) and site reconnaissance data. Baseline ambient noise levels to which potential Proposed Project-generated noise was compared were assumed from the noise surveys. Predictions from traffic noise modeling, and stationary-source noise levels were based on manufacturers' specifications.

The methodology used for this analysis was consistent with approaches recommended by the Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and the City of Woodland. Noise modeling was conducted using the Federal Highway Administration's (FHWA) traffic noise prediction model (FHWA-RD-77-108) and the FTA's Transit Noise and Vibration Impact Assessment Guidance Manual (2006). Stationary-source noise levels were obtained from manufacturer specifications and industry-standard technical reports. Furthermore, traffic data from the traffic impact analysis prepared for the Proposed Project were used to model existing and future traffic noise levels for all project-related alternatives. Detailed noise analytical information is provided in Appendix E.

Construction Noise

To assess the potential short-term noise impacts from construction, sensitive receptors and their relative levels of exposure were identified. Construction noise potentially generated by the Proposed Project was predicted using the Transit Noise and Vibration Impact Assessment methodology for construction noise prediction (FTA 2006). The noise emission levels referenced and usage factors are based on FHWA's Roadway Construction Noise Model (FHA 2006). Noise levels of specific construction equipment and resultant noise levels at the locations of sensitive receptors were calculated.

Groundborne vibration impacts were assessed based on FTA methodology for construction (e.g., vibration levels produced by specific construction equipment operations and the distance of sensitive receptors from a given source), and transportation vibration sources (FTA 2006).

Traffic Noise

Noise impacts were also evaluated by comparing traffic noise generation associated with implementation of the Proposed Project relative to existing conditions. The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict traffic noise levels under existing conditions and under the East and South Alternatives. The contribution of the Proposed Project to traffic noise levels along area roadways was determined by comparing the modeled noise levels at 50 feet from the centerline of the roadway.

Table 4.11-4 lists the estimated distances to the 60 dBA, 65 dBA and 70 dBA L_{dn} traffic noise contours under existing conditions. Table 4.11-10 lists predicted distances to the 60 dBA, 65 dBA and 70 dBA L_{dn} traffic noise contours with buildout of the East and South Alternatives. These contour distances are used to identify portions of the Planning Area that could be subject to noise impacts. Table 4.11-11 compares projected future traffic noise levels with buildout of the East and South Alternatives. Exhibit 4.11-8 and Exhibit 4.11-9 illustrate the predicted 60 dBA, 65 dBA, and 70 dBA L_{dn} noise contours for the East and South Alternatives. Noise estimates took into account different vehicle speeds, but not the effects of existing walls, berms, or other existing intervening structures that may exist along certain street segments.

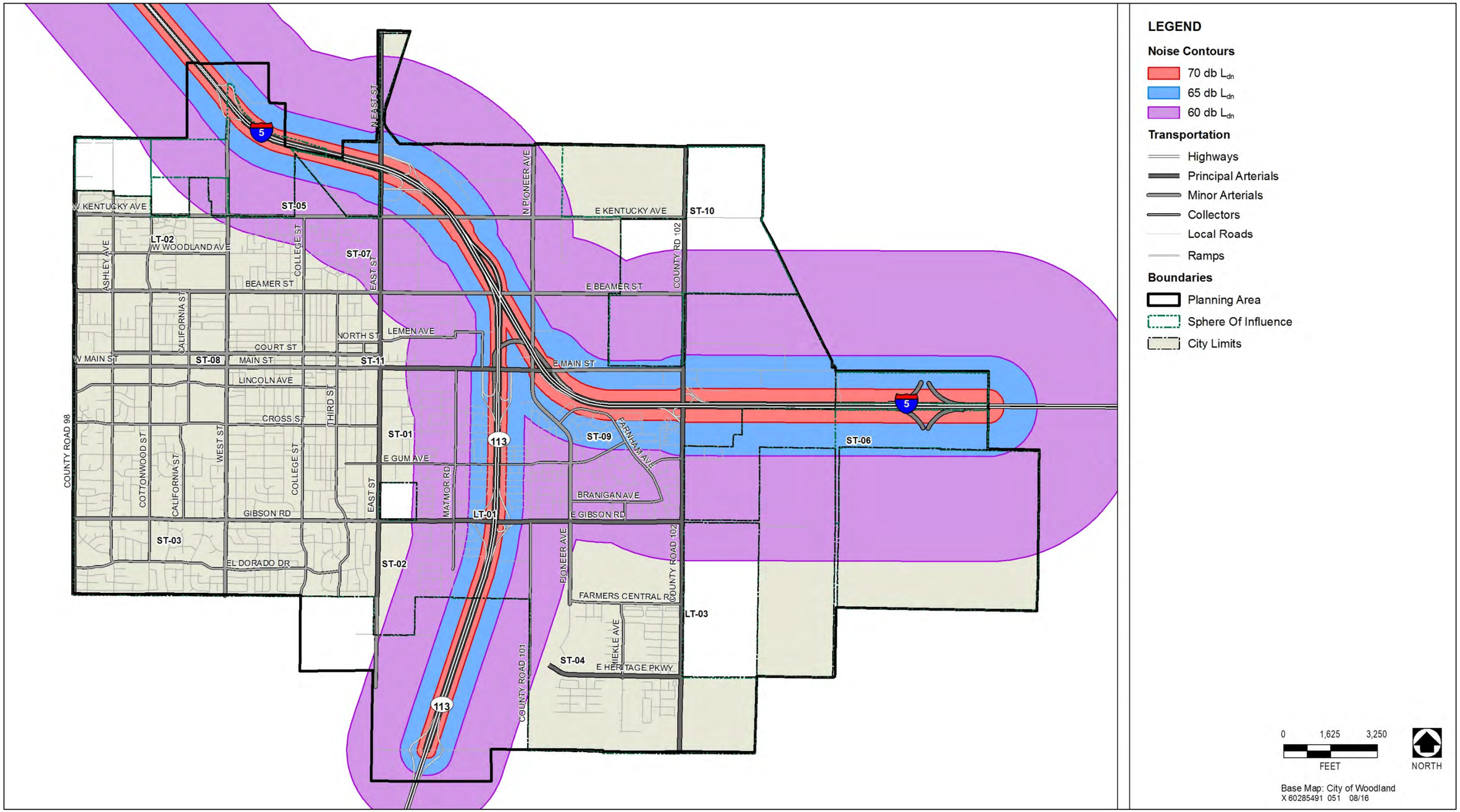
Stationary Noise

Potential long-term (operational) noise impacts from stationary non-transportation sources (shown in Table 4.11-5), and other area noise sources (e.g., HVAC, landscape, parking lot, commercial and industrial cavities, school, and recreation activities and events, agricultural activities) were assessed based on existing documentation (equipment noise levels) and site reconnaissance data.

4.11.4.2 THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts in this analysis are consistent with the checklist in Appendix G of the State CEQA Guidelines. The Proposed Project would have a significant impact if it would result in:

- exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;



Source: City of Woodland, California 2016; Yolo County 2016; Dyett & Bhatia 2016; Fehr & Peers 2016; AECOM 2016

Exhibit 4.11-8a. **Future (South Alternative) Highway Noise Contours**

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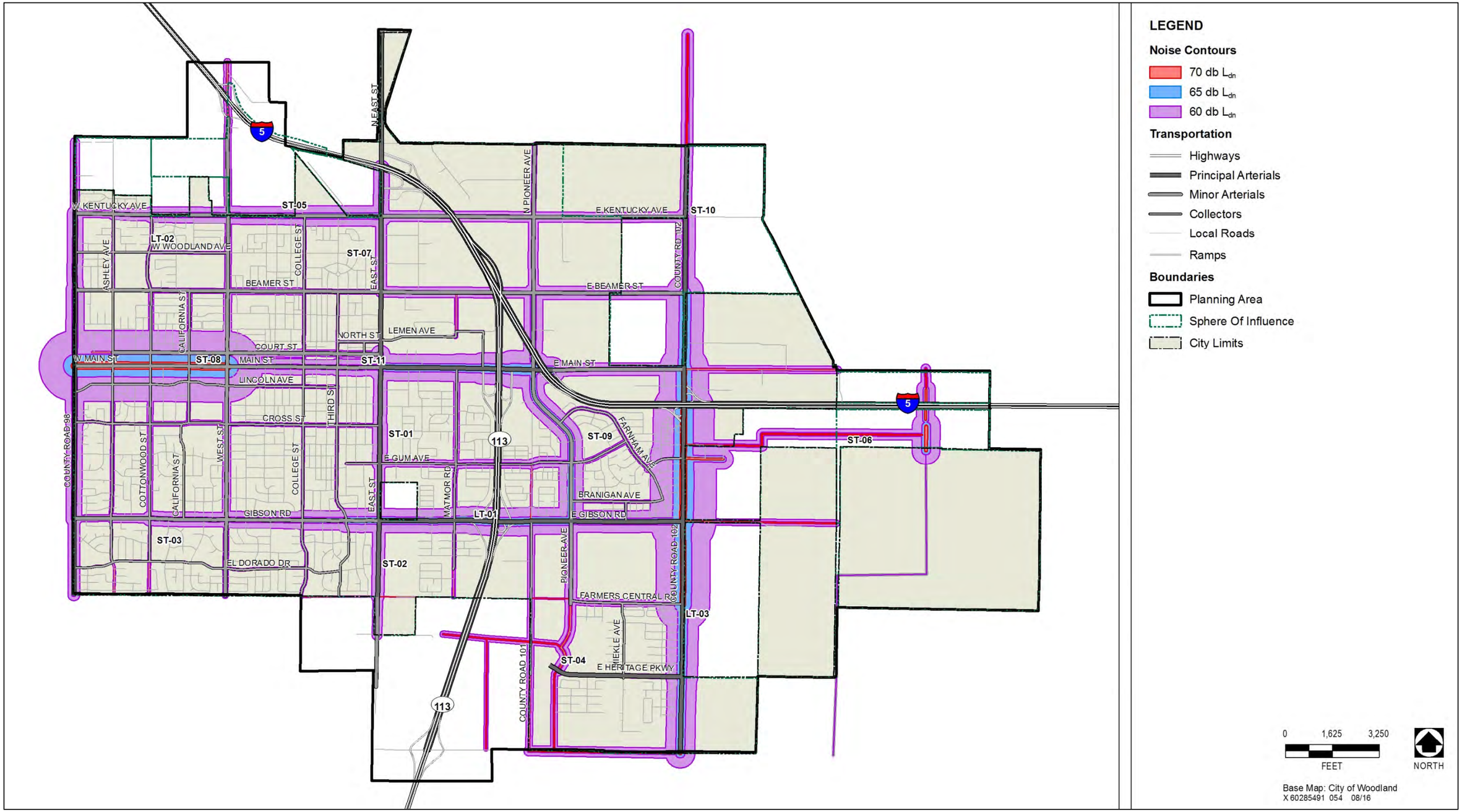

Source: City of Woodland, California 2016; Yolo County 2016; Dyett & Bhatia 2016; Fehr & Peers 2016; AECOM 2016

Exhibit 4.11-8b. **Future (South Alternative) Roadway Noise Contours**

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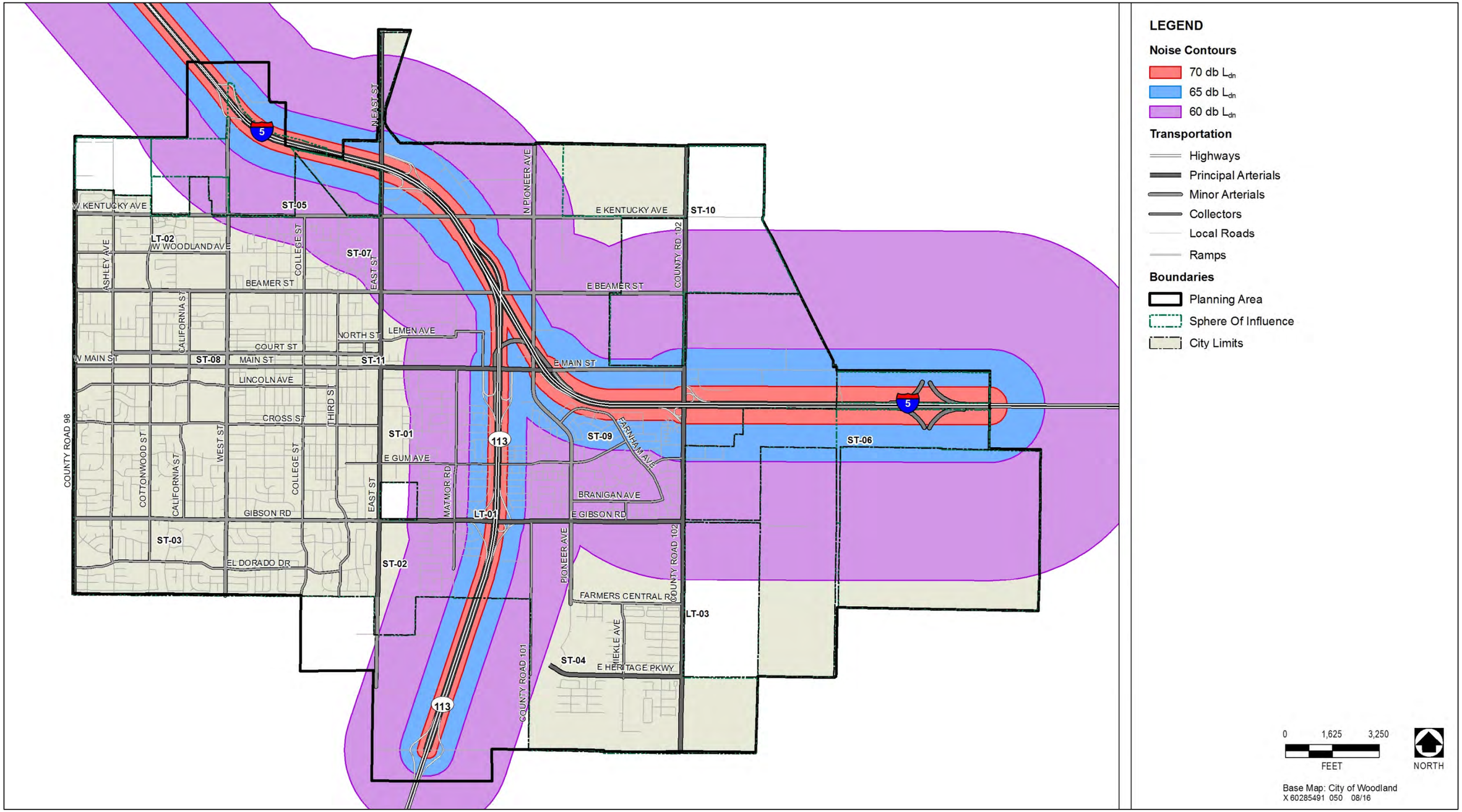

Source: City of Woodland, California 2016; Yolo County 2016; Dyett & Bhatia 2016; Fehr & Peers 2016; AECOM 2016

Exhibit 4.11-9a. **Future (East Alternative) Highway Noise Contours**

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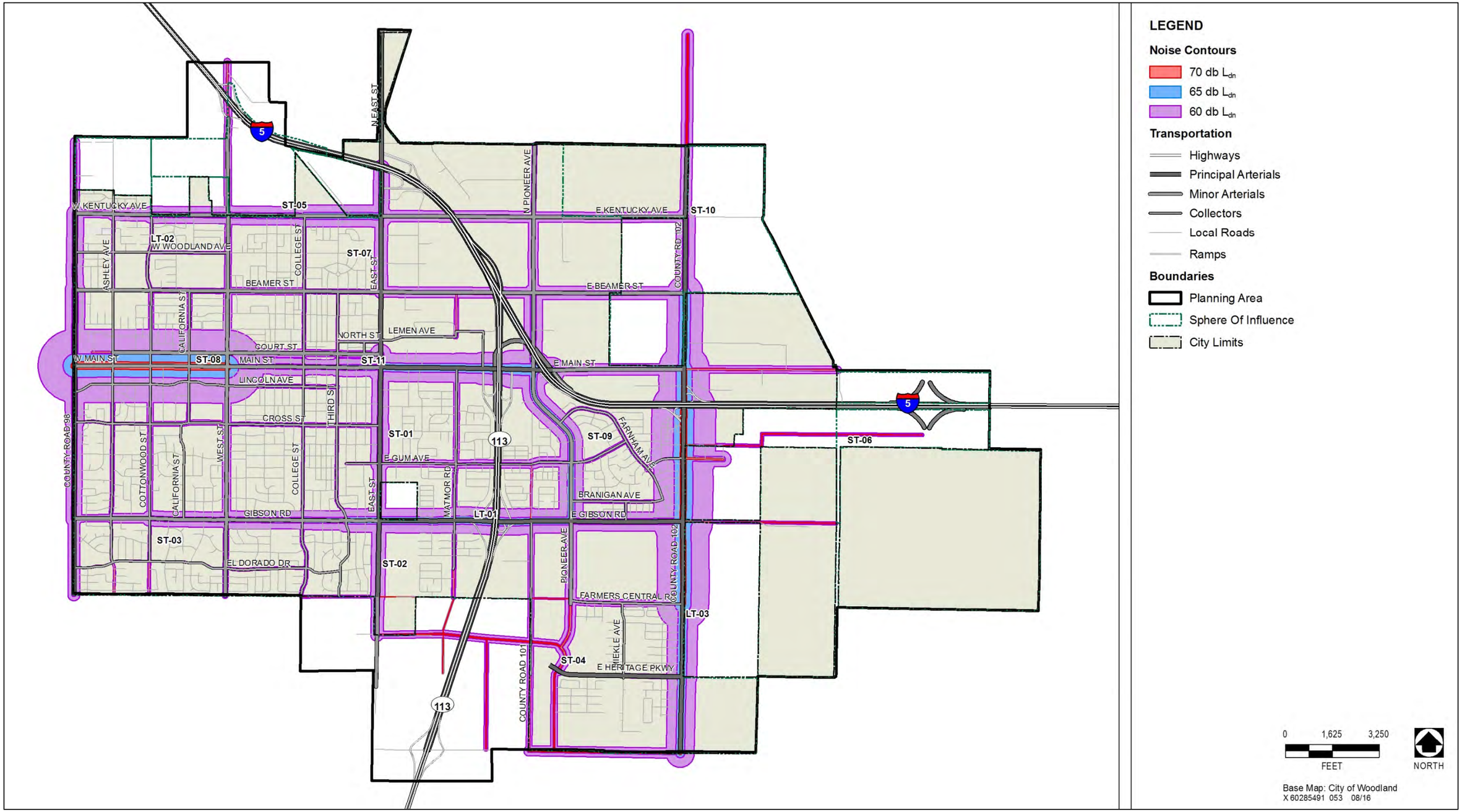

Source: City of Woodland, California 2016; Yolo County 2016; Dyett & Bhatia 2016; Fehr & Peers 2016; AECOM 2016

Exhibit 4.11-9b. **Future (East Alternative) Roadway Noise Contours**

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- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- for a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise.

There is overlap between these individual checklist questions, particularly for a project such as a General Plan that establishes local standards. To improve the readability of this EIR, the City has organized the above six checklist questions into four impacts addressing: (1) short-term, construction-related impacts; (2) long-term noise exposure impacts; (3) vibration-related impacts; and (4) airport compatibility related impacts.

4.11.4.3 ISSUES NOT DISCUSSED FURTHER

All issues relating to noise and vibration are discussed in detail below.

4.11.4.4 IMPACT ANALYSIS

IMPACT 4.11-1 Exposure of Noise-Sensitive Land Uses to Short-Term (Construction). *Future development and implementation of the policies in the Proposed Project would result in exposure of existing and proposed noise sensitive land uses to noticeable increases from construction activities. This impact is considered significant*.

Potential Impacts Associated with Implementation of the Proposed Project

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, or when construction durations last over extended periods of time. Construction noise would occur in areas near existing noise-sensitive receptors in existing developed areas, including sites with the Downtown Mixed Use and the Corridor Mixed Use designations. Construction noise would also occur in locations near noise-sensitive receptors in association with infrastructure improvements that are necessary to serve infill sites in existing developed portions of the City. The City anticipates that infill development under the Proposed Project would be focused in the Downtown Area and along major corridors, including Main Street, East Street, and Court Street. These major corridors have a mix of uses today, but for the most part accommodate commercial, office, and industrial uses, which are not considered to be noise-sensitive. However, the Proposed Project would accommodate residential developments and mixed-use projects that have a residential component along these corridors that, once occupied, would represent noise-sensitive uses that could be adversely affected by future demolition, site preparation, and construction. In addition, while uses fronting these major corridors are mostly non-residential today, there are residential uses in close proximity to these major corridors in locations that could be affected by infill development and infrastructure improvements in the Downtown area and along major corridors.

Construction noise would also occur in new growth areas, including the City's Specific Plan Areas. While most portions of the Specific Plan Areas are not directly adjacent to existing noise-sensitive uses, they have the ability to accommodate planned noise-sensitive uses, and depending on the timing and location of development, the Specific Plans could have construction noise occurring near locations that have been developed with noise-

sensitive land uses. Portions of SP-1 and SP-3 are adjacent to existing noise-sensitive uses, as well, and demolition, site preparation, construction of new buildings, and infrastructure improvements in these areas could have adverse effects on existing noise receptors. The City's northeast Industrial designated area is mostly isolated from existing noise-sensitive receptors, and construction in this area would not generally involve adverse noise-related impacts.

Noise-Generating Construction Activity

Major noise generating construction activities could include demolition activities, site grading, and excavation, building erection, paving, and landscaping. The highest construction noise levels are typically generated during grading and excavation, and lower noise levels typically occur during building construction. Without noise control, large pieces of earth-moving equipment, such as graders, excavators, and dozers, generate maximum noise levels of 85 dBA L_{eq} to 90 dBA L_{eq} at a distance of 50 feet (refer to Table 4.11-9) (EPA 1971: 11). Typical hourly average construction-generated noise levels are about 80 dBA L_{eq} to 85 dBA L_{eq} measured at a distance of 50 feet from the site during busy construction periods.

Although the City does not anticipate a large amount of high-rise development that would require piles in the foreseeable future, it is possible that future projects in certain locations could require the installation of piles for foundations. This type of construction activity could produce very high noise levels of approximately 105 dB L_{eq} at 50 feet. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor. Intervening structures would provide shielding from the noise source, resulting in lower noise levels; however, these reductions would vary and are not quantifiable at the general plan level.

Noise levels anticipated over temporary periods of time as a result of construction under the Proposed Project could expose sensitive receptors to noise levels that would exceed the current standards shown in Table 4.11-6 (45 dBA L_{eq} nighttime, 50 dBA L_{eq} daytime, 65 dBA L_{max} nighttime, 70 dBA L_{max} daytime).

Increase above Existing Ambient Noise Levels

Table 4.11-3 shows the long-term measured ambient noise levels in the Planning Area. Measurement LT_01 represents the SP-1 Area, Measurement LT-03 represents the SP-2 Area, and Measurement LT_02 represents the SP-3 Area. The measured average ambient noise levels at SP-3 (A and B) areas are 54 dBA L_{eq} (84 dBA L_{max}) and 47 dBA L_{eq} (65 dBA L_{max}) at daytime and nighttime, respectively. For SP-1 (A, B, and C), the measured average ambient noise levels are 62 dBA L_{eq} (84 dBA L_{max}) and 54 dBA L_{eq} (73 dBA L_{max}) at daytime and nighttime, respectively. Also, the measured average ambient noise levels at SP-2 are 54 dBA L_{eq} (73 dBA L_{max}), and 49 dBA L_{eq} (68 dBA L_{max}) at daytime and nighttime, respectively. Construction noise in these areas would substantially increase noise above existing ambient levels.

Therefore, implementation of the Proposed Project would result in exposure of existing and proposed noise-sensitive land uses to noticeable increases in noise levels from construction activities. If construction activities were to occur during more noise-sensitive hours, construction source noise levels could also result in annoyance and/or sleep disruption to occupants of existing and proposed noise-sensitive land uses, and could create a substantial temporary increase in ambient noise levels. The Proposed Project includes policies to reduce exposure of noise-sensitive uses to construction noise. The City acknowledges that temporary construction noise is a necessary byproduct of meeting the City's objectives for infill development, economic development, resource conservation, air quality and greenhouse gas emission reduction, and related topics.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The City has established guidelines for construction noise within or near residential areas limiting noisy construction activities to weekdays and Saturdays between 7:00 A.M. and 6:00 P.M. and Sundays between 9:00 A.M. and 6:00 P.M. Please see the Code Compliance Division of the Community Development Department website for more details: http://www.cityofwoodland.org/gov/depts/cd/divisions/code/cng.asp. The City has incorporated this construction noise guideline into a General Plan implementation program.

Proposed Project

The 2035 General Plan has included a goal and policy related to construction noise.

- **Goal 8.G Noise.** Strive to achieve an acceptable noise environment for the environmental, health, and safety needs of Woodland residents and workers.

- **Policy 8.G.11 Construction Noise.** Consider construction noise to be an acceptable impact that is an expected byproduct of planned growth, so long as the land use is consistent with the General Plan, and noise levels are consistent with the General Plan and Construction Noise Ordinance.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact after Mitigation

Even with the Proposed Project mitigating policies and implementation program, temporary construction noise could still be potentially significant. The City has accepted this outcome as a trade-off for promoting infill and compact development. This is communicated in the 2035 General Plan, including the following two policies:

- **Policy 2.C.1 Compact Form.** Promote compact development patterns, mixed land use, and higher-development intensities that conserve land resources, reduce vehicle trips, improve air quality, and facilitate walking, bicycling, and transit use. However, urban development and increased density, as supported by the City in this General Plan, may result in some less desirable impacts, such as increased traffic, greater noise, reduced private residential open space, and reduced privacy than in lower density areas. Where growth and increased density is allowed pursuant to this General Plan, these issues are acknowledged and accepted.

- **Policy 8.G.11 Construction Noise.** Consider construction noise to be an acceptable impact that is an expected byproduct of planned growth, so long as the land use is consistent with the General Plan, and noise levels are consistent with the General Plan and Construction Noise Ordinance.

    a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

    b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

Mitigation Measures

Mitigation Measure 4.11-1– The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Noise 1)

a. Demolition, construction, site preparation, and related activities that would generate noise perceptible at the property line of the subject property are limited to the hours between 7:00 A.M. and 6:00 P.M. on Monday through Saturday and between 9:00 A.M. and 6:00 P.M. on Sunday and federal holidays. The building inspector may issue an exception to this limitation on hours in cases of urgent necessity where the public health and safety will not be substantially impaired.

b. Idling times for noise-generating equipment used in demolition, construction, site preparation, and related activities shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.

c. Demolition, construction, site preparation, and related activities that do not involve pile driving proposed within 445 feet from the edge of properties with existing, occupied noise-sensitive uses shall incorporate all feasible strategies to reduce noise exposure for noise-sensitive uses, including:

    - Provide written notice to all known occupied noise-sensitive uses within 400 feet of the edge of the project site boundary at least 2 weeks prior to the start of each construction phase of the construction schedule;

    - Ensure that construction equipment is properly maintained and equipped with noise control components, such as mufflers, in accordance with manufacturers' specifications;

    - Re-route construction equipment away from adjacent noise-sensitive uses;

    - Locate noisy construction equipment away from surrounding noise-sensitive uses;

    - Use sound aprons or temporary noise enclosures around noise-generating equipment;

    - Position storage of waste materials, earth, and other supplies in a manner that will function as a noise barrier for surrounding noise-sensitive uses;

    - Use the quietest practical type of equipment;

    - Use electric powered equipment instead of diesel or gasoline engine powered equipment;

- Use shrouding or shielding and intake and exhaust silencers/mufflers; and
- Other effective and feasible strategies to reduce construction noise exposure for surrounding noise-sensitive uses.

d. For construction of buildings that require the installation of piles, an alternative to installation of piles by hammering shall be used. This could include the use of augured holes for cast-in-place piles, installation through vibration or hydraulic insertion, or another low-noise technique.

The above described implementation program would reduce construction noise exposure. However, for construction sites that are adjacent to noise-sensitive uses, there still could be a substantial temporary increase in noise levels that could lead to adverse noise-related impacts. The City is obliged to balance temporary noise impacts associated with implementation of the Proposed Plan with other environmental benefits, as well as economic, legal, social, technological, and other benefits. The City's focus on facilitating infill development in the Downtown area and along major corridors will help to achieve goals related to economic development, fiscal sustainability, and local employment opportunities. As noted in OPR's draft General Plan Guidelines update, "While urban infill developments can be noisy environments, they are often healthy communities. Residents whom opt to live in infill developments may welcome such noise, and there are many ways to minimize harmful exposure to excessive noise" (OPR 2015, page 185). While sites for future infill development may be located near noise-sensitive uses, these sites are also in proximity to a mix of housing and destinations. Locating a mix of uses in proximity to one another makes travel without the use of a car more practical, and this provides benefits related to mobility, air quality, and greenhouse gas emission reductions. Communities that make non-automobile trips (pedestrian, bicycle, transit) practical for more residents can also reduce traffic congestion for those who still need to drive. Land and transportation policies that reduce vehicle miles traveled (VMT) also reduce harmful air pollution and greenhouse gas emissions, enhance mobility, and reduce commuting time. Since transportation is a major cost for most households, making transportation without a car more feasible could also hold benefits related to reducing household transportation costs. Municipal costs can be reduced with compact, planned development. The City can help to free up discretionary income that can support expanded local retail activity through planning strategies that reduce travel and utility costs for households. Since infill sites are generally in areas that have access to existing infrastructure, infill development also holds potential benefits related to the up-front and ongoing cost of infrastructure. Implementation of this mitigation measure co would reduce impacts from construction noise. However, there could still be a noticeable temporary increase in noise levels for noise-sensitive uses that are adjacent to construction sites. There is no additional feasible mitigation.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative–The impact is considered **significant and unavoidable**.

IMPACT 4.11-2 Exposure to or Generation of Long-Term Noise Levels. *Future development of new noise-sensitive land uses would occur under the Proposed Project within areas that either are currently exposed to noise from both transportation and non-transportation noise sources, or will be in the future. Uses allowed under the 2035 General Plan could potentially expose existing or planned noise-sensitive uses to noise levels that exceed local standards. The impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project plans for a variety of land uses, including residential; commercial, office, and industrial; open space and recreation; and institutional and public facilities (e.g., parks, and schools). Noise-sensitive uses that exist or are developed near noise-generating commercial, industrial, or agricultural uses with outdoor operations and noise-sensitive uses near higher-volume roadways could experience noise levels in excess of the proposed General Plan noise standards.

a. East Alternative–The East Alternative assumes development within the SP-1A, SP-1B, and SP-3 Areas. There are existing residences, schools, and places of worship, located adjacent to SP-1A and SP-3 (A and B). With implementation of the Proposed Project, future development of noise-sensitive uses (residences, nursing homes, schools, libraries, and places of worship) could occur in the SP-1A and SP-2 areas, and also in the SP-3 (A) Area. Certain portions of SP-1A have existing noise levels that are approaching the City's proposed noise policies for noise-sensitive land uses. For example, the current noise level near the SR 13 and Gibson Road interchange is 62 dBA L_{dn}, shown as LT-01 in Table 4.11-3. The City anticipates that future development in SP-3 (B) would not be noise sensitive, since it is planned to include industrial uses. Future development of noise-sensitive uses within SP-1A and SP-3 (A and B) areas could occur adjacent to areas that are currently exposed to noise from transportation sources and from non-transportation noise sources. SP-2 is not near existing development and therefore would not adversely affect existing noise-sensitive uses, although SP-2 could include noise-sensitive uses that could be adversely affected by implementation of the East Alternative.

   As a necessary outcome of development allowed under the East Alternative, long-term sources of noise would be created. Also, future development of noise-sensitive uses would occur in areas that either are currently exposed to or would be exposed to ambient noise levels that exceed the existing ambient exterior noise levels at noise-sensitive uses. Tables 4.11-3 shows the long-term measured ambient noise levels in the Planning Area. Measurement LT_01 represents SP-1 areas and Measurement LT_02 represents SP-3 areas. The measured average ambient noise levels at SP-1A Areas are 54 dBA L_{eq} (84 dBA L_{max}), and 47 dBA L_{eq} (65 dBA L_{max}) at daytime and nighttime, respectively. For the SP-1A area, the measured average ambient noise levels are 62 dBA L_{eq} (84 dBA L_{max}), and 54 dBA L_{eq} (73 dBA L_{max}) at daytime and nighttime, respectively. The dominant sources of ambient noise in the Specific Plan Areas are vehicular traffic noise, non-transportation noise sources, as well as noise generated by landscape and building maintenance activities, mechanical equipment, solid waste collection, parking lots, commercial, office, and industrial activities, and residential, school, and recreation activities and events. Each of these noise sources could increase noise levels above existing ambient levels.

b. South Alternative–The South Alternative assumes development within the SP-1 and SP-3 Areas. There are existing residences, schools, and places of worship, located adjacent to SP-1 (A, B, and C), and SP-3 (A and B). With implementation of the Proposed Project, future development of noise-sensitive uses (residences, nursing homes, schools, libraries, and places of worship) could occur in SP-1 (A, B, and C) Areas, and also in SP-3 (A) Area. Certain portions of SP-1 (A and B) have existing noise levels that are approaching the City's proposed noise policies for noise-sensitive land uses. For example, the current noise level near the SR 13 and Gibson Road interchange is 62 dBA L_{dn}, shown as LT-01 in Table 4.11-3. The City anticipates that future development in SP-3 (B) would not be noise sensitive, since it is planned to include industrial uses. Future development of noise-sensitive uses within SP-1 (A, B, and C), and SP-

3 (A and B) areas could occur adjacent to areas that are currently exposed to noise from transportation sources and from non-transportation noise sources.

As a necessary outcome of development allowed under the South Alternative, long-term sources of noise would be created. Also, future development of noise-sensitive uses would occur in areas that either are currently exposed to or would be exposed to ambient noise levels that exceed the existing ambient exterior noise levels at noise-sensitive uses. Tables 4.11-3 shows the long-term measured ambient noise levels in the Planning Area. Measurement LT_01 represents SP-1 areas and Measurement LT_02 represents SP-3 areas. The measured average ambient noise levels at SP-3 (A and B) areas are 54 dBA L_{eq} (84 dBA L_{max}), and 47 dBA L_{eq} (65 dBA L_{max}) at daytime and nighttime, respectively. For the SP-1 (A, B, and C) areas, the measured average ambient noise levels are 62 dBA L_{eq} (84 dBA L_{max}), and 54 dBA L_{eq} (73 dBA L_{max}) at daytime and nighttime, respectively. The dominant sources of ambient noise in the Specific Plan Areas are vehicular traffic noise, non-transportation noise sources, as well as noise generated by landscape and building maintenance activities, mechanical equipment, solid waste collection, parking lots, commercial, office, and industrial activities, and residential, school, and recreation activities and events. Each of these noise sources could increase noise levels above existing ambient levels.

Transportation Noise

Development under the Proposed Project would generate and attract vehicular traffic, which would increase traffic noise levels along existing and future roadways. There are several roadways where the addition of vehicular trips would increase noise levels so that they would be perceptible (by at least 3 dB) and some roadways where the increase over existing conditions is anticipated to be readily noticeable (by at least 5 dB). The predicted traffic noise levels shown represent conservative potential noise exposure. In reality, noise levels may vary from that represented, since the calculations do not assume natural or artificial shielding or reflection from existing or proposed structures. Actual noise levels would vary from day to day, depending on factors, such as local traffic volumes and speed, shielding from existing and proposed structures, variations in attenuation rates resulting from changes in surface parameters, and meteorological conditions.

Table 4.11-10 lists the predicted distances to the 60 dBA, 65 dBA and 70 dBA L_{dn} traffic noise contours. Table 4.11-11 compares projected future traffic noise levels under the Proposed Project to those under existing conditions (2013). This table provides an evaluation of the changes in traffic noise levels that would result from development of the Proposed Project. Exhibit 4.11-8 and Exhibit 4.11-9 illustrate the predicted 60 dBA, 65 dBA, and 70 dBA L_{dn} noise contours for the East Alternative and the South Alternative, respectively. Vehicle speeds vary in the City of Woodland, and noise modeling attempted to account for such variation.

Future development of noise-sensitive uses could occur in areas that either are currently exposed to, or would be exposed to future traffic or railroad noise levels that exceed the existing (2002) General Plan exterior noise standard of 60 dB L_{dn}/CNEL. It is also possible that noise-sensitive uses could be developed in areas where transportation-related noise could exceed Proposed Project exterior and interior noise standards of 70 dBA L_{dn} or CNEL for outdoor activity areas or 45 dBA L_{dn} for interior areas. It is also possible that noise-sensitive development could be exposed to non-transportation noise in excess of Proposed Project non-transportation standards (45 dB L_{eq} nighttime, 55 dBA L_{eq} daytime, 65 dBA L_{max} nighttime, 75 dBA L_{max} daytime).

a. East Alternative–As illustrated in Table 4.11-10 and Table 4.11-11, traffic associated with buildout of the East Alternative is expected to increase noise levels along city streets and regional thoroughfares throughout the Planning Area. The traffic noise level increase is substantial in some areas relative to existing conditions. For noise level increases, a 1-dB increase is imperceptible; a 3-dB increase is just perceptible; a 5-dB increase is readily noticeable, a 6-dB increase is clearly noticeable; and a 10-dB increase is subjectively perceived as approximately twice as loud (Caltrans 2013, Egan 1988: 21). As shown in Table 4.11-11, for 84 roadway segments, there would be essentially no change in traffic noise levels. For 142 segments, the change would be imperceptible (less than 3 dB change). For 14 roadway segments, the change would be perceptible. For four roadway segments, the change would be clearly noticeable (6 dB change or more). Traffic noise levels at 50 feet from the centerline of higher-volume roadways would exceed Proposed Project noise standards for noise-sensitive uses under the East Alternative.

b. South Alternative–As illustrated in Table 4.11-10 and Table 4.11-11, traffic associated with buildout of the South Alternative is expected to increase noise levels along city streets and regional thoroughfares throughout the Planning Area. The traffic noise level increase is substantial in some areas relative to existing conditions. For noise level increases, a 1-dB increase is imperceptible; a 3-dB increase is just perceptible; a 5-dB increase is readily noticeable, a 6-dB increase is clearly noticeable; and a 10-dB increase is subjectively perceived as approximately twice as loud (Caltrans 2013, Egan 1988: 21). As shown in Table 4.11-11, for 76 roadway segments, there would be essentially no change in traffic noise levels. For 143 segments, the change would be imperceptible (less than 3 dB change). For 13 roadway segments, the change would be perceptible. For four roadway segments, the change would be clearly noticeable (6 dB change or more). Traffic noise levels at 50 feet from the centerline of higher-volume roadways would exceed City noise policies for noise-sensitive uses under the South Alternative.

Stationary and Area Source Noise

The Proposed Project could have development that may involve stationary and area source noise from:

- landscape and building maintenance activities (e.g., hand tools, power tools, lawn and garden equipment);
- voices;
- whistles, amplified voices, and other sounds associated with sporting or other organized activities;
- amplified music;
- mechanical equipment (e.g., pumps, generators heating, ventilation, and cooling systems);
- loading dock activities;
- parking lots;
- safety and warning devices;
- garbage collection; and
- other noise sources.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Special Events

Some of the above sources of noise and others may be associated with special events. Special events may be hosted at the Yolo County Fairground, for example, in addition to the annual County Fair. The First Friday Art Walk attracts vehicular trips, includes outdoor amplified music, and involves vocalizations; car doors closing; use of powered equipment during setup, operation, and breakdown; and other sources of noise. Some of these noise sources are regulated by the City's Noise Ordinance. For example, the use of noise generating equipment, such as a power saw, power planer, or other powered tool, appliance, saw, or hammer that would disturb residents or patrons of hotels is prohibited between the hours of 10:00 P.M. and 7:00 A.M. A permit is required for outdoor events that use amplified voices and instruments (City of Woodland Municipal Code Section 15-26). Even with a permit, noise attributable to events would be perceptible at noise-sensitive uses in the vicinity.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The federal Noise Control Act established a requirement that all federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare. Although the EPA was given a major role in disseminating information to the public and coordinating federal agencies, each federal agency retains authority to adopt noise regulations pertaining to agency programs. If there are federally funded noise sources, such as highway improvement projects, or noise-sensitive uses in the Planning Area, such as HUD-funded housing projects, during the planning horizon, these noise regulations would help to avoid adverse noise exposure effects.

Proposed Project

The 2035 General Plan includes a goal and policies to reduce potential impacts.

- **Goal 8.G Noise.** Strive to achieve an acceptable noise environment for the environmental, health, and safety needs of Woodland residents and workers.

- **Policy 8.G.1 Noise Compatibility for Residential Uses.** Ensure that existing and planned land uses are compatible with the current and projected noise environment. However, urban development and increased density, as supported by the City in this General Plan, generally results in greater ambient (background) noise than lower density areas. It is the City's intent to meet specified indoor noise thresholds, and to create peaceful backyard living spaces where possible, but particular ambient outdoor thresholds may not always be achievable. Where residential growth is allowed pursuant to this General Plan, these greater noise levels are acknowledged and accepted, notwithstanding the guidelines in Table 8-5. [Exhibit 4.11-9].

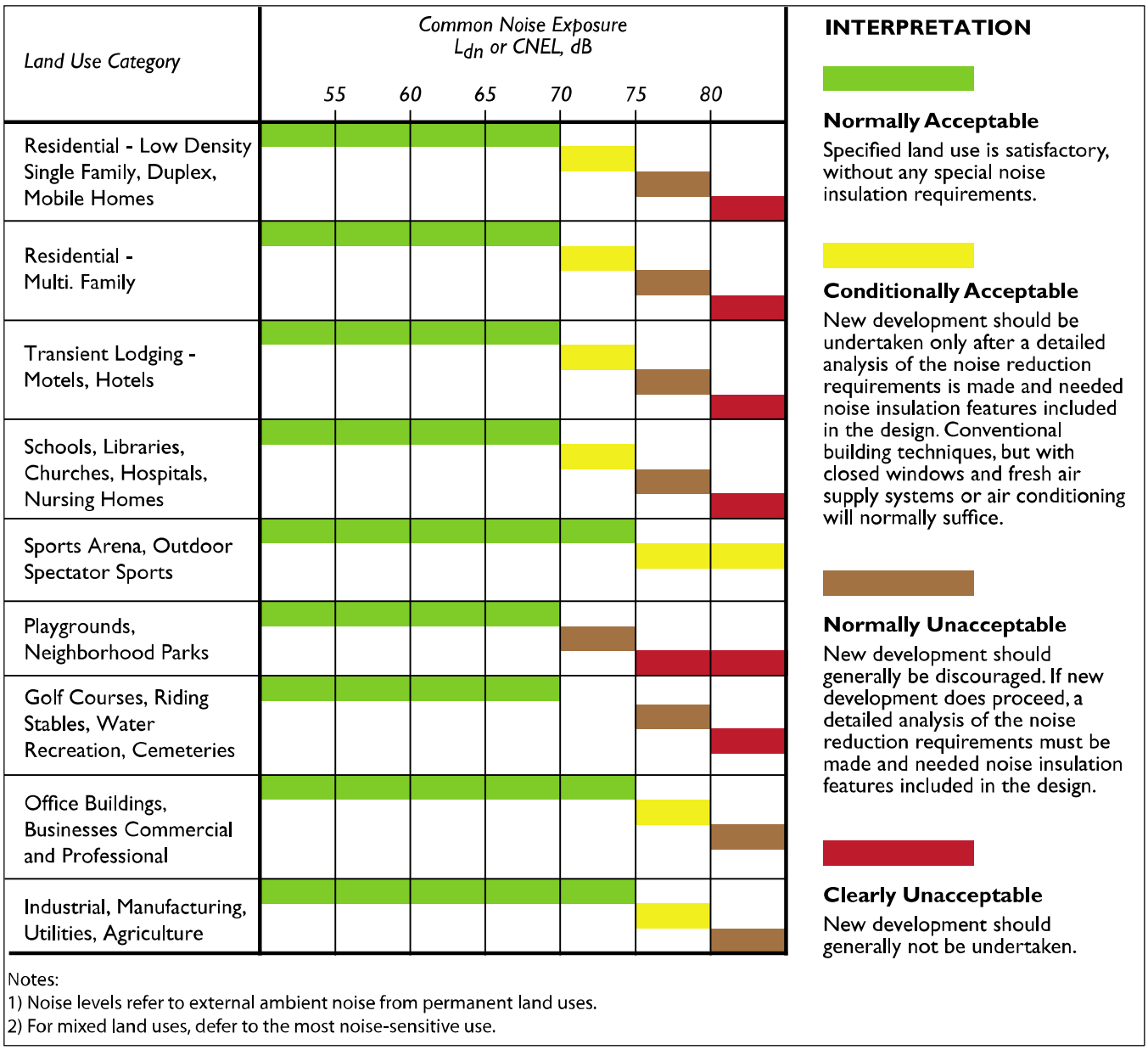


Exhibit 4.11-10. **Land Use Noise Compatibility Standards**
(Table 8-5 from the General Plan)

- **Policy 8.G.2 Land Use Noise Compatibility Standards.** Use the Land Use Noise Compatibility Standards, shown in Table 8-5 [Exhibit 4.11-9], as review criteria for new land uses. For proposed new discretionary development, where it is not possible to reduce noise levels to the "normally acceptable" range using practical application of the best-available noise reduction measures, greater exterior noise levels may be allowed, provided that all available reasonable and feasible exterior noise level reduction measures have been implemented.

- **Policy 8.G.3 Noise Exposure from Transportation Sources.** Require noise-reducing mitigation to meet allowable outdoor and indoor noise exposure standards in Table 8-6 [Table 4.11-12]. Noise mitigation

measures that may be approved to achieve these noise level targets include but are not limited to the following:

- Construct facades with substantial weight and insulation;
- Use sound-rated windows for primary sleeping and activity areas;
- Use sound-rated doors for all exterior entries at primary sleeping and activity areas;
- Use minimum setbacks and exterior barriers;
- Use acoustic baffling of vents for chimneys, attic and gable ends;
- Install a mechanical ventilation system that provides fresh air under closed window conditions; and
- Maximize site design so that buildings shelter outdoor areas.

- **Policy 8.G.5 New Noise-Sensitive Receptors.** Prohibit development of new noise-sensitive receptors where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 8-7 [Table 4.11-13] as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards. Create peaceful outdoor spaces where possible, but acknowledge that particular ambient outdoor thresholds may not always be achievable. Require noise mitigation to assure acceptable interior noise levels appropriate to the land use type:

  - 45 dB L_{dn} for residential, transient lodgings, hospitals, nursing homes, and other uses where people normally sleep; and

  - 45 dB L_{eq} (peak hour) for office buildings and similar uses.

- **Policy 8.G.6 New Non-Transportation Noise Sources.** Require that noise created by new non-transportation noise sources be mitigated so as not to exceed the noise level standards of Table 8-7 [Table 4.11-13] as measured immediately within the property line of lands designated for noise-sensitive receptors.

- **Policy 8.G.7 Roadway Improvements.** Where existing noise-sensitive receptors may be exposed to increased noise levels due to increased roadway capacity and increases in travel speeds associated with roadway improvements, apply the following criteria to determine the significance of increases in noise related to roadway improvement projects:

  - Where existing traffic noise levels are less than 70 dB L_{dn} at the outdoor activity areas of noise-sensitive receptors, a +5 dB L_{dn} increase in noise levels due to a roadway improvement project, will be considered significant; and

  - Where existing traffic noise levels range between 70 and 75 dB L_{dn} at the outdoor activity areas of noise-sensitive receptors, a +3 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant; and

  - Where existing traffic noise levels are greater than 75 dB L_{dn} at the outdoor activity areas of noise-sensitive receptors, a +1.5 dB L_{dn} increase in noise levels due to a roadway improvement project will be considered significant.

- **Policy 8.G.8 Site and Building Design.** Orient buildings such that the noise sensitive portions of a project are shielded from noise sources.

- **Policy 8.G.9 Existing Development.** Promote the use of noise attenuation measures to improve the acoustic environment where existing noise sensitive uses are located in noise-impacted environments, such as along arterial streets or adjacent to noise-producing uses. For non-conforming uses, the burden of noise attenuation falls on the non-conforming use. For allowed uses, the burden falls on the newest use, subject to possible later reimbursement based on benefit received by later use. Allowed uses that are developed simultaneously will share the burden of noise attenuation.

- **Policy 8.G.10 Right-to-Farm Ordinance.** Support the City and County's right-to-farm ordinances, especially as they relate to noise emanating from agricultural operations adjacent to urban uses, by requiring notification of the potential impacts to adjacent property owners, purchasers, residents, and users.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact after Mitigation

The policies referenced above would reduce long-term noise exposure impacts by establishing noise compatibility standards and requiring new development to include certain measures and strategies to achieve acceptable noise environments, wherever feasible. The Proposed Project provides options for different mitigation strategies and performance standards designed to avoid significant adverse noise exposure impacts. The effectiveness of the noise control strategy to bring the desired reduction in noise exposure depends on the physical characteristics of the development and existing surrounding environment. With the proposed intensification of land uses in Woodland, especially Downtown and along key corridors, noise control will be an increasing consideration for new development, particularly for infill projects. However, urban development generally experiences greater ambient (background) noise than rural areas and residents, employees, and visitors to more urban environments would generally be expected to be acclimated to relatively noisier conditions. In order to achieve the increased levels of density and development intensity outlined in this 2035 General Plan, somewhat greater ambient noise levels must be acknowledged and accepted. The noise standards established in the 2035 General Plan accept 70 dB as being in the "normally acceptable" range for residential uses, as compared with 60 dB in the previous 2002 General Plan. This policy supports the development of infill projects Downtown and along key corridors by setting a realistic, achievable threshold of impact for new development that acknowledges the somewhat greater noise levels associated with a vibrant, urban environment in appropriate locations. This policy could result in a greater number of new noise sensitive uses that are exposed to ambient noise levels between 60 dB and 70 dB compared to what may have occurred under the previous General Plan.

Similarly, Policy 8.G.7 addresses acceptable noise levels associated with roadway improvement projects, changing from 60 dB to 70 dB areas where an increase in 5 dB increase is considered significant; increasing from 60-65 to 70-75 areas where an increase of 3 dB is considered significant; and increasing from greater than 65 to greater than 75 areas where a 1.5 dB increase is considered significant. This policy change from the 2002 General Plan relaxes the baseline against which noise increases attributable to roadway improvement projects are assessed.

Policies in the 2035 General Plan establish noise performance standards and require feasible mitigation. Implementation of policies in the Proposed Project, as described above, would reduce the potential for significant noise exposure impacts. Although the policies are designed to avoid substantial disturbances to noise-sensitive receptors, the City anticipates that, despite implementation of feasible noise reduction strategies, noise-sensitive uses could be exposed to noise in exceedance of the City's standards, including noise generated by new development anticipated under the Proposed Project. The City cannot demonstrate at this time that policies in the Proposed Project would reduce impacts of each project and upon each project that could be developed under the 2035 General Plan to a less-than-significant level.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

Mitigation Measures

Mitigation Measure 4.11-2a – Policy 8.G.3 should be amended as follows:

- **Policy 8.G.3 Noise Exposure from Transportation Sources.** Require noise-reducing mitigation to meet allowable outdoor and indoor noise exposure standards in Table 8-6 [Table 4.11-12]. Noise mitigation measures that may be approved to achieve these noise level targets include but are not limited to the following:

  - Construct facades with ~~substantial weight and~~ sound insulation to achieve acceptable interior noise;
  - Use sound-rated windows for primary sleeping and activity areas;
  - Use sound-rated doors for all exterior entries at primary sleeping and activity areas;
  - Use ~~minimum~~ setbacks and/or sound ~~exterior~~ barriers where applicable, feasible, and reasonable;
  - Use acoustic baffling of vents for chimneys, attic and gable ends;
  - Install a mechanical ventilation system that provides fresh air under closed window conditions; and
  - Maximize site design so that buildings shelter outdoor areas.

Mitigation Measure 4.11-2b – The 2035 General Plan should be amended to include the following new policies:

- **Policy 8.G.13 Noise Attenuation Barriers.** Noise attenuation barriers are strongly discouraged, except to attenuate noise for existing developed uses, and may be used in the context of new developments only when no other approach to noise mitigation is feasible.

- **Policy 8.G.14 Vehicle Traffic.** New developments shall disperse vehicular traffic onto a network of fully connected smaller roadways and minimize funneling of local traffic onto large-volume, high-speed roadways near existing or planned noise-sensitive land uses to the maximum extent feasible.

- **Policy 8.G.15 Operational Noise.** In new development areas, service, utility, loading areas, roof-mounted equipment, and noise-generating equipment shall be screened, designed, and located to reduce visibility and noise for surrounding properties and pedestrian areas.

Despite the implementation of policies in the 2035 General Plan and the above described mitigation, the City cannot demonstrate that adverse operational noise exposure impacts could be avoided in all cases. There is no additional feasible mitigation available.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative– The impact is considered **significant and unavoidable**.

IMPACT 4.11-3 Exposure to or Generation of Vibration. *Construction of projects under the Proposed Project could cause temporary, short-term disruptive vibration for locations near sensitive receptors. Under the Proposed Project, new vibration-sensitive uses could locate in areas exposed to vibration. This impact is considered significant.*

Potential Impacts Associated with Implementation of the Proposed Project

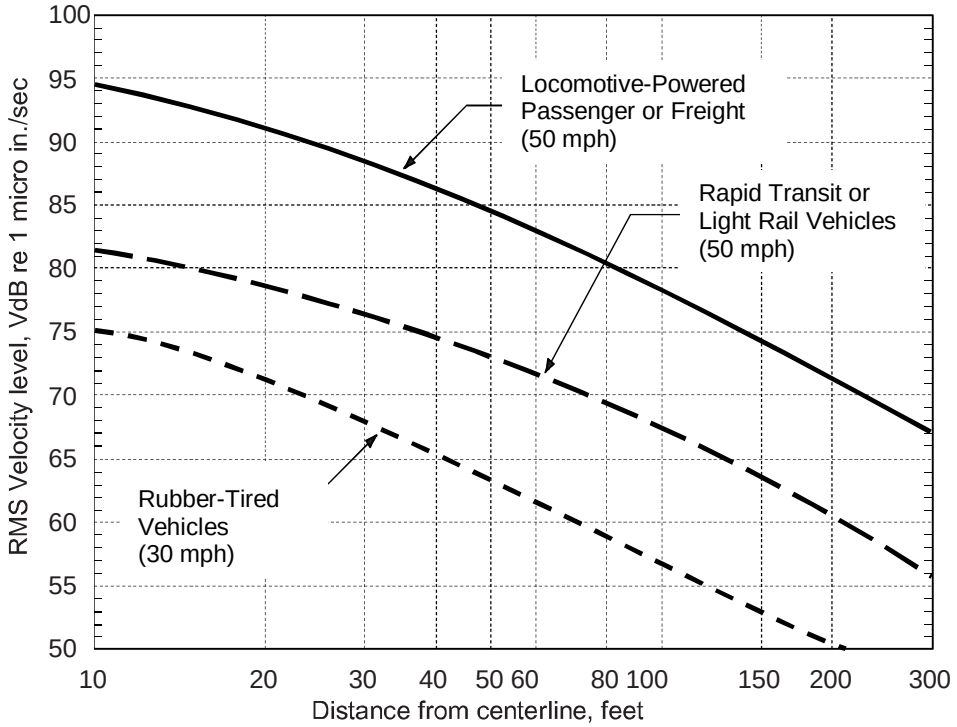
Construction and demolition activities associated with future projects implemented under the Proposed Project have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used, the location of construction activities relative to sensitive receptors, and operations/activities involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The type and density of soil can also affect the transmission of energy. Table 4.11-14 provides vibration levels for typical construction equipment.

The required construction equipment for future projects is not known at this time, but could include maximum generation of vibration from pile drivers, trucks, and bulldozers. According to the FTA, vibration levels associated with the use of such equipment would be approximately 0.089 in/sec PPV and 87 VdB (referenced to 1 μin/sec and based on the root mean square velocity amplitude) at 25 feet, as shown in Table 4.11-14. Using FTA's recommended procedure for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels would not exceed 0.2 in/sec PPV (Caltrans's recommended standard with respect to the prevention of structural damage for normal buildings), but would exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for residential uses) within 60 feet of vibration-sensitive receptors. Although the City does not anticipate a large amount of multi-story development in the foreseeable future, it is possible that pile-driving could occur at some development sites. This type of construction activity could produce very high vibration levels of approximately 112 VdB (1.518 PPV) at 25 feet, as shown in Table 4.11-14. These vibration levels drop off at a rate of about 9 VdB per doubling of distance between the noise source and receptor.

Depending on the nature of future projects, existing vibration-sensitive receptors could be located within 60 feet of proposed construction sites. Temporary, short-term vibration levels from project construction sources could exceed FTA's maximum-acceptable vibration standard of 80 VdB with respect to human response for residential uses (i.e., annoyance) at vibration-sensitive land uses. If construction activities were to occur during more noise-sensitive hours, vibration from construction sources could annoy and/or disrupt the sleep of occupants of existing and proposed residences and expose persons to excessive groundborne vibration or groundborne noise levels.

Depending on the nature and location of future projects, new vibration-sensitive receptors could be located near an existing or future source of vibration (e.g., railroad line, industrial facility). It is possible that vibration-sensitive land uses under the 2035 General Plan be located in areas exposed to existing or future sources of vibration.

Projects located closer than approximately 85 feet to railroad lines within the Planning Area could expect periodic vibration levels of approximately 80 VdB (Exhibit 4.11-11). Heavy truck traffic can generate groundborne vibration, which varies considerably depending on vehicle type, weight, and pavement conditions. However, groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the road right-of-way. Rubber-tired vehicles operating at 30 miles per hour (mph) would generate groundborne vibration of approximately 0.006 PPV (63 VdB) at a distance of 50 feet from the road's centerline (FTA 2006, page 10-3) (see Exhibit 4.11-11). This is based on a typical bus operating on a smooth roadway – according to FTA, rubber-tire vehicles "rarely create ground-borne vibration problems unless there is a discontinuity or bump in the road that causes the vibration" (FTA 2006, page 10-6). Increasing speeds from 30 to 60 miles per hour would be expected to increase vibration levels by approximately 6 VdB (FTA 2006, page 10-7).



Source: FTA 2006, adapted by AECOM in 2016

Exhibit 4.11-11. Ground-Surface Vibration Curves

Vibration levels from existing or future vibration sources could exceed FTA's maximum-acceptable vibration standard of 80 VdB with respect to human response for residential uses (i.e., annoyance) at vibration-sensitive land uses. More importantly, vibration from existing or future sources could annoy and/or disrupt the sleep of occupants of existing and proposed residences and expose persons to excessive groundborne vibration or

groundborne noise levels if vibration-generating activities were to occur during more noise-sensitive hours. Therefore, vibration levels would exceed the established standards.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

There are no applicable proposed policies.

Summary of Impact after Mitigation

Construction of projects under the Proposed Project could cause temporary, short-term disruptive vibration for locations near sensitive receptors. Existing and planned vibration-sensitive uses could locate in areas exposed to existing and future vibration.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **significant**.

Mitigation Measures

Mitigation Measure 4.11-3a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Vibration 1)

a. New development that proposes the use of piles for foundations shall include all feasible measures necessary with the goal to ensure that vibration exposure for adjacent buildings is less than 0.5 PPV and less than 80 VdB for adjacent vibration-sensitive uses and less than 0.2 PPV for adjacent historic buildings. These performance standards shall take into account the reduction in vibration exposure that would occur through coupling loss provided by each affected building structure. If it is determined necessary to avoid damage, the project applicant shall coordinate with the Chief Building Official to implement corrective actions, which may include, but is not limited to building protection or stabilization.

b. New developments that would generate substantial long-term vibration shall provide analysis and mitigation, as feasible, to achieve velocity levels, as experienced at habitable structures of vibration-sensitive land uses, of less than 80 vibration decibels.

Mitigation Measure 4.11-3b – Implement Mitigation Measure 4.11-1

As described above, the new implementation programs require use of project-specific vibration mitigation measures (preparation of vibration analysis and implementation of vibration abatement measures, as necessary and to the greatest extent feasible) and best practices during construction to mitigate vibration impacts to sensitive land uses. Implementation would reduce the potential for vibration levels in areas of new vibration-sensitive land uses and the level of impact associated with temporary construction-related vibration exposure for sensitive uses. However, the City cannot determine at this time that potentially significant vibration-related impacts would be avoided in every instance. There is no additional feasible mitigation.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **significant and unavoidable**.

b. South Alternative– The impact is considered **significant and unavoidable**.

IMPACT 4.11-4 Expose People to Excessive Airport Noise. *The Planning Area is outside of the 60 dB CNEL contours of all nearby airports. The impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The closest airport to the Planning Area is the Watts Woodland Airport, which is located 3.7 miles from the western city limits. The Sacramento International Airport is located approximately five miles northeast and Yolo County Airport approximately five miles southwest of the City limits. Based upon the most recent noise contours for the Watts Woodland and Yolo County Airports contained within the Yolo County 2030 General Plan EIR (April 2009) and recent noise contours obtained from Sacramento International Airport Master Plan 2004, areas within the City's Urban Limit Line are located outside of the 60 dB CNEL contours.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

There are no applicable proposed policies.

Summary of Impact after Mitigation

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

Table 4.11-1. Relationship Between Increases in Environmental Noise Level and Human Perception	
Noise Level Increase, dB	Human Perception (typical)
0	Reference (no change)
1 to 2	not perceptible
+ 3	barely perceptible increase
+ 5	readily perceptible increase
+ 10	Two times as loud
+ 20	Four times as loud
+ 30	Eight times as loud
+ 40	16 times as loud
Source: Caltrans 2013	

Table 4.11-2. Summary of Short-term Ambient Noise Level Survey Results

Site	Location	Time Period	Measured Sound Level, dB 2013 (1995)		
			L_{eq}	L_{max}	L_{dn}
ST-01	Campbell Park	L_{d1}	57 (49)	75 (65)	
		L_{d2}	56 (52)	73 (64)	56 (53)
		L_n	45 (46)	63 (63)	
ST-02	Tredway Park	L_{d1}	54	77	
		L_{d2}	54	66	58
		L_n	51	76	
ST-03	Woodside Park	L_{d1}	55 (49)	68 (62)	
		L_{d2}	58 (53)	70 (64)	63 (55)
		L_n	57 (48)	77 (62)	
ST-04	133 E Heritage Pkwy (Spring Lake Area)	L_{d1}	52	74	
		L_{d2}	51	71	51
		L_n	41	63	
ST-05	Northwest Corner of Kentucky Ave & Walnut St	L_{d1}	67	82	
		L_{d2}	66	77	69
		L_n	61	79	
ST-06	Private Ranch, South of I-5, East of Hwy 102	L_{d1}	52	73	
		L_{d2}	49	61	54
		L_n	46	69	
ST-07	Beamer Park	L_{d1}	51 (49)	64 (61)	
		L_{d2}	55 (50)	75 (59)	58 (54)
		L_n	52 (48)	74 (59)	
ST-08	Pool, Americas Best Value Inn & Suites	L_{d1}	58	68	
		L_{d2}	61	73	61
		L_n	53	75	
ST-09	Ramon S Tafoya Elementary School	L_{d1}	49	61	
		L_{d2}	50	63	56
		L_n	50	72	

Table 4.11-2. Summary of Short-term Ambient Noise Level Survey Results

Site	Location	Time Period	Measured Sound Level, dB 2013 (1995)		
			L_{eq}	L_{max}	L_{dn}
ST-10	Southwest Corner of Co Hwy E8 (102) & Kentucky Ave	L_{d1}	67	82	68
		L_{d2}	66	79	
		L_n	59	82	
ST-11	Downtown, Southeast corner of Main St & 5th St	L_{d1}	65	76	66
		L_{d2}	64	72	
		L_n	58	73	

Note: dB = decibels; L_{dn} = day-night average noise level; L_{eq} = energy-equivalent noise level; L_{max} = maximum sound level.
L_d = Average measured sound level during daytime hours (7:00 am – 10:00 pm)
L_{d1}= Average measured sound level before noon
L_{d2}= Average measured sound level after noon
L_n = Average measured sound level during nighttime hours (10:00 pm – 7:00 am)
ST = Short Term

Table 4.11-3. Summary of Long-term Ambient Noise Level Survey Results

Site	Location	Measured Sound Level, dB						
		March 2013					1995	2013 Versus 1995
		Day (7a.m.–10p.m.)		Night (10p.m.–7a.m)		Est. L_{dn}	Est. L_{dn}	
		Avg. (Range) L_{eq}	Avg. (Range) L_{max}	Avg. (Range) L_{eq}	Avg. (Range) L_{max}			
LT - 01	1435 Roosevelt Drive	62 (57–66)	78 (70–84)	54 (51–57)	68 (65–73)	63	55	+8
LT - 02	213 Glacier Place	54 (42–59)	73 (59–84)	47 (39–50)	57 (52–65)	55	53	+2
LT - 03	2795 Ortiz Avenue	54 (51–56)	69 (62–73)	49 (47–51)	64 (61–68)	56	54	+2

Note: dB = decibels; L_{dn} = day-night average noise level; L_{eq} = energy-equivalent noise level; L_{max} = maximum sound level; ST = Short Term
Source: AECOM 2013.

Table 4.11-4. Existing Traffic Noise Levels and Contour Distances

ID	Roadway	Roadway Segment	ADT	L_{dn} @ 50 ft	Distance to Contours		
					60 dBA L_{dn}	65 dBA L_{dn}	70 dBA L_{dn}
1	County Road 98	From W. Kentucky Avenue to North of W. Kentucky Avenue	7,652	65	148	47	15
2	County Road 98	From W. Kentucky Avenue to W. Beamer Street	7,462	67	230	73	23
3	County Road 98	From W. Beamer Street to W. Main Street	6,241	67	266	84	27
4	County Road 98	From Main Street to W. Cross Street	3,736	68	307	97	31
5	County Road 98	From W. Cross Street to W. Gibson Road	5,500	67	269	85	27
6	County Road 98	From W. Gibson Road to South of W. Gibson Road	10,411	66	187	59	19
7	N. Ashley Avenue	From W. Kentucky Avenue to North of W. Kentucky Avenue	10,299	55	15	5	2
8	N. Ashley Avenue	From W. Kentucky Avenue to W. Beamer Street	7,653	59	42	13	4
9	Ashley Avenue	From W. Court Street to W. Main Street	2,500	63	102	32	10

Table 4.11-4. Existing Traffic Noise Levels and Contour Distances

ID	Roadway	Roadway Segment	ADT	L_{dn} @ 50 ft	Distance to Contours		
					60 dBA L_{dn}	65 dBA L_{dn}	70 dBA L_{dn}
10	Ashley Avenue	From W. Main Street to W. Lincoln Avenue	1,825	62	87	28	9
11	Ashley Avenue	From W. Lincoln Avenue to W. Cross Street	1,000	61	70	22	7
12	Ashley Avenue	From W. Cross Street to W. Gibson Road	10,237	61	65	21	7
13	Ashley Avenue	From W. Gibson Road to W. El Dorado Drive	12,827	58	35	11	3
14	N. Cottonwood Street	From W. Kentucky Avenue to W. Beamer Street	13,975	60	48	15	5
15	Cottonwood Street	From W. Beamer Street to W. Court Street	13,015	62	86	27	9
16	Cottonwood Street	From W. Court Street to W. Main Street	15,000	64	122	39	12
17	Cottonwood Street	From W. Main Street to W. Lincoln Avenue	13,650	62	77	24	8
18	Cottonwood Street	From W. Lincoln Avenue to W. Cross Street	15,576	63	104	33	10
19	Cottonwood Street	From W. Cross Street to W. Gibson Road	24,015	63	92	29	9
20	Cottonwood Street	From W. Gibson Road to W. El Dorado Drive	25,000	60	49	15	5
21	California Street	From W. Beamer Street to W. Main Street	28,891	62	77	24	8
22	California Street	From W. Main Street to W. Cross Street	31,000	61	63	20	6
23	California Street	From W. Cross Street to W. Gibson Road	23,000	56	18	6	2
24	N. West Street	From W. Kentucky Avenue to North of W. Kentucky Avenue	8,233	64	120	38	12
25	N. West Street	From W. Kentucky Avenue to W. Beamer Street	5,581	63	99	31	10
26	West Street	From W. Beamer Street to W. Court Street	2,114	64	130	41	13
27	West Street	From W. Court Street to W. Main Street	2,700	64	137	43	14
28	West Street	From W. Main Street to W. Lincoln Avenue	4,270	64	140	44	14
29	West Street	From W. Lincoln Avenue to W. Cross Street	4,500	64	133	42	13
30	West Street	From W. Cross Street to W. Gibson Road	3,000	64	136	43	14
31	West Street	From W. Gibson Road to South of W. Gibson Road	5,903	62	83	26	8
32	N. College Street	From Kentucky Avenue to Beamer Street	4,573	59	43	13	4
33	College Street	From Beamer Street to Court Street	5,000	60	52	16	5
34	College Street	From Court Street to Main Street	3,000	61	63	20	6
35	College Street	From Main Street to Lincoln Avenue	7,155	59	42	13	4
36	College Street	From Cross Street to Gibson Road	8,153	59	42	13	4
37	College Street	From Gibson Road to South of Gibson Road	8,500	60	49	15	5
38	3rd Street	From Beamer Street to Main Street	3,000	59	42	13	4
39	3rd Street	From Main Street to Cross Street	4,801	58	35	11	3
40	3rd Street	From Cross Street to Gibson Road	4,087	59	42	13	4
41	3rd Street	From Gibson Road to South of Gibson Road	6,022	56	22	7	2
42	N. East Street	From Kentucky Avenue to North of Kentucky Avenue	10,897	67	225	71	22
43	N. East Street	From Kentucky Avenue to Beamer Street	3,000	65	155	49	15
44	East Street	From Court Street to Main Street	4,000	68	291	92	29
45	East Street	From Main Street to Cross Street	5,658	66	207	65	21
46	East Street	From Cross Street to Gum Avenue	7,914	67	227	72	23
47	East Street	From Gum Avenue to E. Gibson Road	13,085	65	149	47	15
48	East Street	From E. Gibson Road to Sports Park Drive	15,717	64	113	36	11
49	East Street	From Sports Park Drive to South of Sports Park Drive	17,936	62	73	23	7

Table 4.11-4. Existing Traffic Noise Levels and Contour Distances

ID	Roadway	Roadway Segment	ADT	L_{dn} @ 50 ft	Distance to Contours		
					60 dBA L_{dn}	65 dBA L_{dn}	70 dBA L_{dn}
50	Matmor Road	From E. Main Street to E. Gum Avenue	21,024	63	97	31	10
51	Matmor Road	From E. Gum Avenue to E. Gibson Road	21,564	62	74	24	7
52	Matmor Road	From E. Gibson Road to Sports Park Drive	21,000	60	53	17	5
53	Industrial Way	From Cannery Road to E. Main Street	23,465	54	14	4	1
54	Bourn Drive	From E. Gum Avenue to E. Gibson Road	23,000	57	28	9	3
55	County Road 101	From E. Gibson Road to South of E. Gibson Road	22,748	52	7	2	1
56	N. Pioneer Avenue	From Churchill Downs Avenue to E. Kentucky Avenue	14,640	62	74	23	7
57	N. Pioneer Avenue	From E. Kentucky Avenue to E. Beamer Street	1,500	64	119	38	12
58	Pioneer Avenue	From E. Beamer Street to E. Main Street	3,000	66	219	69	22
59	Pioneer Avenue	From E. Main Street to E. Gum Avenue	2,500	67	263	83	26
60	Pioneer Avenue	From E. Gum Avenue to E. Gibson Road	1,978	67	243	77	24
61	Pioneer Avenue	From E. Gibson Road to Farmers Central Road	1,000	59	43	14	4
62	Ogden Street	From Branigan Avenue to E. Gibson Road	1,479	58	32	10	3
63	Miekle Avenue	From Farmers Central Road to E. Heritage Parkway	26,500	55	15	5	1
64	County Road 102	From E. Kentucky Avenue to North of E. Kentucky Avenue	28,275	65	147	47	15
65	County Road 102	From E. Kentucky Avenue to E. Beamer Street	31,757	65	170	54	17
66	County Road 102	From E. Beamer Street to E. Main Street	26,000	68	311	98	31
67	County Road 102	From E. Main Street to I-5 Northbound Ramps	39,507	70	525	166	53
68	County Road 102	From I-5 Northbound Ramps to I-5 Southbound Ramps	48,837	71	582	184	58
69	County Road 102	From I-5 Southbound Ramps to Maxwell Avenue	24,758	72	768	243	77
70	County Road 102	From Maxwell Avenue to E. Gibson Road	20,585	71	602	190	60
71	County Road 102	From E. Gibson Road to Farmers Central Road	22,442	69	445	141	45
72	County Road 102	From Farmers Central Road to E. Heritage Parkway	11,000	68	315	100	32
73	County Road 102	From E. Heritage Parkway to South of E. Heritage Parkway	7,652	69	380	120	38
74	W. Kentucky Avenue	From County Road 98 to N. Ashley Avenue	7,462	63	110	35	11
75	W. Kentucky Avenue	From N. Ashley Avenue to N. Cottonwood Street	6,241	65	161	51	16
76	W. Kentucky Avenue	From N. Cottonwood Street to N. West Street	3,736	67	224	71	22
77	Kentucky Avenue	From N. West Street to N. College Street	5,500	67	230	73	23
78	Kentucky Avenue	From N. College Street to N. East Street	10,411	67	258	82	26
79	E. Kentucky Avenue	From N. East Street to N. Pioneer Avenue	10,299	64	121	38	12
80	E. Kentucky Avenue	From N. Pioneer Avenue to County Road 102	7,653	61	61	19	6
81	W. Woodland Avenue	From County Road 102 to N. Cottonwood Street	2,500	56	21	7	2
82	W. Woodland Avenue	From N. Cottonwood Street to N. West Street	1,825	59	42	13	4
83	W. Beamer Street	From County Road 98 to N. Ashley Avenue	1,000	56	20	6	2
84	W. Beamer Street	From N. Cottonwood Street to N. West Street	10,237	62	83	26	8
85	Beamer Street	From N. West Street to N. College Street	12,827	63	106	34	11
86	Beamer Street	From N. College Street to N. East Street	13,975	62	72	23	7
87	E. Beamer Street	From N. East Street to N. Pioneer Avenue	13,015	65	152	48	15
88	E. Beamer Street	From N. Pioneer Avenue to County Road 102	15,000	64	121	38	12

Table 4.11-4. Existing Traffic Noise Levels and Contour Distances

ID	Roadway	Roadway Segment	ADT	L_{dn} @ 50 ft	Distance to Contours		
					60 dBA L_{dn}	65 dBA L_{dn}	70 dBA L_{dn}
89	W. Court Street	From Ashley Avenue to Cottonwood Street	13,650	62	77	24	8
90	W. Court Street	From Cottonwood Street to West Street	15,576	65	145	46	14
91	Court Street	From West Street to College Street	24,015	65	143	45	14
92	Court Street	From College Street to East Street	25,000	63	107	34	11
93	North Street	From 3rd Street to East Street	28,891	58	35	11	3
94	Lemen Avenue	From East Street to Matmor Road	31,000	57	25	8	3
95	Cannery Road	From Matmor Road to Industrial Way	23,000	56	18	6	2
96	W. Main Street	From County Road 98 to Ashley Avenue	8,233	66	182	58	18
97	W. Main Street	From Ashley Avenue to Cottonwood Street	5,581	67	228	72	23
98	W. Main Street	From Cottonwood Street to West Street	2,114	67	248	79	25
99	Main Street	From West Street to College Street	2,700	67	244	73	23
100	Main Street	From Walnut Street to College Street	4,270	67	267	84	27
101	Main Street	From College Street to 3rd Street	4,500	67	243	77	24
102	Main Street	From 3rd Street to East Street	3,000	67	277	88	28
103	E. Main Street	From East Street to Matmor Road	5,903	69	427	135	43
104	E. Main Street	From Matmor Road to Industrial Way	4,573	69	444	141	44
105	E. Main Street	From SR 113 Southbound Ramps to SR 113 Northbound Ramps	5,000	70	514	162	51
106	E. Main Street	From SR 113 Northbound Ramps to Pioneer Avenue	3,000	70	551	174	55
107	E. Main Street	From Pioneer Avenue to I-5 Northbound Ramps	7,155	69	409	129	41
108	E. Main Street	From I-5 Northbound Ramps to County Road 102	8,153	66	241	46	15
109	E. Main Street	From County Road 102 to East of County Road 103	8,500	63	99	31	10
110	W. Lincoln Avenue	From County Road 98 to Ashley Avenue	3,000	58	29	9	3
111	W. Lincoln Avenue	From Ashley Avenue to Cottonwood Street	4,801	59	38	12	4
112	W. Lincoln Avenue	From Cottonwood Street to West Street	4,087	61	59	19	6
113	Lincoln Avenue	From West Street to 3rd Street	6,022	61	63	20	6
114	W. Cross Street	From County Road 98 to Cottonwood Street	10,897	59	42	13	4
115	W. Cross Street	From Cottonwood Street to West Street	3,000	62	82	26	8
116	Cross Street	From West Street to College Street	4,000	61	64	20	6
117	Cross Street	From College Street to East Street	5,658	61	70	22	7
118	E. Gum Avenue	From 4th Street to East Street	7,914	59	42	13	4
119	E. Gum Avenue	From East Street to Matmor Road	13,085	64	127	40	13
120	E. Gum Avenue	From Matmor Road to Bourn Drive	15,717	65	145	46	14
121	E. Gum Avenue	From Bourn Drive to Pioneer Avenue	17,936	65	151	48	15
122	Farnham Avenue	From Pioneer Avenue to E. Gum Avenue	21,024	60	53	17	5
123	E. Gum Avenue	From Pioneer Avenue to Farnham Avenue	21,564	61	67	21	7
124	Farnham Avenue	From E. Gum Avenue to Maxwell Avenue	21,000	61	57	18	6
125	Maxwell Avenue	From Farnham Avenue to County Road 102	23,465	62	84	27	8
126	Maxwell Avenue	From County Road 102 to East of County Road 103	23,000	65	152	48	15
127	Farnham Avenue	From Maxwell Avenue to Branigan Avenue	22,748	59	42	13	4
128	Branigan Avenue	From Pioneer Avenue to Farnham Avenue	14,640	60	56	18	6
129	W. Gibson Road	From County Road 98 to Ashley Avenue	1,500	63	101	32	10

Table 4.11-4. Existing Traffic Noise Levels and Contour Distances

ID	Roadway	Roadway Segment	ADT	L_{dn} @ 50 ft	Distance to Contours		
					60 dBA L_{dn}	65 dBA L_{dn}	70 dBA L_{dn}
130	W. Gibson Road	From Ashley Avenue to Cottonwood Street	3,000	64	141	44	14
131	W. Gibson Road	From Cottonwood Street to West Street	2,500	67	233	74	23
132	Gibson Road	From West Street to College Street	1,978	67	279	88	28
133	Gibson Road	From College Avenue to Coloma Way	1,000	68	319	101	32
134	Gibson Road	From Coloma Way to East Street	1,479	69	374	118	37
135	E. Gibson Road	From East Street to Matmor Road	26,500	69	383	121	38
136	E. Gibson Road	From Matmor Road to SR 113 Southbound Ramps	28,275	69	373	118	37
137	E. Gibson Road	From SR 113 Southbound Ramps to SR 113 Northbound Ramps	31,757	69	417	132	42
138	E. Gibson Road	From SR 113 Northbound Ramps to Bourn Drive	26,000	69	409	129	41
139	E. Gibson Road	From Bourn Drive to Pioneer Avenue	39,507	69	404	128	40
140	E. Gibson Road	From Pioneer Avenue to County Road 102	48,837	67	260	82	26
141	El Dorado Drive	From County Road 98 to West Street	24,758	56	21	7	2
142	El Dorado Drive	From West Street to College Street	20,585	59	42	13	4
143	Farmers Central Road	From Pioneer Avenue to Miekle Avenue	22,442	58	35	11	3
144	Farmers Central Road	From Miekle Avenue to County Road 102	11,000	57	28	9	3
145	E. Heritage Parkway	From Parkland Avenue to Miekle Avenue	7,652	57	24	8	2
146	E. Heritage Parkway	From Miekle Avenue to County Road 102	7,462	59	36	11	4
147	I-5 Mainline	From County Road 98 to West Street	6,241	76	2188	692	219
148	I-5 Mainline	From West Street to East Street	3,736	77	2335	738	234
149	I-5 Mainline	From East Street to SR 113	5,500	77	2623	829	262
150	I-5 Mainline	From SR 113 to E. Main Street	10,411	76	2147	679	215
151	I-5 Mainline	From E. Main Street to County Road 102	10,299	78	3263	1032	326
152	I-5 Mainline	From County Road 102 to East of County Road 103	7,653	79	4,033	1,275	403
153	SR 113	From I-5 to E. Main Street	2,500	76	2045	647	204
154	SR 113	From E. Main Street to E. Gibson Road	1,825	75	1700	538	170
155	SR 113	From E. Gibson Road to South of E. Gibson Road	1,000	76	1853	586	185
156	SR 16	From County Road 98 to West of County Road 99	10,237	73	908	287	91
157	County Road 24	From County Road 102 to County Road 103	n/a	n/a	n/a	n/a	n/a
158	Bronze Star Drive	From County Road 102 to County Road 103	n/a	n/a	n/a	n/a	n/a
159	County Road 103	From County Road 22 to I-5 WB Ramps	n/a	n/a	n/a	n/a	n/a
160	County Road 103	From 1-5 WB Ramps to 1-5 EB Ramps	n/a	n/a	n/a	n/a	n/a
161	County Road 103	From I-5 EB Ramps to Bronze Star Drive	n/a	n/a	n/a	n/a	n/a
162	County Road 103	From Bronze Star Drive to County Road 25	n/a	n/a	n/a	n/a	n/a
163	County Road 25A	From Bourn Drive to County Road 102	n/a	n/a	n/a	n/a	n/a
164	Marston Road	From Pioneer Avenue to County Road 25A	n/a	n/a	n/a	n/a	n/a
165	Farmers Central Road	From Pioneer Avenue to Harry Lorenzo Avenue	n/a	n/a	n/a	n/a	n/a
166	Pioneer Avenue	From Parkland Avenue to Harry Lorenzo Avenue	n/a	n/a	n/a	n/a	n/a
167	Pioneer Avenue	From Harry Lorenzo Avenue to Matmor Drive	n/a	n/a	n/a	n/a	n/a
168	Pioneer Avenue	From Matmor Drive to East Street	n/a	n/a	n/a	n/a	n/a
169	Matmor Road	From Sports Park Drive to Unnamed Road	n/a	n/a	n/a	n/a	n/a

Table 4.11-4. Existing Traffic Noise Levels and Contour Distances

ID	Roadway	Roadway Segment	ADT	L_{dn} @ 50 ft	Distance to Contours		
					60 dBA L_{dn}	65 dBA L_{dn}	70 dBA L_{dn}
170	Parkland Avenue	From Farmers Central Road to E. Heritage Parkway	n/a	n/a	n/a	n/a	n/a
171	Parkland Avenue	From E. Heritage Parkway to County Road 25A	n/a	n/a	n/a	n/a	n/a
172	Sports Park Drive	From College Street to East Street	n/a	n/a	n/a	n/a	n/a
173	Sports Park Drive	From East Street to Matmor Road	n/a	n/a	n/a	n/a	n/a
174	I-5 NB Ramp	From I-5 NB to SR 113	n/a	n/a	n/a	n/a	n/a
175	I-5 NB Ramp	From I-5 NB Off Ramp to County Road 103	n/a	n/a	n/a	n/a	n/a
176	I-5 NB Ramp	From I-5 NB On Ramp to County Road 103	n/a	n/a	n/a	n/a	n/a
177	I-5 SB Ramp	From I-5 SB Off Ramp to County Road 103	n/a	n/a	n/a	n/a	n/a
178	I-5 SB Ramp	From I-5 SB On Ramp to County Road 103	n/a	n/a	n/a	n/a	n/a

Notes: dB = decibels; L_{dn} = Day-Night Average sound level; n/a = Roadway segments that are not currently existing, but were analyzed in the project's traffic impact study for future alternatives. These roadway segments will be added in the future planned areas. Some of these new segments are included under both alternatives, and some are different between alternatives Shown here, because future roadway noise levels will be compared to the existing roadway noise levels, later in this section (Table 4.11-12 and Table 4.11-14). All tables use a consistent segment numbering approach for easier referencing. The same segment numbers are used even when the segment is new and does not have any data for the existing condition.

* Volumes are averaged from two daily traffic counts.

**Volumes are AADT and from Caltrans traffic counts.

Source: Traffic data from Fehr & Peers Associates 2013, and 2016, noise modeling conducted by AECOM 2016.

Table 4.11-5. Noise Exposure from Operation of Typical Farming Equipment (Tractor)

Distance from Source (feet)	Calculated Noise Level (dB)
50	84
100	78
200	72
400	66
800	60
1,600	54

Note: dB = decibels.

Source: Toth 1979.

Table 4.11-6. Existing General Plan Noise Standards, New Projects and Non-transportation Sources (Table 8-1 of the City of Woodland General Plan)

Noise Level Descriptor	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Hourly L_{eq}, dB	50	45
Maximum Level (L_{max}), dB	70	65

Notes: dB = decibels; L_{eq} = energy-equivalent noise level.

Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

* For the purposes of compliance with the provisions of this section, the City defines transportation noise sources as traffic on public roadways, railroad line operations, and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Other noise sources are presumed to be subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, and loading docks.

Source: City of Woodland General Plan, Noise Element (2002)

Table 4.11-7. Feasibility of Developments with Respect to Noise (Figure 8-1 of the City of Woodland General Plan)

Land Use Category	Community Noise Exposure Level (L_{dn} or CNEL, dBA)						
	55	60	65	70	75	80	
Residential, Theaters, Auditoriums, Meeting Halls, Churches							
Transient Lodging – Motels, Hotels							
Schools, Libraries, Hospitals, Child Care, Museums							
Playgrounds, Neighborhood Parks							
Office Buildings, Retail, Commercial							
Industrial, Utilities, Manufacturing							
Golf Courses, Outdoor Spectator Sports							

Feasible: Specified land use is satisfactory. No noise mitigation measures are required.

Probably Feasible: Use should be permitted only after careful study and inclusion of mitigation measures as needed to satisfy the policies of the Noise Element.

Usually Not Feasible: Development is usually not feasible in accordance with the goals and policies of the noise section of the General Plan.

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level; CNEL = Community Noise Equivalent Level.
Source: City of Woodland General Plan, December 2002.

Table 4.11-8. Existing General Plan Transportation Noise Standards (Table 8-2 of the City of Woodland General Plan)

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[3]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes: dB = decibels; L_{dn} = day-night average noise level; CNEL = Community Noise Equivalent Level.

1. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. For residential uses with front yards facing the identified noise source, an exterior noise level criterion of 65 dB L_{dn} shall be applied at the building facade, in addition to a 60 dB L_{dn} criterion at the outdoor activity area.
2. As determined for a typical worst-case hour during periods of use.
3. Where it is not possible to re duce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table 4.11-9. Typical Construction Equipment Noise Levels

Type of Equipment	Noise Level in dB at 50 feet	
	Without Feasible Noise Control	With Noise Control [1]
Dozer or Tractor	80	75
Excavator	88	80
Compactor	82	75
Front-end Loader	79	75
Backhoe	85	75
Grader	85	75
Crane	83	75
Generator	78	75
Truck	91	75
Pile Driver	101	-

Note: dB = decibels.

[1] Noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds in accordance with manufacturer's specifications.

Sources: EPA 1971; FTA 2006.

Table 4.11-10. Noise at 50 Feet and Distances to 60 dBA, 65 dBA and 70 dBA L_{dn} Traffic Noise Contours, East and South Alternatives

No.	Roadway	Roadway Segment	East Alternative						South Alternative					
			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours		
						70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}				70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}
1	County Road 98	From W. Kentucky Avenue to North of W. Kentucky Avenue	4,850	45	65	16	50	157	4,900	45	65	16	50	158
2	County Road 98	From W. Kentucky Avenue to W. Beamer Street	8,360	45	67	27	86	270	8,960	45	68	29	92	290
3	County Road 98	From W. Beamer Street to W. Main Street	9,690	45	68	31	99	313	10,430	45	68	34	107	337
4	County Road 98	From Main Street to W. Cross Street	9,650	45	68	31	99	312	10,090	45	68	33	103	326
5	County Road 98	From W. Cross Street to W. Gibson Road	8,420	45	67	27	86	272	8,440	45	67	27	86	273
6	County Road 98	From W. Gibson Road to South of W. Gibson Road	6,310	45	66	20	65	204	6,350	45	66	21	65	205
7	N. Ashley Avenue	From W. Kentucky Avenue to North of W. Kentucky Avenue	1,670	30	57	2	7	23	1,890	30	57	3	8	26
8	N. Ashley Avenue	From W. Kentucky Avenue to W. Beamer Street	3,260	30	60	5	14	45	3,520	30	60	5	15	49
9	Ashley Avenue	From W. Court Street to W. Main Street	7,530	30	63	10	33	105	7,560	30	63	11	33	105
10	Ashley Avenue	From W. Main Street to W. Lincoln Avenue	6,400	30	63	9	28	89	6,460	30	63	9	28	90
11	Ashley Avenue	From W. Lincoln Avenue to W. Cross Street	5,040	30	61	7	22	70	5,080	30	62	7	22	71
12	Ashley Avenue	From W. Cross Street to W. Gibson Road	4,740	30	61	7	21	66	4,800	30	61	7	21	67
13	Ashley Avenue	From W. Gibson Road to W. El Dorado Drive	2,530	30	58	4	11	35	2,530	30	58	4	11	35
14	N. Cottonwood Street	From W. Kentucky Avenue to W. Beamer Street	3,710	30	60	5	16	52	3,810	30	60	5	17	53
15	Cottonwood Street	From W. Beamer Street to W. Court Street	6,270	30	62	9	28	87	6,330	30	62	9	28	88
16	Cottonwood Street	From W. Court Street to W. Main Street	8,810	30	64	12	39	123	8,980	30	64	12	40	125
17	Cottonwood Street	From W. Main Street to W. Lincoln Avenue	8,130	25	62	8	25	79	8,300	25	62	8	25	80
18	Cottonwood Street	From W. Lincoln Avenue to W. Cross Street	7,600	30	63	11	33	106	7,720	30	63	11	34	107
19	Cottonwood Street	From W. Cross Street to W. Gibson Road	6,720	30	63	9	30	94	6,710	30	63	9	30	93
20	Cottonwood Street	From W. Gibson Road to W. El Dorado Drive	3,530	30	60	5	16	49	3,510	30	60	5	15	49
21	California Street	From W. Beamer Street to W. Main Street	5,600	30	62	8	25	78	5,600	30	62	8	25	78
22	California Street	From W. Main Street to W. Cross Street	4,530	30	61	6	20	63	4,510	30	61	6	20	63
23	California Street	From W. Cross Street to W. Gibson Road	1,320	30	56	2	6	18	1,340	30	56	2	6	19
24	N. West Street	From W. Kentucky Avenue to North of W. Kentucky Avenue	8,890	30	64	12	39	124	9,070	30	64	13	40	126
25	N. West Street	From W. Kentucky Avenue to W. Beamer Street	8,100	30	64	11	36	113	8,240	30	64	11	36	115
26	West Street	From W. Beamer Street to W. Court Street	9,950	30	64	14	44	138	10,280	30	65	14	45	143
27	West Street	From W. Court Street to W. Main Street	10,200	30	65	14	45	142	10,580	30	65	15	47	147
28	West Street	From W. Main Street to W. Lincoln Avenue	10,390	30	65	14	46	145	10,480	30	65	15	46	146
29	West Street	From W. Lincoln Avenue to W. Cross Street	9,760	30	64	14	43	136	10,050	30	64	14	44	140
30	West Street	From W. Cross Street to W. Gibson Road	9,860	30	64	14	43	137	10,120	30	64	14	45	141
31	West Street	From W. Gibson Road to South of W. Gibson Road	6,710	30	63	9	30	93	6,630	30	63	9	29	92
32	N. College Street	From Kentucky Avenue to Beamer Street	3,420	30	60	5	15	48	3,650	30	60	5	16	51
33	College Street	From Beamer Street to Court Street	3,900	30	60	5	17	54	4,260	30	61	6	19	59
34	College Street	From Court Street to Main Street	4,640	30	61	6	20	65	5,050	30	61	7	22	70
35	College Street	From Main Street to Lincoln Avenue	4,600	25	59	4	14	45	4,820	25	60	5	15	47
36	College Street	From Cross Street to Gibson Road	4,620	25	60	4	14	45	4,890	25	60	5	15	47
37	College Street	From Gibson Road to South of Gibson Road	3,820	30	60	5	17	53	4,510	30	61	6	20	63
38	3rd Street	From Beamer Street to Main Street	3,060	30	59	4	13	43	3,360	30	60	5	15	47

Table 4.11-10. Noise at 50 Feet and Distances to 60 dBA, 65 dBA and 70 dBA L_{dn} Traffic Noise Contours, East and South Alternatives

No.	Roadway	Roadway Segment	East Alternative						South Alternative					
			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours		
						70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}				70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}
39	3rd Street	From Main Street to Cross Street	2,620	30	59	4	12	36	2,760	30	59	4	12	38
40	3rd Street	From Cross Street to Gibson Road	3,640	30	60	5	16	51	3,700	30	60	5	16	51
41	3rd Street	From Gibson Road to South of Gibson Road	1,740	30	57	2	8	24	1,700	30	57	2	7	24
42	N. East Street	From Kentucky Avenue to North of Kentucky Avenue	11,090	40	67	27	85	270	11,330	40	67	28	87	275
43	N. East Street	From Kentucky Avenue to Beamer Street	7,730	40	66	19	59	188	9,180	40	66	22	71	223
44	East Street	From Court Street to Main Street	17,970	35	68	32	101	319	20,010	35	69	36	112	356
45	East Street	From Main Street to Cross Street	13,180	35	67	23	74	234	16,070	35	68	29	90	286
46	East Street	From Cross Street to Gum Avenue	14,540	35	67	26	82	258	17,380	35	68	31	98	309
47	East Street	From Gum Avenue to E. Gibson Road	9,740	35	65	17	55	173	12,320	35	66	22	69	219
48	East Street	From E. Gibson Road to Sports Park Drive	8,790	40	66	21	68	214	10,090	40	67	25	78	245
49	East Street	From Sports Park Drive to South of Sports Park Drive	7,090	40	65	17	55	172	8,860	40	66	22	68	215
50	Matmor Road	From E. Main Street to E. Gum Avenue	7,080	30	63	10	31	99	7,140	30	63	10	31	99
51	Matmor Road	From E. Gum Avenue to E. Gibson Road	5,400	30	62	8	24	75	5,740	30	62	8	25	80
52	Matmor Road	From E. Gibson Road to Sports Park Drive	4,350	30	61	6	19	61	5,150	30	62	7	23	72
53	Industrial Way	From Cannery Road to E. Main Street	1,080	30	55	2	5	15	1,110	30	55	2	5	15
54	Bourn Drive	From E. Gum Avenue to E. Gibson Road	2,090	30	58	3	9	29	2,150	30	58	3	9	30
55	County Road 101	From E. Gibson Road to South of E. Gibson Road	2,800	50	64	12	37	118	2,460	50	63	10	33	103
56	N. Pioneer Avenue	From Churchill Downs Avenue to E. Kentucky Avenue	3,440	40	62	8	26	84	3,370	40	62	8	26	82
57	N. Pioneer Avenue	From E. Kentucky Avenue to E. Beamer Street	6,890	40	65	17	53	168	6,940	40	65	17	53	169
58	Pioneer Avenue	From E. Beamer Street to E. Main Street	13,370	40	68	33	103	325	13,180	40	68	32	101	320
59	Pioneer Avenue	From E. Main Street to E. Gum Avenue	15,600	40	69	38	120	379	15,950	40	69	39	123	388
60	Pioneer Avenue	From E. Gum Avenue to E. Gibson Road	17,290	40	69	42	133	420	17,290	40	69	42	133	420
61	Pioneer Avenue	From E. Gibson Road to Farmers Central Road	20,850	25	66	20	64	202	19,900	25	66	19	61	193
62	Ogden Street	From Branigan Avenue to E. Gibson Road	2,700	30	59	4	12	38	2,840	30	59	4	12	40
63	Miekle Avenue	From Farmers Central Road to E. Heritage Parkway	1,280	30	56	2	6	18	1,280	30	56	2	6	18
64	County Road 102	From E. Kentucky Avenue to North of E. Kentucky Avenue	4,770	50	66	20	63	201	4,660	50	66	20	62	196
65	County Road 102	From E. Kentucky Avenue to E. Beamer Street	10,550	45	68	34	108	341	10,170	45	68	33	104	329
66	County Road 102	From E. Beamer Street to E. Main Street	19,970	45	71	65	204	646	19,170	45	71	62	196	620
67	County Road 102	From E. Main Street to I-5 Northbound Ramps	26,420	45	72	85	270	855	27,070	45	72	88	277	876
68	County Road 102	From I-5 Northbound Ramps to I-5 Southbound Ramps	25,750	45	72	83	263	833	26,640	45	72	86	272	862
69	County Road 102	From I-5 Southbound Ramps to Maxwell Avenue	32,640	45	73	106	334	1056	34,350	45	73	111	351	1,111
70	County Road 102	From Maxwell Avenue to E. Gibson Road	35,440	45	74	115	363	1146	31,710	45	73	103	324	1,026
71	County Road 102	From E. Gibson Road to Farmers Central Road	22,300	50	73	94	296	937	21,370	50	73	90	284	898
72	County Road 102	From Farmers Central Road to E. Heritage Parkway	13,060	50	70	55	174	549	12,330	50	70	52	164	518
73	County Road 102	From E. Heritage Parkway to South of E. Heritage Parkway	12,060	50	70	51	160	507	11,500	50	70	48	153	483
74	W. Kentucky Avenue	From County Road 98 to N. Ashley Avenue	5,470	40	64	13	42	133	5,730	40	64	14	44	139
75	W. Kentucky Avenue	From N. Ashley Avenue to N. Cottonwood Street	8,190	40	66	20	63	199	9,050	40	66	22	70	220
76	W. Kentucky Avenue	From N. Cottonwood Street to N. West Street	11,230	40	67	27	86	273	12,050	40	68	29	93	293

Table 4.11-10. Noise at 50 Feet and Distances to 60 dBA, 65 dBA and 70 dBA L_{dn} Traffic Noise Contours, East and South Alternatives

No.	Roadway	Roadway Segment	East Alternative						South Alternative					
			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours		
						70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}				70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}
77	Kentucky Avenue	From N. West Street to N. College Street	12,780	40	68	31	98	311	13,230	40	68	32	102	322
78	Kentucky Avenue	From N. College Street to N. East Street	14,610	40	69	36	112	355	15,710	40	69	38	121	382
79	E. Kentucky Avenue	From N. East Street to N. Pioneer Avenue	7,590	40	66	18	58	185	8,000	40	66	19	62	195
80	E. Kentucky Avenue	From N. Pioneer Avenue to County Road 102	7,210	40	65	18	55	175	7,290	40	65	18	56	177
81	W. Woodland Avenue	From County Road 98 to N. Cottonwood Street	1,580	30	56	2	7	22	1,730	30	57	2	8	24
82	W. Woodland Avenue	From N. Cottonwood Street to N. West Street	3,160	30	59	4	14	44	3,170	30	59	4	14	44
83	W. Beamer Street	From County Road 98 to N. Ashley Avenue	2,400	25	57	2	7	23	2,380	25	57	2	7	23
84	W. Beamer Street	From N. Cottonwood Street to N. West Street	6,150	30	62	9	27	86	6,290	30	62	9	28	88
85	Beamer Street	From N. West Street to N. College Street	8,380	30	64	12	37	117	8,680	30	64	12	38	121
86	Beamer Street	From N. College Street to N. East Street	8,360	25	62	8	26	81	8,890	25	62	9	27	86
87	E. Beamer Street	From N. East Street to N. Pioneer Avenue	7,500	40	66	18	58	182	7,610	40	66	19	59	185
88	E. Beamer Street	From N. Pioneer Avenue to County Road 102	6,980	45	67	23	71	226	6,950	45	67	22	71	225
89	W. Court Street	From Ashley Avenue to Cottonwood Street	5,620	30	62	8	25	78	5,820	30	62	8	26	81
90	W. Court Street	From Cottonwood Street to West Street	10,670	30	65	15	47	148	10,960	30	65	15	48	153
91	Court Street	From West Street to College Street	10,470	30	65	15	46	146	10,800	30	65	15	48	150
92	Court Street	From College Street to East Street	7,930	30	63	11	35	110	8,570	30	64	12	38	119
93	North Street	From 3rd Street to East Street	2,600	30	59	4	11	36	2,580	30	59	4	11	36
94	Lemen Avenue	From East Street to Matmor Road	1,920	30	57	3	8	27	2,040	30	58	3	9	28
95	Cannery Road	From Matmor Road to Industrial Way	1,100	35	56	2	6	20	1,120	35	56	2	6	20
96	W. Main Street	From County Road 98 to Ashley Avenue	12,310	35	66	22	69	219	12,920	35	67	23	73	230
97	W. Main Street	From Ashley Avenue to Cottonwood Street	13,990	35	67	25	79	249	14,660	35	67	26	82	261
98	W. Main Street	From Cottonwood Street to West Street	14,180	35	67	25	80	252	14,790	35	67	26	83	263
99	Main Street	From West Street to College Street	13,250	35	67	24	74	236	13,980	35	67	25	79	249
100	Main Street	From Walnut Street to College Street	15,700	35	67	28	88	279	16,830	35	68	30	95	299
101	Main Street	From College Street to 3rd Street	14,210	35	67	25	80	253	14,770	35	67	26	83	263
102	Main Street	From 3rd Street to East Street	16,670	35	68	30	94	296	17,600	35	68	31	99	313
103	E. Main Street	From East Street to Matmor Road	25,970	35	70	46	146	462	27,570	35	70	49	155	490
104	E. Main Street	From Matmor Road to Industrial Way	27,170	35	70	48	153	483	28,610	35	70	51	161	509
105	E. Main Street	From SR 113 Southbound Ramps to SR 113 Northbound Ramps	30,820	35	70	55	173	548	31,390	35	70	56	176	558
106	E. Main Street	From SR 113 Northbound Ramps to Pioneer Avenue	36,200	35	71	64	204	644	36,490	35	71	65	205	649
107	E. Main Street	From Pioneer Avenue to I-5 Northbound Ramps	25,070	35	70	45	141	446	24,570	35	69	44	138	437
108	E. Main Street	From Pioneer Avenue to County Road 102	12,180	35	68	22	68	217	11,060	35	68	20	62	197
109	E. Main Street	From County Road 102 to East of County Road 103	7,200	35	64	13	40	128	7,040	35	64	13	40	125
110	W. Lincoln Avenue	From County Road 98 to Ashley Avenue	2,190	30	58	3	10	30	2,200	30	58	3	10	31
111	W. Lincoln Avenue	From Ashley Avenue to Cottonwood Street	2,800	30	59	4	12	39	2,800	30	59	4	12	39
112	W. Lincoln Avenue	From Cottonwood Street to West Street	4,370	30	61	6	19	61	4,330	30	61	6	19	60
113	Lincoln Avenue	From West Street to 3rd Street	4,710	30	61	7	21	66	5,000	30	61	7	22	70
114	W. Cross Street	From County Road 98 to Cottonwood Street	3,070	30	59	4	14	43	3,090	30	59	4	14	43

Table 4.11-10. Noise at 50 Feet and Distances to 60 dBA, 65 dBA and 70 dBA L_{dn} Traffic Noise Contours, East and South Alternatives

No.	Roadway	Roadway Segment	East Alternative						South Alternative					
			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours		
						70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}				70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}
115	W. Cross Street	From Cottonwood Street to West Street	5,980	30	62	8	26	83	6,000	30	62	8	26	84
116	Cross Street	From West Street to College Street	4,750	30	61	7	21	66	4,800	30	61	7	21	67
117	Cross Street	From College Street to East Street	5,270	30	62	7	23	73	5,420	30	62	8	24	75
118	E. Gum Avenue	From 4th Street to East Street	3,100	30	59	4	14	43	3,310	30	60	5	15	46
119	E. Gum Avenue	From East Street to Matmor Road	7,490	35	64	13	42	133	7,670	35	64	14	43	136
120	E. Gum Avenue	From Matmor Road to Bourn Drive	8,820	35	65	16	50	157	8,490	35	65	15	48	151
121	E. Gum Avenue	From Bourn Drive to Pioneer Avenue	10,760	35	66	19	60	191	10,070	35	66	18	57	179
122	Farnham Avenue	From Pioneer Avenue to E. Gum Avenue	3,150	35	60	6	18	56	3,180	35	61	6	18	57
123	E. Gum Avenue	From Pioneer Avenue to Farnham Avenue	5,990	30	62	8	26	83	5,030	30	61	7	22	70
124	Farnham Avenue	From E. Gum Avenue to Maxwell Avenue	5,190	30	62	7	23	72	4,440	30	61	6	20	62
125	Maxwell Avenue	From Farnham Avenue to County Road 102	8,120	30	64	11	36	113	6,810	30	63	9	30	95
126	Maxwell Avenue	From County Road 102 to East of County Road 103	25,540	30	69	36	112	355	20,060	30	67	28	88	279
127	Farnham Avenue	From Maxwell Avenue to Branigan Avenue	3,070	30	59	4	14	43	3,170	30	59	4	14	44
128	Branigan Avenue	From Pioneer Avenue to Farnham Avenue	4,030	30	60	6	18	56	4,100	30	61	6	18	57
129	W. Gibson Road	From County Road 98 to Ashley Avenue	6,570	35	64	12	37	117	7,090	35	64	13	40	126
130	W. Gibson Road	From Ashley Avenue to Cottonwood Street	8,570	35	65	15	48	152	9,080	35	65	16	51	161
131	W. Gibson Road	From Cottonwood Street to West Street	14,260	35	67	25	80	254	14,920	35	67	27	84	265
132	Gibson Road	From West Street to College Street	16,480	35	68	29	93	293	17,170	35	68	31	97	305
133	Gibson Road	From College Avenue to Coloma Way	18,890	35	68	34	106	336	18,520	35	68	33	104	329
134	Gibson Road	From Coloma Way to East Street	23,410	35	69	42	132	416	22,970	35	69	41	129	408
135	E. Gibson Road	From East Street to Matmor Road	23,530	35	69	42	132	418	23,950	35	69	43	135	426
136	E. Gibson Road	From Matmor Road to SR 113 Southbound Ramps	25,420	35	70	45	143	452	25,790	35	70	46	145	459
137	E. Gibson Road	From SR 113 Southbound Ramps to SR 113 Northbound Ramps	27,020	35	70	48	152	480	25,750	35	70	46	145	458
138	E. Gibson Road	From SR 113 Northbound Ramps to Bourn Drive	27,950	35	70	50	157	497	25,060	35	69	45	141	446
139	E. Gibson Road	From Bourn Drive to Pioneer Avenue	26,090	35	70	46	147	464	23,380	35	69	42	131	416
140	E. Gibson Road	From Pioneer Avenue to County Road 102	21,250	35	69	38	119	378	18,550	35	68	33	104	330
141	El Dorado Drive	From County Road 98 to West Street	1,630	30	57	2	7	23	1,650	30	57	2	7	23
142	El Dorado Drive	From West Street to College Street	3,030	30	59	4	13	42	3,360	30	60	5	15	47
143	Farmers Central Road	From Pioneer Avenue to Miekle Avenue	8,990	30	64	13	40	125	8,960	30	64	12	39	125
144	Farmers Central Road	From Miekle Avenue to County Road 102	8,570	30	64	12	38	119	8,540	30	64	12	38	119
145	E. Heritage Parkway	From Parkland Avenue to Miekle Avenue	1,430	40	58	3	11	35	1,470	40	59	4	11	36
146	E. Heritage Parkway	From Miekle Avenue to County Road 102	3,090	40	62	8	24	75	3,050	40	62	7	23	74
147	I-5 Mainline	From County Road 98 to West Street	38,670	65	78	319	1010	3194	38,750	65	78	320	1,012	3,200
148	I-5 Mainline	From West Street to East Street	40,070	65	78	331	1046	3309	40,520	65	78	335	1,058	3,346
149	I-5 Mainline	From East Street to SR 113	46,360	65	79	383	1211	3829	46,420	65	79	383	1,212	3,834
150	I-5 Mainline	From SR 113 to E. Main Street	37,010	65	78	306	967	3056	36,710	65	78	303	959	3,032
151	I-5 Mainline	From E. Main Street to County Road 102	57,240	65	80	473	1495	4727	58,370	65	80	482	1,524	4,820
152	I-5 Mainline	From County Road 102 to East of County Road 103	64,690	65	80	534	1689	5342	72,960	65	81	603	1,905	6,025

Table 4.11-10. Noise at 50 Feet and Distances to 60 dBA, 65 dBA and 70 dBA L_{dn} Traffic Noise Contours, East and South Alternatives

No.	Roadway	Roadway Segment	East Alternative						South Alternative					
			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours			ADT	Speed (MPH)	dBA, L_{dn} at 50 feet	Distance to Contours		
						70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}				70 dBA L_{dn}	65 dBA L_{dn}	60 dBA L_{dn}
153	SR 113	From I-5 to E. Main Street	28,350	65	77	234	740	2341	28,720	65	77	237	750	2,372
154	SR 113	From E. Main Street to E. Gibson Road	34,410	65	78	284	899	2842	36,440	65	78	301	952	3,009
155	SR 113	From E. Gibson Road to South of E. Gibson Road	32,850	65	77	271	858	2713	33,980	65	77	281	887	2,806
156	SR 16	From County Road 98 to West of County Road 99	14,920	65	74	123	390	1232	15,410	65	74	127	402	1,273
157	County Road 24	From County Road 102 to County Road 103	3480	45	64	11	36	113	1,620	45	60	5	17	52
158	Bronze Star Drive	From County Road 102 to County Road 103	13150	30	66	18	58	183	3,920	30	60	5	17	55
159	County Road 103	From County Road 22 to I-5 WB Ramps	5070	45	65	16	52	164	n/a	n/a	n/a	n/a	n/a	n/a
160	County Road 103	From 1-5 WB Ramps to 1-5 EB Ramps	10010	45	68	32	102	324	n/a	n/a	n/a	n/a	n/a	n/a
161	County Road 103	From I-5 EB Ramps to Bronze Star Drive	15020	45	70	49	154	486	n/a	n/a	n/a	n/a	n/a	n/a
162	County Road 103	From Bronze Star Drive to County Road 25	40	45	44	0	0	1	n/a	n/a	n/a	n/a	n/a	n/a
163	County Road 25A	From Bourn Drive to County Road 102	5370	45	65	17	55	174	5,410	45	65	17	55	175
164	Marston Road	From Pioneer Avenue to County Road 25A	4760	30	61	7	21	66	4,800	30	61	7	21	67
165	Farmers Central Road	From Pioneer Avenue to Harry Lorenzo Avenue	1740	30	57	2	8	24	1,620	30	57	2	7	23
166	Pioneer Avenue	From Parkland Avenue to Harry Lorenzo Avenue	4640	40	64	11	36	113	5,480	40	64	13	42	133
167	Pioneer Avenue	From Harry Lorenzo Avenue to Matmor Drive	4500	40	63	11	35	109	5,540	40	64	13	43	135
168	Pioneer Avenue	From Matmor Drive to East Street	n/a	n/a	n/a	n/a	n/a	n/a	5,080	40	64	12	39	124
169	Matmor Road	From Sports Park Drive to Unnamed Road	n/a	n/a	n/a	n/a	n/a	n/a	470	30	51	1	2	7
170	Parkland Avenue	From Farmers Central Road to E. Heritage Parkway	13490	30	66	19	59	188	13,100	30	66	18	58	182
171	Parkland Avenue	From E. Heritage Parkway to County Road 25A	8090	30	64	11	36	113	7,950	30	63	11	35	111
172	Sports Park Drive	From College Street to East Street	1700	30	57	2	7	24	3,660	30	60	5	16	51
173	Sports Park Drive	From East Street to Matmor Road	430	30	51	1	2	6	270	30	49	0	1	4
174	I-5 NB Ramp	From I-5 NB to SR 113	6340	30	62	9	28	88	7,180	30	63	10	32	100
175	I-5 NB Ramp	From I-5 NB Off Ramp to County Road 103	6650	30	63	9	29	93	n/a	30	n/a	n/a	n/a	n/a
176	I-5 NB Ramp	From I-5 NB On Ramp from County Road 103	1950	30	57	3	9	27	n/a	30	n/a	n/a	n/a	n/a
177	I-5 SB Ramp	From I-5 SB Off Ramp to County Road 103	1630	30	57	2	7	23	n/a	30	n/a	n/a	n/a	n/a
178	I-5 SB Ramp	From I-5 SB On Ramp to County Road 103	6790	30	63	9	30	94	n/a	30	n/a	n/a	n/a	n/a

Notes: FHWA-RD-77-108 = Federal Highway Administration Highway Traffic Noise Prediction Model; dB = decibel; dBA = A-weighted decibel; L_{dn} = day-night average noise level; ADT = average daily trips; MPH = Mile Per Hours; SR = state route; n/a = Roadway segments that are not currently existing, but were analyzed in the project's traffic impact study for future alternatives. Some of these new segments are included under both alternatives, and some are different between alternatives.

Medium (2 axles) and heavy trucks (3+ axles) produce significantly more noise than passenger vehicles so their percentages are taken into account with heavier weighting when computing traffic noise levels

Source: Fehr & Peers Associates. 2016, Modeling conducted by AECOM 2016

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Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
1	County Road 98	From W. Kentucky Avenue to North of W. Kentucky Avenue	65	65	0	65	0
2	County Road 98	From W. Kentucky Avenue to W. Beamer Street	67	67	0	68	1
3	County Road 98	From W. Beamer Street to W. Main Street	67	68	1	68	1
4	County Road 98	From Main Street to W. Cross Street	68	68	0	68	0
5	County Road 98	From W. Cross Street to W. Gibson Road	67	67	0	67	0
6	County Road 98	From W. Gibson Road to South of W. Gibson Road	66	66	0	66	0
7	N. Ashley Avenue	From W. Kentucky Avenue to North of W. Kentucky Avenue	55	57	2	57	2
8	N. Ashley Avenue	From W. Kentucky Avenue to W. Beamer Street	59	60	1	60	1
9	Ashley Avenue	From W. Court Street to W. Main Street	63	63	0	63	0
10	Ashley Avenue	From W. Main Street to W. Lincoln Avenue	62	63	1	63	1
11	Ashley Avenue	From W. Lincoln Avenue to W. Cross Street	61	61	0	62	1
12	Ashley Avenue	From W. Cross Street to W. Gibson Road	61	61	0	61	0
13	Ashley Avenue	From W. Gibson Road to W. El Dorado Drive	58	58	0	58	0
14	N. Cottonwood Street	From W. Kentucky Avenue to W. Beamer Street	60	60	0	60	0
15	Cottonwood Street	From W. Beamer Street to W. Court Street	62	62	0	62	0
16	Cottonwood Street	From W. Court Street to W. Main Street	64	64	0	64	0
17	Cottonwood Street	From W. Main Street to W. Lincoln Avenue	62	62	0	62	0
18	Cottonwood Street	From W. Lincoln Avenue to W. Cross Street	63	63	0	63	0
19	Cottonwood Street	From W. Cross Street to W. Gibson Road	63	63	0	63	0
20	Cottonwood Street	From W. Gibson Road to W. El Dorado Drive	60	60	0	60	0
21	California Street	From W. Beamer Street to W. Main Street	62	62	0	62	0
22	California Street	From W. Main Street to W. Cross Street	61	61	0	61	0
23	California Street	From W. Cross Street to W. Gibson Road	56	56	0	56	0
24	N. West Street	From W. Kentucky Avenue to North of W. Kentucky Avenue	64	64	0	64	0
25	N. West Street	From W. Kentucky Avenue to W. Beamer Street	63	64	1	64	1
26	West Street	From W. Beamer Street to W. Court Street	64	64	0	65	1
27	West Street	From W. Court Street to W. Main Street	64	65	1	65	1

Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
28	West Street	From W. Main Street to W. Lincoln Avenue	64	65	1	65	1
29	West Street	From W. Lincoln Avenue to W. Cross Street	64	64	0	64	0
30	West Street	From W. Cross Street to W. Gibson Road	64	64	0	64	0
31	West Street	From W. Gibson Road to South of W. Gibson Road	62	63	1	63	1
32	N. College Street	From Kentucky Avenue to Beamer Street	59	60	1	60	1
33	College Street	From Beamer Street to Court Street	60	60	0	61	1
34	College Street	From Court Street to Main Street	61	61	0	61	0
35	College Street	From Main Street to Lincoln Avenue	59	59	0	60	1
36	College Street	From Cross Street to Gibson Road	59	60	1	60	1
37	College Street	From Gibson Road to South of Gibson Road	60	60	0	61	1
38	3rd Street	From Beamer Street to Main Street	59	59	0	60	1
39	3rd Street	From Main Street to Cross Street	58	59	1	59	1
40	3rd Street	From Cross Street to Gibson Road	59	60	1	60	1
41	3rd Street	From Gibson Road to South of Gibson Road	56	57	0	57	1
42	N. East Street	From Kentucky Avenue to North of Kentucky Avenue	67	67	0	67	1
43	N. East Street	From Kentucky Avenue to Beamer Street	65	66	1	66	1
44	East Street	From Court Street to Main Street	68	68	0	69	1
45	East Street	From Main Street to Cross Street	66	67	1	68	2
46	East Street	From Cross Street to Gum Avenue	67	67	0	68	1
47	East Street	From Gum Avenue to E. Gibson Road	65	65	0	66	1
48	East Street	From E. Gibson Road to Sports Park Drive	64	66	2	67	3
49	East Street	From Sports Park Drive to South of Sports Park Drive	62	65	3	66	4
50	Matmor Road	From E. Main Street to E. Gum Avenue	63	63	0	63	0
51	Matmor Road	From E. Gum Avenue to E. Gibson Road	62	62	0	62	0
52	Matmor Road	From E. Gibson Road to Sports Park Drive	60	61	1	62	2
53	Industrial Way	From Cannery Road to E. Main Street	54	55	1	55	1
54	Bourn Drive	From E. Gum Avenue to E. Gibson Road	57	58	1	58	1

Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
55	County Road 101	From E. Gibson Road to South of E. Gibson Road	52	64	12	63	11
56	N. Pioneer Avenue	From Churchill Downs Avenue to E. Kentucky Avenue	62	62	0	62	0
57	N. Pioneer Avenue	From E. Kentucky Avenue to E. Beamer Street	64	65	1	65	1
58	Pioneer Avenue	From E. Beamer Street to E. Main Street	66	68	2	68	2
59	Pioneer Avenue	From E. Main Street to E. Gum Avenue	67	69	2	69	2
60	Pioneer Avenue	From E. Gum Avenue to E. Gibson Road	67	69	2	69	2
61	Pioneer Avenue	From E. Gibson Road to Farmers Central Road	59	66	7	66	7
62	Ogden Street	From Branigan Avenue to E. Gibson Road	58	59	1	59	1
63	Miekle Avenue	From Farmers Central Road to E. Heritage Parkway	55	56	1	56	1
64	County Road 102	From E. Kentucky Avenue to North of E. Kentucky Avenue	65	66	1	66	1
65	County Road 102	From E. Kentucky Avenue to E. Beamer Street	65	68	3	68	3
66	County Road 102	From E. Beamer Street to E. Main Street	68	71	3	71	3
67	County Road 102	From E. Main Street to I-5 Northbound Ramps	70	72	2	72	2
68	County Road 102	From I-5 Northbound Ramps to I-5 Southbound Ramps	71	72	1	72	1
69	County Road 102	From I-5 Southbound Ramps to Maxwell Avenue	72	73	1	73	1
70	County Road 102	From Maxwell Avenue to E. Gibson Road	71	74	3	73	2
71	County Road 102	From E. Gibson Road to Farmers Central Road	69	73	4	73	4
72	County Road 102	From Farmers Central Road to E. Heritage Parkway	68	70	2	70	2
73	County Road 102	From E. Heritage Parkway to South of E. Heritage Parkway	69	70	1	70	1
74	W. Kentucky Avenue	From County Road 98 to N. Ashley Avenue	63	64	1	64	1
75	W. Kentucky Avenue	From N. Ashley Avenue to N. Cottonwood Street	65	66	1	66	1
76	W. Kentucky Avenue	From N. Cottonwood Street to N. West Street	67	67	0	68	1
77	Kentucky Avenue	From N. West Street to N. College Street	67	68	1	68	1
78	Kentucky Avenue	From N. College Street to N. East Street	67	69	2	69	2
79	E. Kentucky Avenue	From N. East Street to N. Pioneer Avenue	64	66	2	66	2
80	E. Kentucky Avenue	From N. Pioneer Avenue to County Road 102	61	65	4	65	4
81	W. Woodland Avenue	From SR 16 to N. Cottonwood Street	56	56	0	57	1

Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
82	W. Woodland Avenue	From N. Cottonwood Street to N. West Street	59	59	0	59	0
83	W. Beamer Street	From County Road 98 to N. Ashley Avenue	56	57	1	57	1
84	W. Beamer Street	From N. Cottonwood Street to N. West Street	62	62	0	62	0
85	Beamer Street	From N. West Street to N. College Street	63	64	1	64	1
86	Beamer Street	From N. College Street to N. East Street	62	62	0	62	0
87	E. Beamer Street	From N. East Street to N. Pioneer Avenue	65	66	1	66	1
88	E. Beamer Street	From N. Pioneer Avenue to County Road 102	64	67	3	67	3
89	W. Court Street	From Ashley Avenue to Cottonwood Street	62	62	0	62	0
90	W. Court Street	From Cottonwood Street to West Street	65	65	0	65	0
91	Court Street	From West Street to College Street	65	65	0	65	0
92	Court Street	From College Street to East Street	63	63	0	64	1
93	North Street	From 3rd Street to East Street	58	59	1	59	1
94	Lemen Avenue	From East Street to Matmor Road	57	57	0	58	1
95	Cannery Road	From Matmor Road to Industrial Way	56	56	0	56	0
96	W. Main Street	From County Road 98 to Ashley Avenue	66	66	1	67	1
97	W. Main Street	From Ashley Avenue to Cottonwood Street	67	67	0	67	1
98	W. Main Street	From Cottonwood Street to West Street	67	67	0	67	0
99	Main Street	From West Street to College Street	67	67	0	67	0
100	Main Street	From Walnut Street to College Street	67	67	0	68	1
101	Main Street	From College Street to 3rd Street	67	67	0	67	0
102	Main Street	From 3rd Street to East Street	67	68	1	68	1
103	E. Main Street	From East Street to Matmor Road	69	70	1	70	1
104	E. Main Street	From Matmor Road to Industrial Way	69	70	1	70	1
105	E. Main Street	From SR 113 Southbound Ramps to SR 113 Northbound Ramps	70	70	0	70	0
106	E. Main Street	From SR 113 Northbound Ramps to Pioneer Avenue	70	71	1	71	1
107	E. Main Street	From Pioneer Avenue to I-5 Northbound Ramps	69	70	1	69	0
108	E. Main Street	From I-5 Northbound Ramps to County Road 102	65	66	1	66	1

Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
109	E. Main Street	From County Road 102 to East of County Road 103	63	64	1	64	1
110	W. Lincoln Avenue	From County Road 98 to Ashley Avenue	58	58	0	58	0
111	W. Lincoln Avenue	From Ashley Avenue to Cottonwood Street	59	59	0	59	0
112	W. Lincoln Avenue	From Cottonwood Street to West Street	61	61	0	61	0
113	Lincoln Avenue	From West Street to 3rd Street	61	61	0	61	0
114	W. Cross Street	From County Road 98 to Cottonwood Street	59	59	0	59	0
115	W. Cross Street	From Cottonwood Street to West Street	62	62	0	62	0
116	Cross Street	From West Street to College Street	61	61	0	61	0
117	Cross Street	From College Street to East Street	61	62	1	62	0
118	E. Gum Avenue	From 4th Street to East Street	59	59	0	60	1
119	E. Gum Avenue	From East Street to Matmor Road	64	64	0	64	0
120	E. Gum Avenue	From Matmor Road to Bourn Drive	65	65	0	65	0
121	E. Gum Avenue	From Bourn Drive to Pioneer Avenue	65	66	1	66	1
122	Farnham Avenue	From Pioneer Avenue to E. Gum Avenue	60	60	0	61	1
123	E. Gum Avenue	From Pioneer Avenue to Farnham Avenue	61	62	1	61	0
124	Farnham Avenue	From E. Gum Avenue to Maxwell Avenue	61	62	1	61	0
125	Maxwell Avenue	From Farnham Avenue to County Road 102	62	64	2	63	1
126	Maxwell Avenue	From County Road 102 to East of County Road 103	65	69	4	67	2
127	Farnham Avenue	From Maxwell Avenue to Branigan Avenue	59	59	0	59	0
128	Branigan Avenue	From Pioneer Avenue to Farnham Avenue	60	60	0	61	1
129	W. Gibson Road	From County Road 98 to Ashley Avenue	63	64	1	64	1
130	W. Gibson Road	From Ashley Avenue to Cottonwood Street	64	65	1	65	1
131	W. Gibson Road	From Cottonwood Street to West Street	67	67	0	67	0
132	Gibson Road	From West Street to College Street	67	68	1	68	1
133	Gibson Road	From College Avenue to Coloma Way	68	68	0	68	0
134	Gibson Road	From Coloma Way to East Street	69	69	0	69	0
135	E. Gibson Road	From East Street to Matmor Road	69	69	0	69	0

Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
136	E. Gibson Road	From Matmor Road to SR 113 Southbound Ramps	69	70	1	70	1
137	E. Gibson Road	From SR 113 Southbound Ramps to SR 113 Northbound Ramps	69	70	1	70	1
138	E. Gibson Road	From SR 113 Northbound Ramps to Bourn Drive	69	70	1	69	0
139	E. Gibson Road	From Bourn Drive to Pioneer Avenue	69	70	1	69	0
140	E. Gibson Road	From Pioneer Avenue to County Road 102	67	69	2	68	1
141	El Dorado Drive	From County Road 98 to West Street	56	57	1	57	1
142	El Dorado Drive	From West Street to College Street	59	59	0	60	1
143	Farmers Central Road	From Pioneer Avenue to Miekle Avenue	58	64	6	64	6
144	Farmers Central Road	From Miekle Avenue to County Road 102	57	64	7	64	7
145	E. Heritage Parkway	From Parkland Avenue to Miekle Avenue	57	58	1	59	2
146	E. Heritage Parkway	From Miekle Avenue to County Road 102	59	62	3	62	3
147	I-5 Mainline	From County Road 98 to West Street	76	78	2	78	2
148	I-5 Mainline	From West Street to East Street	77	78	1	78	1
149	I-5 Mainline	From East Street to SR 113	77	79	2	79	2
150	I-5 Mainline	From SR 113 to E. Main Street	76	78	2	78	2
151	I-5 Mainline	From E. Main Street to County Road 102	78	80	2	80	2
152	I-5 Mainline	From County Road 102 to East of County Road 103	79	80	1	81	2
153	SR 113	From I-5 to E. Main Street	76	77	1	77	1
154	SR 113	From E. Main Street to E. Gibson Road	75	78	3	78	3
155	SR 113	From E. Gibson Road to South of E. Gibson Road	76	77	1	77	1
156	SR 16	From County Road 98 to West of County Road 99	73	74	1	74	1
157	County Road 24	County Road 102 to County Road 103	n/a	64	n/a	60	n/a
158	Bronze Star Drive	County Road 102 to County Road 103	n/a	66	n/a	60	n/a
159	County Road 103	County Road 22 to I-5 WB Ramps	n/a	65	n/a	n/a	n/a
160	County Road 103	1-5 WB Ramps to 1-5 EB Ramps	n/a	68	n/a	n/a	n/a
161	County Road 103	I-5 EB Ramps to Bronze Star Drive	n/a	70	n/a	n/a	n/a
162	County Road 103	Bronze Star Drive to County Road 25	n/a	44	n/a	n/a	n/a

Table 4.11-11. Traffic Noise, Existing Compared to East and South Alternatives

No.	Roadway	Roadway Segment	Existing Condition (dBA L_{dn})	East Alternative		South Alternative	
				2035 General Plan (dBA L_{dn})	Change	2035 General Plan (dBA L_{dn})	Change
163	County Road 25A	Bourn Drive to County Road 102	n/a	65	n/a	65	n/a
164	Marston Road	Pioneer Avenue to County Road 25A	n/a	61	n/a	61	n/a
165	Farmers Central Road	Pioneer Avenue to Harry Lorenzo Avenue	n/a	57	n/a	57	n/a
166	Pioneer Avenue	Parkland Avenue to Harry Lorenzo Avenue	n/a	64	n/a	64	n/a
167	Pioneer Avenue	Harry Lorenzo Avenue to Matmor Drive	n/a	63	n/a	64	n/a
168	Pioneer Avenue	Matmor Drive to East Street	n/a	n/a	n/a	64	n/a
169	Matmor Road	Sports Park Drive to Unnamed Road	n/a	n/a	n/a	51	n/a
170	Parkland Avenue	Farmers Central Road to E. Heritage Parkway	n/a	66	n/a	66	n/a
171	Parkland Avenue	E. Heritage Parkway to County Road 25A	n/a	64	n/a	63	n/a
172	Sports Park Drive	College Street to East Street	n/a	57	n/a	60	n/a
173	Sports Park Drive	East Street to Matmor Road	n/a	51	n/a	49	n/a
174	I-5 NB Ramp	I-5 NB to SR 113	n/a	62	n/a	63	n/a
175	I-5 NB Ramp	From I-5 NB Off Ramp to County Road 103	n/a	63	n/a	n/a	n/a
176	I-5 NB Ramp	From I-5 NB On Ramp to County Road 103	n/a	57	n/a	n/a	n/a
177	I-5 SB Ramp	From I-5 SB Off Ramp to County Road 103	n/a	57	n/a	n/a	n/a
178	I-5 SB Ramp	From I-5 SB On Ramp to County Road 103	n/a	63	n/a	n/a	n/a

Notes: dBA = A-weighted decibels; I = Interstate; SR = State Route; L_{dn} = day-night average noise level; n/a = Roadway segments that are not currently existing, but were analyzed in the project's traffic impact study for future alternatives. Some of these new segments are included under both alternatives, and some are different between alternatives.

[1] Traffic noise level at 50 feet from roadway centerline in terms of day/night average levels

Source: Modeling conducted by AECOM 2016

Table 4.11-12. Transportation (non-aircraft) Noise Sources (Table 8-6 from the 2035 General Plan)

Noise Sensitive Land Use[2]	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	70	45	--
Transient Lodging	70	45	--
Hospitals, Nursing Homes	70	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	70	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level; CNEL = Community Noise Equivalent Level; L_{eq} = energy-equivalent noise level.

[1] Outdoor activity areas are considered to be the portion of a property where outdoor activities would normally be expected (i.e., patios of residences and outdoor instructional areas of schools). Outdoor activity areas for the purposes of this element do not include gathering spaces alongside transportation corridors or associated public rights-of-way. Where it is not possible to reduce noise in outdoor activity areas to the levels specified in this table using a practical application of the best-available noise reduction measures, a higher exterior noise level may be allowed provided that interior noise levels are in compliance with this table.[2] As determined for a typical worst-case hour during periods of use.

Source: City of Woodland General Plan 2035.

Table 4.11-13. New Projects and Non-Transportation Noise Sources[1] (Table 8-7 from the 2035 General Plan)

Noise Level Descriptor	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Hourly Equivalent Sound Level (L_{eq}), dBA	55	45
Maximum Sound Level (L_{max}), dBA	75	65

Notes: dB = decibels; L_{dn} = day-night average noise level; L_{eq} = energy-equivalent noise level; L_{max} = maximum sound level.

Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

These standards apply to the noise sources themselves; noise caused by motor vehicles traveling to and from the site is exempt from this standard.

* For the purposes of compliance with the provisions of this section, the City defines transportation noise sources as traffic on public roadways, railroad line operations, and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Other noise sources are presumed to be subject to local regulations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, and loading docks.

Source: City of Woodland General Plan 2035.

Table 4.11-14. Typical Vibration Levels for Construction Equipment			
Equipment		PPV at 25 Feet (in/sec)	Approximate L_v at 25 Feet
Pile Driver (Impact)	Upper Range	1.518	112
	Typical	0.644	104
Pile Driver (Sonic)	Upper Range	0.734	105
	Typical	0.170	93
Large Bulldozer		0.089	87
Drill		0.089	87
Truck		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58
Significance Threshold		0.2/0.08 [1]	80

Notes: in/sec = inches per second; Lv = the velocity level in decibels referenced to 1 microinch per second and based on the root mean square velocity amplitude; PPV = peak particle velocity

[1] For normal residential buildings and for buildings more susceptible to structural damage, respectively.

Sources: Caltrans 2013, FTA 2006

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4.12 PUBLIC SERVICES AND RECREATION

4.12.1 INTRODUCTION

This section describes the conditions of parks, public schools, public safety services, and other public facilities and related impacts related to these services associated with implementation of the Proposed Project.

The following resources were consulted: the Woodland Joint Unified School District (WJUSD) 2011 Facilities Master Plan and written communication with City of Woodland Police Department and WJUSD from 2013.

The City received two NOP comments relevant to this section of the EIR. One comment on the NOP recommended that parks without active areas should be counted as open space and not park land. The types of parkland and open space are described in the Environmental Setting of this section of the EIR.

The City also received an NOP comment supporting greenbelts around Woodland. To the extent that greenbelts would have a recreational component, the impacts are addressed in this section. To the extent that greenbelts would provide for non-vehicular transportation, please see Section 4.13 of this EIR, "Transportation and Circulation." Impacts on farmland that surround the Planning Area are discussed in Section 4.2, "Agricultural and Forestry Resources," and impacts on open space are discussed in this chapter of the EIR. Impacts specific to greenbelts are not discussed in the EIR.

4.12.2 ENVIRONMENTAL SETTING

4.12.2.1 PARKS

The City provides its residents with several types of parks and recreation facilities, which are classified as follows:

- **Mini Parks/Plazas:** a small park that provides a neighborhood amenity of passive recreation to small neighborhood areas. Mini parks and plazas typically range from 0.1 to 2.5 acres. These parks may have picnic areas, play structures, open lawn and trees, paved areas, and may contribute to providing green space to neighborhood streets that would ordinarily be developed exclusively with residential lots. Small hardscaped plazas with seating areas, fountains, public art, or similar amenities may also function as mini parks or plazas in the downtown, along corridors, or in other mixed-use environments.

- **Neighborhood Park**: a small, mostly passive recreation area that serves an individual neighborhood with a range of about one-half mile (walking distance). They typically range in size from 2.5 to 15 acres. Neighborhood parks may have informal multi-use turf areas, a pair of full-court basketball courts, a pair of tennis courts, toddler and youth play areas (separated), group or individual picnic areas, restrooms, and/or a youth sport practice field (multi-use turf area).

- **Community Park**: a large, mostly passive recreation area dominated by open turf, shade trees, picnic areas, plazas, trails, and playgrounds. Community parks typically range in size from 15 to 25 acres. These parks serve multiple neighborhoods and may have areas for basketball, tennis, handball, bocce, horseshoes, shuffleboard, or other similar activities. A community focal point or point of interest is common and suggested in a community park, such as a swimming pool, water feature, dog park, or amphitheater.

Community parks may have a single or pair of active sport fields for competition and/or practice but do not have a concentration of active sports fields and may contain community recreation buildings, parking, and restroom buildings.

- **Community Sports Park**: a large, active, concentrated youth and/or adult sports-oriented park, with lighted fields and courts, parking areas, restrooms, concessions buildings, maintenance buildings, group picnic areas, bike and pedestrian trails, dog park, and toddler and youth playgrounds.

- **Recreational Facilities**: a single- or multi-active recreational feature, such as a swimming pool or ballfield complex with restrooms.

- **Linear Park/Greenbelts**: a landscaped, linear shaped open area used for recreation and non-motorized transportation. Greenbelts may have playgrounds, open turf or planted areas, shade trees, plazas, and picnic areas connected by continuous bike/walking paths.

- **Open Space**: minimally-maintained, undeveloped areas set aside for passive uses, scenic beauty, and relief from developed areas, and should contain, and be accessible by, a trail system. May be part of a habitat conservation easement area and/or a stormwater facility.

Existing Facilities and Recreation Programs

The City of Woodland owns and operates numerous parks and recreation facilities, with programming of park resources and maintenance of facilities provided by the Community Services Department. The City has nine mini parks/plazas, 15 neighborhood parks, one community sports park, and six recreational facilities, including the 13-acre Woodland Community and Senior Center. The City also owns a 154-acre undeveloped park site known as Woodland Regional Park, which is located just beyond new residential development along County Road 102 (CR 102) and County Road 25 (CR 25) in the southeastern portion of the Planning Area.

Altogether, Woodland contains a total of approximately 394 acres of parks and recreation facilities. This total includes about 149 acres of developed parkland, 222 acres of undeveloped parkland (including undeveloped parks and stormwater detention basins), and 24 acres of other facilities. As shown in Table 4.12-1, based on the 2013 population of 55,700 residents, the existing parks ratio is 2.7 acres of developed parkland, 4.0 acres of undeveloped parkland, and 6.7 of total developed and undeveloped parkland per 1,000 residents. Pursuant to City policy and standard requirements, additional parkland will be created as part of future development. Woodland's current inventory of parks and recreation facilities is listed in Table 4.12-2 and shown in Exhibit 4.12-1.

The Community Services Department provides recreation programs to City residents and visitors. Examples of programs include youth sports, adult sports, youth and adult aquatics classes, senior services, youth and adult enrichment programs and various other leisure and recreation opportunities.

Table 4.12-1. Current Parks Ratios		
Existing Parks and Recreation Facilities	Total	Current Parks Ratio: Acreage per 1,000 Residents[1]
Developed Parkland Total Acres	148.9	2.7
Undeveloped Parkland Total Acres	221.9	4.0
Developed and Undeveloped Parkland Total Acres	**370.8**	**6.7**
General Park Parkland Standard		**5.0**

Notes:

[1] Current Parks Ratio based on the 2013 existing population of 55,700 residents and existing parks and recreation facilities acreage. Acreage does not include the Woodland Cemetery.

Source: City of Woodland 2016.

Table 4.12-2. Parks and Recreation Facilities		
Park or Recreation Facility Name	Facility Location	Acreage
Mini Parks/Plazas		
Beamer Circle	Palm Avenue	0.5
Heritage Plaza and Parking Lot	713 Main Street	0.7
Heritage Park	Summerset (Spring Lake Area)	1.0
Jeff Roddy Park	264 Mallard Drive	0.5
North Park (Small Park)	313 Redwing Drive	0.3
North Park L&L (Small Unnamed Park)	Cardinal Drive and Robin Drive	0.3
Traynham Park	313 Redwing Drive	1.1
Tredway Park	1701 Sixth Street	1.2
Woodland West	412 Dove Drive	0.4
Subtotal Mini Parks/Plazas		6.0
Neighborhood Parks		
Beamer Park	810 Hollister Road	2.3
Campbell Park	701 Thomas Street	5.6
Christiansen Park	202 Beamer Street	2.0
City Park	629 Cleveland Street	3.9
Cline Park	223 Teton Place	3.8
Crawford Park	1733 College Street	8.3
Everman Park	929 Cottage Drive	3.4
John Ferns Park	750 W. Southwood Drive	9.3
Freeman Park	1001 Main Street	2.3
Harris Park	100 Imperial Street	3.1
Jack Slaven Park	1705 Miekle Drive	8.0
Pioneer Park	1925 Branigan Avenue	10.0
Schneider Park (Greenbelt Park)	179 Schuler Ranch Drive	3.2
Southland Park	1310 College Street	4.0
Woodside Park	1615 Cottonwood Street	8.2

Table 4.12-2. Parks and Recreation Facilities		
Park or Recreation Facility Name	Facility Location	Acreage
Subtotal Neighborhood Parks		77.4
Community Sports Parks		
Sports Park (developed areas)	2001 East Street	28.0
Subtotal Community Sports Parks		28.0
Recreational Facilities		
Camarena / Pedroia Field	202 Beamer Street	3.7
Clark Field	70 Beamer Street	3.5
Community and Senior Center	2001 East Street	12.9
Community Swim Center	155 N. West Street	2.8
Harris Field	Ashley Avenue	2.4
Klenhard Park	1771 East Gum Avenue	7.2
Subtotal Recreational Facilities		32.5
Linear Park		
Spring Lake (Greenbelts)	Various, within Spring Lake	5.0
Subtotal Linear Park Facilities		5.0
TOTAL DEVELOPED PARKLAND		148.9
Other Undeveloped Parks		
Regional Park[1]	County Road 102 & 25	154.2
Spring Lake Neighborhood Parks (undeveloped) N1, N3 and Jack Slaven remainder	N1, N3 and Jack Slaven Remainder	19.8
Sports Park (Undeveloped)	2001 East Street	29.1
Detention Basins		
Douglass Park (Holding Pond) Detention Basin	827 Saratoga Drive	11.3
Streng Park Pond Detention Basin	Gibson & Columbia Drive	2.5
Sports Park Detention Basin	2001 East Street	5.0
TOTAL UNDEVELOPED PARKLAND		221.9
Other Facilities		
Woodland Cemetery[2]	800 West Street	23.5
TOTAL OTHER FACILITIES		23.5
TOTAL PARKS AND RECREATION FACILITIES		394.3

Note: Some totals may not add up precisely due to rounding.

[1] The Regional Park has the remnants of an old waste fill site and is populated with Special Status species. The City is negotiating with the YHC to place a conservation easement on the property which would permanently restrict it to habitat uses with trails and an educational component. .

[2] The Woodland Cemetery is not included in the acreage totals for calculation of parks ratios.

Source: City of Woodland 2016.

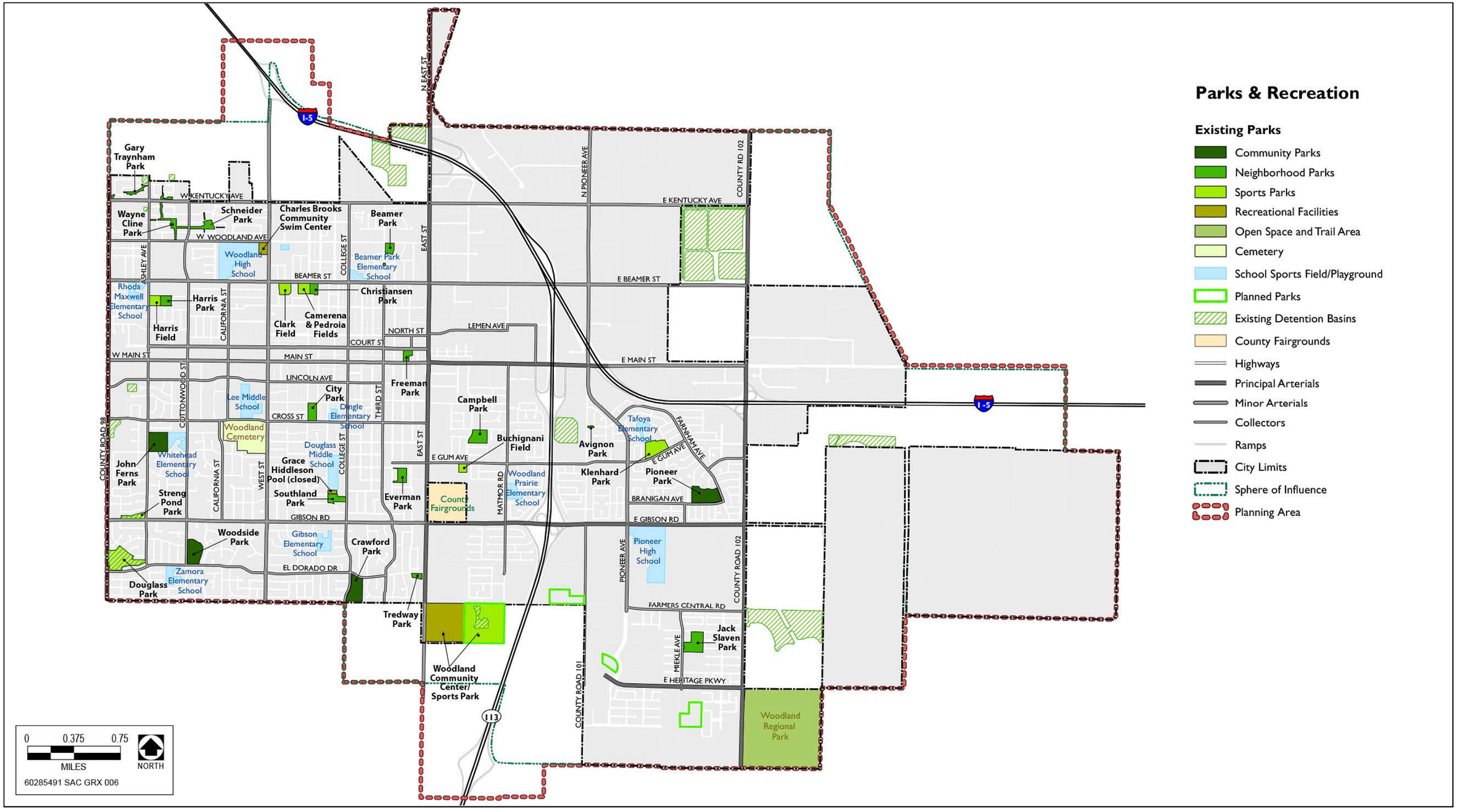

Exhibit 4.12-1. **Parks & Recreation**

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Planned Improvements to Parks and Recreation Facilities

The City plans additional park development as part of the Spring Lake Specific Plan (SLSP) area, which at buildout will include more than 4,000 new housing units. Jack Slaven Park (8 acres) is the first of the neighborhood parks to be developed in Spring Lake, which will total 30 acres of parkland when fully developed.

4.12.2.2 PUBLIC SCHOOLS

WJUSD provides public education from kindergarten through 12th grade in the Planning Area, as well as nearby unincorporated areas of Knight's Landing, Yolo, and Zamora. The District includes 10 elementary schools, one charter elementary school, two middle schools, two comprehensive senior high schools for grades 9-12, and one continuation high school. Additionally, there are three alternative education programs, six pre-schools, three infant-toddler programs, and an adult education center. Two of the District's elementary schools and one of the District's high schools are located outside of the Planning Area. Altogether, just over 10,100 students attend public schools in WJUSD, 9,400 of whom attend school in the Planning Area. Public schools and enrollment for all schools are detailed in Table 4.12-3 and are mapped on Exhibit 4.12-2.

Table 4.12-3. Existing Public Schools in Woodland Joint Unified School District

School	Total Enrollment 2012-2013	State Loading Capacity		District Loading Capacity	
		Total Capacity[2]	Percent Under-Utilized	Total Capacity[3]	Percent Under-Utilized
Elementary Schools (K–6)					
Beamer	504	550	8%	704	28%
Dingle	406	525	23%	672	40%
Freeman	485	600	19%	768	37%
Gibson	631	725	13%	928	32%
Maxwell	501	675	26%	864	42%
Plainfield[1]	313	450	30%	576	46%
Tafoya	831	875	5%	1,120	26%
Whitehead	423	575	26%	736	43%
Woodland Prairie	645	750	14%	960	33%
Zamora	575	550	-5%	704	18%
Sci-Tech[1]	252	275	8%	352	28%
Subtotal Elementary	5,566	6,550	15%	8,384	34%
Middle Schools (7–8)					
Douglass	865	1,107	22%	1,312	34%
Lee	673	1,134	41%	1,344	50%
Subtotal Middle Schools	1,538	2,241	31%	2,656	42%
High Schools (9–12)					
Cache Creek[1]	149	297	50%	352	58%
Pioneer	1,557	1,944	20%	2,304	32%
Woodland	1,297	2,187	41%	2,592	50%
Subtotal High Schools	3,003	4,428	32%	5,248	43%
Total	10,107	13,219	24%	16,288	38%
Total Within Planning Area	9,393	12,197	23%	15,008	37%

Notes:
1. Schools located outside Planning Area.
2. Total capacity based on a 25 student loading factor for elementary and 27 student loading factor for middle and high school.
3. Total capacity based on a 24 student loading factor for kindergarten and first grade, 32 student loading factor for grades 2-6, and a 36 student loading factor for grades 7-12.

Source: Woodland Joint Unified School District 2013; Jack Schreder & Associates 2011; California Department of Education 2013; CDE Data quest.

Planned Facilities

A new elementary school is planned for the Spring Lake Specific Plan Area to serve surrounding neighborhoods. Construction of Spring Lake Elementary School (K–6) is anticipated in 2017 at a site on the corner of Banks Drive and Miekle Avenue in Spring Lake.

In addition, there is a vacant WJUSD school site south of Pioneer High School that is intended for a future middle school; detailed plans may be developed in the coming years and the additional middle school may be constructed during the horizon of the General Plan. Precise timing of construction of the new school will depend on the pace of residential development and capacity of facilities in the District.

Aging Facilities

According to the WJUSD 2011 Facilities Master Plan, many of the District's aging facilities are in need of renovation and modernization, as they were designed for the educational needs of over 50 years ago. Of the District's 18 school facilities, 50 percent were constructed prior to 1960, and an additional two facilities were constructed prior to 1930. The District reports that the aging infrastructure can no longer be repaired, and pipes, heating units, electrical wiring, fire alarms, and other life safety systems need to be replaced. The cost to replace and upgrade existing facilities is estimated to be in the millions, well beyond what the District's operating fund can provide; however, the District will continue to implement renovation and modernization projects, as feasible over the planning horizon of the Proposed Project.

Joint Use Agreements for Facilities

The City of Woodland has two joint-use agreements for facilities with WJUSD. One agreement concerns the installation and operation of an electricity cogeneration facility. The second agreement, which recently expired, involves the use of City and District facilities; currently, the City uses the District's facilities for after-school programs and several recreational programs, while the District uses the City's pool, parks, and fields.

4.12.2.3 PUBLIC SAFETY SERVICES

Police

Law enforcement services in the Planning Area are provided by both police departments in both the City and the County, as well as the California Highway Patrol. The City of Woodland Police Department provides service within the Woodland city limits, the Yolo County Sheriff's Department provides service in unincorporated areas.

City of Woodland Police Department

The Woodland Police Department has a staff of 79 paid employees, including 64 sworn patrol officers and 15 non-sworn support personnel. The City of Woodland Police Department is located at 1000 Lincoln Avenue, as shown on Exhibit 4.12-3. The Police Department currently staffs four full time beats in the northeast, northwest, southwest, and southeast quadrants of the city. An additional fifth beat covering downtown is staffed during the daytime. However, given calls for service under existing conditions, the Police Chief has expressed that this fifth beat should be staffed full-time (Correspondence between BAE Urban Economics, Dyett & Bhatia, and Woodland Police Department 2016.)

Response Time Standards

The Police Department dispatches police personnel based on priority level, Priority One being the highest. Priority One calls are major crimes or incidents "In-Progress," requiring immediate dispatch. Priority Two calls are minor crimes or incidents "In-Progress" or just occurred within 10 minutes. Priority Three calls are any major crimes or incidents that are not "In-Progress." Priority Four calls are any minor crimes or incidents that are not "In-Progress." Lastly, Priority Five calls are the lowest priority call (e.g., follow up on a cold case) that police personnel deal with as time permits.

Standards for response times are based on the dispatch time (measured from the start of the call) until the first unit's arrival. The Police Department's response time standard is five minutes for Priority One calls, six minutes for Priority Two calls, 25 minutes for Priority Three calls, 40 minutes for Priority Four calls, and 45 minutes for Priority Five calls. As shown in Table 4.12-4, in 2012, the Police Department's average actual response time for Priority One and Two calls were about 2.5 minutes longer than the department's standard, while response times for Priority Three and Four calls were within the response time standard.

Table 4.12-4. Police Department Response Times, 2012

Priority Level	Police Department Standard (minutes)	Average Actual Response Time (minutes)
Priority One	5:00	7:30
Priority Two	6:00	8:24
Priority Three	25:00	20:52
Priority Four	40:00	25:30
Priority Five	45:00	25:35

Source: City of Woodland Police Department 2013.

Service Standards

The Police Department does not have a service standard based on population. Rather, the department determines staffing needs based on the amount of uncommitted time per officer, number of calls for service per officer per day, and number of major crimes assigned to detectives per day. Patrol officers should average a minimum of 40 percent of unobligated patrol time per shift. The International City Manager Association suggests that a target of 40 percent uncommitted time is appropriate (International City Manager Association). According to the Woodland Police Department, it currently has an average of 15 percent unobligated time.

Yolo County Sheriff's Department

The Yolo County Sherriff's Department has more than 300 full and part-time employees and volunteers who serve a population of approximately 200,000 residents. In addition to patrolling unincorporated county land, the Sheriff's Department administers the County jail and work program, provides security to the Yolo County Court System, provides animal services, and serves as the County coroner.

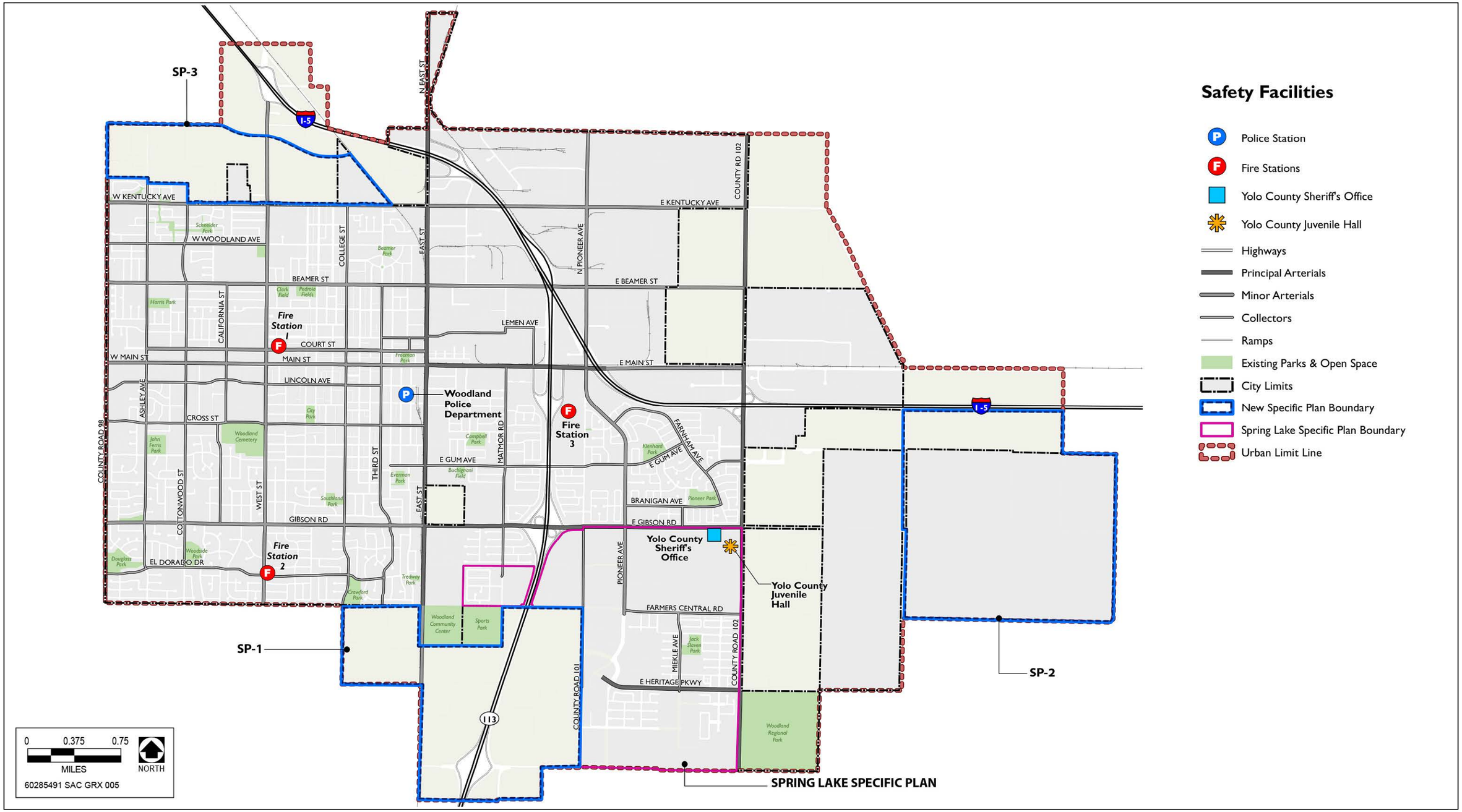

Exhibit 4.12-3. **Safety Facilities**

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Fire and Emergency Medical Services

The Woodland Fire Department provides fire and emergency medical services (EMS) in the Planning Area. In 1982, the City of Woodland Fire Department merged with the Springlake Fire Protection District. Now, the Fire Department protects an area of 56 square miles, which includes 15 square miles of land within the City limits and 41 square miles of rural area north, east, and south of the City limits in unincorporated Yolo County.

As shown on Exhibit 4.12-3, the City of Woodland Fire Department operates three fire stations, with an engine company at each one: 101 Court Street (Station #1), 1619 West Street (Station #2), and 1550 Springlake Court (Station #3). The Department operates a ladder truck out of Station #3 that is utilized for suppression activities, air support, technical rescue, and light support. Currently, the Fire Department provides service to the Springlake Fire Protection District from the three existing fire stations located in Woodland. The Fire Department is staffed with 45 personnel and is assisted by a part-time administrative staff person. Currently, the Fire Department is only staffed to meet National Fire Protection Association (NFPA) standards for low hazard fires, and it currently relies heavily on its mutual aid partners for support to meet NFPA standards for higher-risk fire incidents.

Response Time Standards

The Fire Department establishes response time standards for its services, measured from the time the unit leaves the station to the time the unit arrives at the scene. In alignment with NFPA 1710 standards, the Fire Department's standards are a 60 second turnout time[1] for EMS calls and an 80 second turnout time for fire and special operations. The first engine should have a travel time of four minutes or less for a fire suppression incident and eight minutes or less for the deployment of an initial full alarm assignment. For an emergency medical incident, travel time should also be four minutes or less. NFPA standards require that the Fire Department meet these response time standards 90 percent of the time. In 2015, as shown in Table 4.12-5, the Fire Department met the NFPA standard for EMS calls 81.2 percent of the time and 70.1 percent of the time for fire calls.

[1] Turnout Time is the time interval that begins when the emergency response facilities and emergency response units notification process begins either by an audible alarm or visual annunciation or both and ends when a unit is en route to the emergency (Fire Protection Research Foundation, 2010).

Table 4.12-5. Fire Department Service Standards		
Service	Time Standard	Percentage of Services that Achieve the Time Standard
Emergency Medical Service Call	60 seconds turnaround time, at least 90% of the time	81%
Fire and Special Operations Response	80 seconds turnaround time, at least 90% of the time	70%
Arrival at Fire Suppression Incident	4 minutes or less travel time of the first arriving engine, at least 90% of the time	70%
Deployment of an Initial Full Alarm Assignment	8 minutes or less travel time of the first arriving engine, at least 90% of the time	70%
Arrival at Emergency Medical Incident	4 minutes or less travel time, at least 90% of the time	81%
Dispatch Call Answering Time	15 seconds or less, at least 95% of the time, and 40 seconds or less, at least 99% of the time	n/a
Dispatch Call Processing Time	60 seconds or less, 90% of the time; and 90 seconds or less, 99% of the time	n/a
Source: Woodland Fire Department 2016		

Insurance Service Organization (ISO) Rating

Fire departments are rated by ISO's Public Protection Classification (PPC) program. The program uses the Fire Suppression Rating Schedule (FSRS), which is comprised of a long list of elements a community may use to fight fires effectively. Each element is given a point score. Using the point scores and various formulas, ISO derives a PPC rating. On a scale of 1 (exemplary fire protection) to 10 (not meeting minimum criteria), Woodland scored a 3 for areas inside the City limits and 8B[2] for areas in the Springlake Fire Protection District.

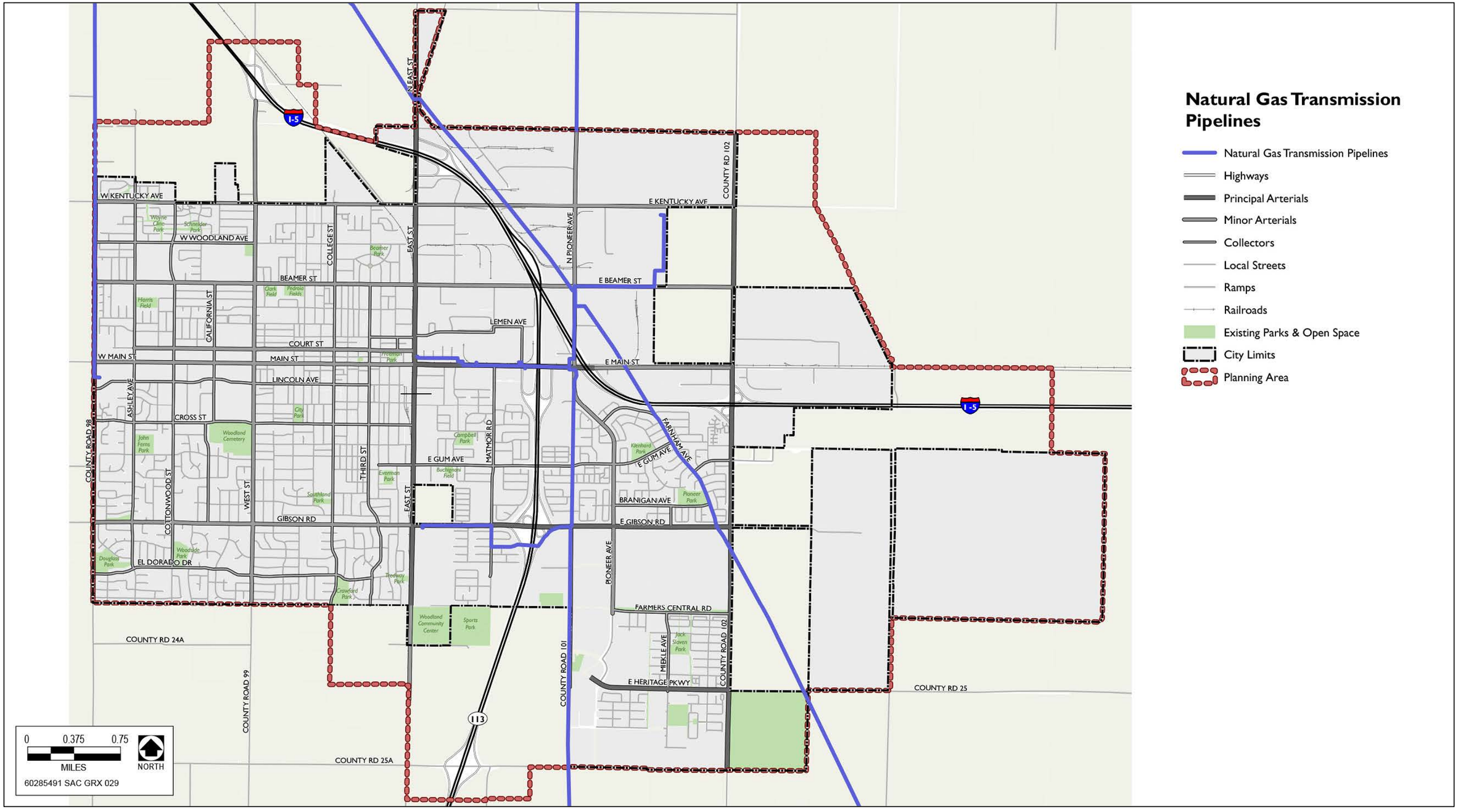
Other Public Facilities

Electric and Gas Utilities

Pacific Gas & Electric (PG&E) provides electricity and natural gas service in Woodland. As shown in Exhibit 4.12-4, several major PG&E gas transmission pipelines extend through the Planning Area—roughly following I-5 to the northwest and Farnham Avenue to the southeast; along North Pioneer Avenue and Bourn Drive from East Beamer Street to the southern city limits; Main Street and East Gibson Road between Bourn Drive and East Street; and County Road 98 from I-5 to West Main Street. The City of Woodland is not responsible for the siting, design, construction, or operation of these transmission facilities, but works with PG&E to ensure their ongoing monitoring, safety, and efficacy.

Energy use is discussed and analyzed in detail in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy."

[2] Class 8B is a classification for communities that provide superior fire-protection services and fire-alarm facilities but lack the water supply required for a Class 8 or better.



Source: City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013; Dyett & Bhatia 2013

Exhibit 4.12-2. **Natural Gas Transmission Pipelines**

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Broadband Internet Service

In contrast to traditional dial-up internet access, broadband internet service provides a faster, more reliable connection to the internet, using a wide bandwidth data transmission that has the ability to simultaneously transport multiple signals and traffic types. Broadband internet service can be provided via a cable modem, a digital subscriber line (DSL), fiber, wireless signals, satellites, or over powerlines.

Woodland currently lacks broadband internet services of desired quality. According to the County's 2015 Yolo Broadband Strategic Plan (Magellan Advisors 2015), residents in Woodland are served by two primary providers, AT&T of California and Wave Broadband. Businesses in Woodland subscribe to a larger mix of wireline providers and resellers than residents, including AT&T of California, Wave Broadband, AFES Wireless Network Services, and Omsoft. Some residents and businesses also use fixed wireless providers, including Winters Broadband and DigitalPath.

According to the Yolo Broadband Strategic Plan, the City utilizes a combination of fiber and wireless connections for its municipal operations. These services provide connectivity between municipal facilities to connect departmental resources to a common network. The City maintains a small amount of its own fiber segments throughout the community and continues to build new fiber in conjunction with other capital projects that allow conduit to be installed for low costs. As more of these projects are completed, it allows the City to connect segments to one another to form a larger municipal network that can be utilized to interconnect its facilities.

The City anticipates that it will develop a master plan for its fiber network in conjunction with the Yolo Community Broadband Network.

Library and Other Civic Facilities

The Woodland Public Library houses literary, artistic, and reference materials for public use and circulation. Located at 250 First Street, the library provides opportunities to attend social and educational programming and events, and provides access to twenty-first century technologies. In addition, there are a number of City and County administrative and public buildings in the Planning Area, such as City Hall, the Municipal Services Building, and the County Courthouse. Many of Woodland's civic buildings are located in historic Downtown Woodland.

4.12.3 REGULATORY SETTING

4.12.3.1 FEDERAL

Parks

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

Public Schools

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

Public Safety Services

Uniform Fire Code, National Fire Protection Association

The National Fire Protection Association (NFPA) publishes the Uniform Fire Code, which provides standards for fire protection. The nationally recognized standards require that fire departments "have the capability to deploy an initial full alarm assignment within eight (8) minute response time to 90 percent of the incidents (NFPA 1710)." NFPA defines "response time" as "the travel time that begins when units are en route to the emergency incident and ends when units arrive at the scene."

Other Public Facilities

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

4.12.3.2 STATE

Parks

Quimby Act, CA Government Code Section 66477

The 1975 Quimby Act authorizes cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Under the Quimby Act, fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services communitywide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The act states that the dedication requirement of parkland can be a minimum of three acres per thousand residents or more, and equal to the existing parkland provision (up to five acres per thousand residents) if the existing ratio is greater than the minimum standard. In 1982, the act was substantially amended. The amendments further defined acceptable uses of, or restrictions on, Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must show a reasonable relationship to a project's impacts as identified through studies required by CEQA.

State Open Space Standards, CA Government Code Section 65560

State planning law provides a structure for the preservation of open space by requiring every city and county in the state to prepare, adopt, and submit to the Secretary of the Resources Agency a "local open-space plan for the comprehensive and long-range preservation and conservation of open-space land within its jurisdiction." The following open space categories are identified for preservation:

- **Open space for public health and safety,** including, but not limited to, areas that require special management or regulation due to hazardous or special conditions.
- **Open space for the preservation of natural resources,** including, but not limited to, natural vegetation, fish and wildlife, and water resources.
- **Open space for resource management and production,** including, but not limited to, agricultural and mineral resources, forests, rangeland, and areas required for the recharge of groundwater basins.

- **Open space for outdoor recreation,** including, but not limited to, parks and recreational facilities, areas that serve as links between major recreation and open space reservations (such as trails, easements, and scenic roadways), and areas of outstanding scenic and cultural value.

- **Open space for the protection of Native American sites,** including, but not limited to, places, features, and objects of historical, cultural, or sacred significance such as Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property (further defined in California Public Resources Code Sections 5097.9 and 5097.993).

Public Schools

School Site Selection, Education Code Sections 17211,17211, 17212.5, and 17251, CA Public Resources Code Section 21151.8

The California Education Code contains various provisions governing the siting of new public schools, including Education Code Sections 17211, 17212, and 17212.5. In addition, Public Resources Code Section 21151.8 identifies additional environmental requirements for locations of new schools. The California Department of Education (CDE) establishes standards for school sites pursuant to Education Code Section 17251. In 2000, the CDE School Facilities Planning Division (SFPD) updated the *Guide to School Site Analysis and Development* (Guide), which was originally published in 1966. The Guide assists school districts in determining the amount of land needed to meet their educational purposes according to CDE recommendations.

SB 50 (Statutes of 1998), State School Funding, Education Code Section 17620

California Education Code 17620 establishes the authority of any school district to levy a fee, charge, dedication, or other requirements against any development within the school district for the purposes of funding the construction of school facilities, as long as the district can show justification for the fees.

Senate Bill 50 was adopted in 1998. The legislation limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also authorizes school districts to levy statutory developer fees at levels higher than previously allowed and according to new rules.

Public Safety Services

California Fire Code, Code of Regulations Title 24, Part 9

The California Fire Code establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems, such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Other Public Facilities

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

4.12.3.3 REGIONAL

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated.

Parks

Yolo County 2030 General Plan

The Public Facilities and Services Element of the Yolo County 2030 General Plan identifies existing community or neighborhood parks of less than 10 acres, as well as the location of future parks to meet the needs of the growing population. The Conservation and Open Space Element identifies existing and future regional and open space parkland, including trails. Both Elements include goals, policies, and actions to support the provision of a sufficient amount of well-maintained parks. The following Yolo County 2030 General Plan policy and actions establish specific park standards.

- **Policy PF-3.1** Establish a service threshold of 5 acres of community (neighborhood) park per 1,000 people in each unincorporated town.

- **Action PF-3.7** New development shall be required to provide "turnkey" (built and operational) community parks at the required standards of 5 acres per 1,000 people to serve existing and new residents, at locations within unincorporated communities within planned residential neighborhoods. An appropriate service district shall be formed to provide operation and maintenance.

- **Policy CO-1.10** The target threshold for resource parks (regional and open space parks) shall be 20 acres per 1,000 total County population (both unincorporated and incorporated). Larger ratios may be appropriate in Specific plan areas to accommodate important natural features and/or safety areas.

Public Schools

Yolo County 2030 General Plan

The Public Facilities and Services Element of the Yolo County 2030 General Plan identifies the existing public school districts, private schools, and other educational facilities and programs, such as the Woodland Community College. The 2030 General Plan includes policies and actions to support the following goal: "Goal PF-6 Schools. Collaborate with educational groups to develop school facilities and programs that serve the evolving needs of current and future residents."

Public Safety Services

Yolo County 2030 General Plan

The Public Facilities and Services Element identifies existing law enforcement and fire and emergency medical services, and establishes policies and actions to provide law enforcement that successfully prevent crime and improve neighborhood relations, as well as fire and emergency medical services that enhance the protection of life and property. The following Yolo County 2030 General Plan policy and actions establish specific law enforcement and fire and emergency medical service standards.

- **Policy PF-4.2** Strive to maintain an average response time of 12 minutes for 90 percent of priority law enforcement calls in the rural areas.

- **Policy PF-4.3** Maintain a minimum ratio of 1.75 sworn officers per 1,000 service population, which is defined as both the number of residents and employees located solely within the unincorporated area. For the purposes of this policy, an employee is weighted at 0.26 the cost of service for a resident. Maintenance of this ratio includes the necessary facilities, equipment, and non-uniformed personnel to support that ratio. Commercial and/or industrial projects, businesses, events, and other proposals that generate higher demands for Sheriff's services shall be evaluated to determine if additional resources are needed to address potential fiscal impacts.

- **Policy PF-5.4** Encourage fire districts and other emergency medical service providers to achieve National Fire Protection Association standards of an average response time for emergency calls of nine minutes at least 90 percent of the time in the unincorporated communities and 15 minutes at least 80 percent of the time in rural areas, with the exception of remote areas (requiring a travel distance of more than 8 miles).

- **Policy PF-5.5** Encourage fire districts to maintain an overall fire insurance (ISO) public protection classification (PPC) rating of Rural 7 or better for fire protection service within the unincorporated communities.

Other Public Facilities

Yolo County 2030 General Plan

The Public Facilities and Services Element identifies existing library services in the county and establishes policies and actions to provide library services with the goal of meeting "the changing informational and social needs of each community." (Yolo County 2030 General Plan Goal PF-7) There are library services throughout the county, including in all incorporated cities except for Woodland, which has its own City library. In addition, the Yolo County 2030 General Plan explains the role of the Yolo County Childcare Planning Council and other agencies that provide dependent care services and establishes a goal, policies, and actions to provide quality dependent care in the county. The following Yolo County 2030 General Plan policies relate to providing sufficient power transmissions lines and high-quality communication technology.

- **Policy PF-11.1** Encourage the development of power generating and transmission facilities in appropriate alignments and locations, sufficient to serve existing and planned land uses.

- **Policy PF-11.2** Encourage expanded coverage and enhanced quality for communication technology, such as mobile connectivity, high-speed wireless internet access, and emergency communication systems.

- **Policy PF-11.3** Require utility lines to follow field edges to minimize impacts on agricultural operations.

4.12.3.4 LOCAL

Parks

City of Woodland 2002 General Plan

The 2002 General Plan sets standards and plans for the development of new parks and recreation facilities. The following policies establish specific standards, including requiring the City to strive to achieve a standard of six acres of parkland per 1,000 residents. The 2002 General Plan also sets goals with supporting policies and implementation standards regarding diversity in recreational facilities and services, as well as community centers and senior centers.

- **Policy 5.A.1** The City shall strive to achieve the standard of six acres of parks per 1,000 population for the development of City-owned park facilities. Typically, neighborhood parks are ten to 15 acres, community parks are 20 to 50 acres and sports parks are three to 30 acres.

- **Policy 5.A.3** The City shall strive to achieve the standards for sports and recreational facilities established in the Park and Recreation Master Plan. These standards may be satisfied through any combination or joint development of public facilities, private recreational facilities, and school facilities.

  In addition to these standards and minimum sizes, sports facilities shall be developed according to the adopted sports facilities master plans.

- **Policy 5.A.4** The City shall recognize that standards for neighborhood park acreage are distinct from standards for sports fields and facilities acreage for baseball, softball, and soccer fields, pools, gyms, and youth, senior, or community centers.

- **Implementation Program 5.1** The City shall prepare and maintain a Parks and Recreation Master Plan to identify locations of major parks and recreational facilities, specific criteria and standards for the development of sports and recreation facilities, funding sources for the development and maintenance of parks, recreation centers, and open space resources. This shall include provision for the development of new parks in connection with new development and the development of parks to address existing deficiencies. Responsibility: City Council; Parks, Recreation, and Community Services Commission; Parks, Recreation, and Community Services Department. Time Frame: Completed 1998; update

- **Implementation Program 5.2** The City shall adopt the Quimby Act Ordinance which will require developers to dedicate a minimum of five acres of acceptable parkland per 1,000 residents. Responsibility: Parks, Recreation, and Community Services Department; Parks, Recreation, and Community Services Commission; City Council. Time Frame: FY 02-03

City of Woodland Park and Recreation Master Plan

The City of Woodland Park and Recreation Master Plan (Parks Master Plan) is an implementation tool of the Woodland 2002 General Plan. The Parks Master Plan identifies existing parks and recreation facilities and programs, parks and recreation needs, and implementation recommendations. Its needs assessment is based on the 2002 General Plan parkland ratio of six acres per 1,000 residents and forecasted population of approximately 69,000 residents by 2000. According to the Parks Master Plan, the City of Woodland needs to provide approximately 277 more acres of parkland than the City provided in 2004. The Parks Master Plan concludes that land developers that construct one half-acre per 1,000 residents of pocket parks and one half-acre per 1,000 residents of greenbelts as part of the infrastructure requirements will help achieve the parkland ratio. In addition, the Parks Master Plan recommends increasing the developer impact fees for infill development to cover costs for park construction and maintenance.

Public Schools

City of Woodland 2002 General Plan

The 2002 General Plan sets policies regarding educational services in Woodland, including working with the WJUSD, UC Davis, and the Woodland Community College. In addition, the 2002 General Plan sets policies to

guide school siting and financing, including Policy 5.F.2, which requires the City to consider school sites in the planning of residential development.

- **Policy 5.F.2** The City's land use planning shall be coordinated with the planning of school facilities and shall involve the Woodland Joint Unified School District and private school boards in the early stages of the land use planning process.

- **Policy 5.F.3** The City shall plan and approve residential uses that are accessible to school sites in order to enhance neighborhoods, minimize transportation requirements and costs, and minimize safety problems.

- **Policy 5.F.4** The City shall consider the plans of the Woodland Joint Unified School District in establishing acceptable levels off service for schools, determining school location and land and facility needs, and determining appropriate financing methods. In cooperation with the school district, the City shall designate school sites in specific plans to accommodate school district needs.

- **Policy 5.F.5.** The City shall encourage school facility siting that establishes schools as focal points within the neighborhood and community.

- **Policy 5.F.6.** The City shall encourage the location of schools in areas with safe pedestrian and bicycle access.

Woodland Joint Unified School District Facilities Master Plan

In November 2011, WJUSD adopted a Facilities Master Plan to identify and accommodate its facility needs for the short term and identify goals for the long term. The Facilities Master Plan was prepared by School Board members, District administration staff, educators, community members, and District consultants. It identifies values and a shared vision, analyzes demographics and projected enrollment, assesses capacity and condition of facilities, and proposes 15 recommendations. The recommendations include "perform cost benefit analysis for repurposing of sites" and "develop Financial Master Plan."

Public Safety Services

City of Woodland 2002 General Plan

The 2002 General Plan establishes the following standards, including dispatch time and fire operations staffing ratio, for law enforcement and fire and emergency services.

- **Policy 4.H.1** The City shall, through adequate staffing arrangements, endeavor to maintain a high level of police service to the community. Determination of adequate staffing levels shall consider the number of calls for service per patrol officer (nonsupervisory), response time to calls for service based on priority, the amount of unobligated patrol time available to further community policing activities, and the average number of Part I crimes per investigator. The following goals are established to measure the adequacy of police staffing:

    - The average number of calls for service per day per patrol officer should not exceed seven per day.

    - The average response times for calls for service:

Priority	Class of Crime	Dispatch/Response Standard
Priority 1	Major Crimes	Dispatch time: 1 minute Policy response time: 4 minutes
Priority 2	Major Crimes	Dispatch time: 1 minute Policy response time: 5 minutes
Priority 3	Major Crimes Cold	Dispatch time: 15 minute Policy response time: 10 minutes
Priority 4	Minor Crimes Cold	Dispatch time: 30 minute Policy response time: 10 minutes
Priority 5	Service Calls	Dispatch time: 35 minute Policy response time: 10 minutes

  - Patrol officers should average a minimum of 50 percent unobligated patrol time per shift to focus on community policing activities.
  - The ratio of Part I crimes should not exceed an average of two per day for each assigned investigator.

- **Policy 4.I.1** Within the City's overall budgetary constraints, the City shall strive to maintain a fire operations staffing ratio of 1.0 per 1,000 residents.
- **Policy 4.I.2** The City shall attempt to maintain an ISO (Insurance Service Organization) ratio of 3.
- **Policy 4.I.3** The City shall establish and maintain a performance standard of four (4) minutes response time for the first arriving unit capable of providing service and eight (8) minutes for arrival of the complete first alarm assignment. The benchmark for both response times in this process should be 90 percent (response time is measured from the time the unit leaves the station to the time the unit arrives at the scene.
- **Policy 4.I.4** The City shall attempt to maintain the following fire flow standards:
  - Commercial and individual: 3,500 gallons per minute (GPM)
  - Light commercial and multifamily: 2,500 GPM
  - Single family: 1,500 GPM
- **Implementation Program 4.15** The City shall continue to implement the recommendations in the City of Woodland Fire Department Organizational Assessment and Master Plan adopted by the City Council on January 16, 2001. The City shall incorporate necessary service equipment and facilities into the Major Projects Financing Plan. Responsibility: Fire Department; Finance Department. Time Frame: FY 01-02; annually

In addition, the Appendix D City of Woodland Level of Service Guidelines of the City of Woodland 2002 General Plan includes the following level of service guidelines regarding fire and police services:

Fire Services

- Fire Stations, Fire Engines, and Support Equipment

- Locate fire stations around the community in such a manner as to provide for emergency responses consistent with Department response time goals
  - Fire apparatus and personnel at fire stations are adequate to meet industry safety standards for fire service personnel and meet City established response time goals
  - Capacity to deliver 1,500 GPM in conjunction with a first due engine within 4 minutes for single family residential
  - Capacity to deliver 2,500 GPM in conjunction with a first due engine within 4 minutes for light commercial and multi-family residential
  - Capacity to deliver 3,500 GPM in conjunction with a first due engine within 4 minutes for commercial and industrial uses
  - Capacity to fight a 3,500 GPM fire at any facility within the city given a first and second alarm

- Protection
  - Dispatch activities and response times shall include a performance standard of 60 seconds for the information gathering portion, 60 seconds for completion of dispatch, four minutes response time for the first arriving unit capable of providing service and eight minutes for arrival of the complete first alarm assignment. Response time is measured from the time the unit leaves the station to the time the unit arrives at the scene.
  - The City's CAD system should interlink and operate with City's Fire Records Management System.
  - All traffic signals shall have opticom sensors installed to allow for more efficient emergency services responses.
  - 1,200 square feet of facility space per on-duty fire fighter

- Prevention
  - One fire prevention officer with new vehicle and related support equipment for every 20,000 persons served
  - 170 square feet of facility space per employee

- Administration
  - There shall be one Chief Officer for every major division and every operational shift
  - One Administrative Division Chief for every eight sworn personnel
  - One clerical employee for every two Division Chiefs
  - 170 square feet of office space per employee

- Training
    - One classroom, at 50 square feet per fire fighter, and the necessary audio-visual equipment to supply the classroom
    - One 130,000 square foot outside training ground and apparatus for every 97,076 persons served

Police Services

- Communications/JPA
    - Upgrade computer hardware/software as new technology becomes available which will increase speed and efficiency
    - The City, along with other members of the Yolo County Communications Emergency Service Agency JPA, will upgrade existing radio communications equipment to provide reliable and consistent radio communications throughout our service area. These may include replacement of base and mobile equipment, addition of repeater sites, acquisition of additional radio frequencies and use of alternate wireless technologies and frequencies
- Police Vehicles and Equipment
    - One new patrol vehicle for every 2.0 patrol positions
    - One plain sedan for every 2 investigative, support, or administrative positions (non-sworn personnel)
    - One I.D. van and identification equipment per 52 sworn personnel
    - One K-9 unit including dog, training, vehicle, and equipment per 26 sworn officers
    - One portable radio, leather gear, weapon, and vest for every new sworn officer
- Personnel and Facility Space
    - Sufficient personnel to meet performance measures stated in Policy 4.H.1
    - 315 square feet of total building space per employee

City of Woodland Municipal Code

Fire Emergency Services, Chapter 8 of the Municipal Code

Chapter 8 of the Woodland Municipal Code establishes a city disaster council, an office of the director of emergency services, and an office of the assistant director of emergency services. It requires the city disaster council to develop a city emergency plan.

Fire Prevention and Emergency Services, Chapter 9 of the Municipal Code

Section 9-1 of the Woodland Municipal Code adopts the 2013 California Building Standards Code, Title 24, CCR, Part 9 (California Fire Code) as the Woodland Fire Code as amended by Section 9-9 of the Municipal Code. Section 9-2 establishes the duties of the bureau of fire prevention of Woodland's Fire Department, and other sections of the chapter establish fire safety standards in the city.

Fire Alarm Systems, Chapter 9A of the Municipal Code

Chapter 9A establishes standards and controls to reduce the incidents of false fire alarm calls responded to by the fire department.

Other Public Facilities

City of Woodland 2002 General Plan

The 2002 General Plan establishes policies and actions to "promote adequate levels of utility services provided by private companies and ensure that these are constructed to minimize negative effects on surrounding development" (City of Woodland 2002 General Plan Goal 4.J), to expand the use of information technology, and to ensure high-quality library facilities to all current and future Woodland residents. The following policies establish specific standards for library services in Woodland:

- **Policy 5.J.5** The City shall strive to maintain a library standard of 507 square feet of library space per 1,000 population.

- **Policy 5.J.7** The City shall strive to maintain a library standard of 1,800 volumes per 1,000 population with an annual acquisition rate of 200 volumes per 1,000 population.

In addition, the Appendix D City of Woodland Level of Service Guidelines of the City of Woodland 2002 General Plan includes the following level of service guidelines regarding general city facilities and libraries:

General City Facilities

- City Hall
  - 566 square feet of total space per employee
  - 400 square feet of office space with related support equipment per employee
- Municipal Service Center
  - 1,450 square feet of building work area per 1,000 population
  - 450 square feet of building per space per Administrative/Supervisory employee

Library Facilities

- Libraries
  - 400 square feet of office space per administrative/supervisory employee

City of Woodland Municipal Code

Cable Communications System, Chapter 8A of the Municipal Code

Chapter 8A regulates the granting of franchise to install, construct, operate and maintain a cable communications system in Woodland, technical standards for the cable television system, and other legal matters regarding the cable communications system in Woodland.

Underground Utilities, Chapter 23B of the Municipal Code

Chapter 23B requires all utility distribution facilities in subdivisions, including electric and communication lines, to be placed underground. In addition, it allows the city council to require underground utility distribution facilities in certain areas, if it finds that the public necessity, health, safety, or welfare requires such underground installation.

4.12.4 Environmental Impacts and Mitigation Measures

4.12.4.1 Methodology

Population

This analysis uses an estimate of 19,300 new residents, 75,000 total residents, and 27,000 total housing units at the horizon year of the Proposed Project (2035). These projections are the same for both the East Alternative and the South Alternative.

Parks

The City of Woodland 2002 General Plan Appendix D establishes a standard for 6.0 acres of parkland per 1,000 residents. This standard is also included in the City's 2004 Parks, Recreation, and Community Services Master Plan. The parkland standard is proposed to be revised in the 2035 General Plan to provide 5.0 acres of parks for every 1,000 residents. The 2004 Parks Master Plan is currently being updated and will reflect the standards of the final adopted General Plan. For the purposes of this analysis, however, the current parkland standard of 6.0 acres per 1,000 residents is used.

To determine whether the parks ratio at the horizon year would achieve the current parkland standard, the total amount of developed and undeveloped parkland was divided by 75 (the projected 2035 population of 75,000 divided by 1,000) to arrive at acres of parkland per 1,000 residents.

Schools

WJUSD calculates school capacities for each school and uses a 24 student per classroom loading factor for kindergarten and first grade, a 32 student per classroom loading factor for grades 2-6, and a 36 student per classroom loading factor for grades 7-12. State standards for student loading factors are 25 students per classroom for elementary schools and 27 students per classroom for middle and high schools.

The District uses student generation factors (students per new dwelling units) for single- and multi-family development in order to project student enrollment. The District projects an ongoing decline of 0.5 percent in student enrollment in the near term, based on projections made in January 2013.

Public Safety Services

The City's fire service standard is consistent with NFPA. The Fire Department's current standards of service and facility needs after the anticipated development from implementation of the Proposed Project were provided by the City of Woodland. The Police Department's current standards of service and facility needs after implementation of the Proposed Project were provided by the Woodland Police Department. The Police

Department does not have a service standard based on population but rather on the amount of uncommitted time per officer.

4.12.4.2 THRESHOLDS OF SIGNIFICANCE

Implementation of the Proposed Project would have a potentially significant adverse impact if it would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for:

- fire protection;
- police protection;
- schools;
- parks; or
- other public facilities;
- or if the Proposed Project would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- or if the Proposed Project would include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

4.12.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to public services and recreation are discussed below.

4.12.4.4 IMPACT ANALYSIS

IMPACT 4.12-1 Impacts Related to Fire Protection Services. *Implementation of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for fire protection. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Fire Department operates three fire stations, with an engine company at each one: 101 Court Street (Station #1), 1619 West Street (Station #2), and 1550 Springlake Court (Station #3). To help maintain adequate response times, the Fire Department has identified a need for additional fire stations in the city. To serve the Spring Lake Specific Plan Area, a fourth fire station is planned for the Spring Lake Specific Plan Area on a one-acre site, as part of the Spring Lake Center that will adjoin the Central Park. Alternatively, fire services could be provided by

relocating an existing station to serve the Spring Lake Specific Plan Area, instead of constructing a new station in the area. A new or relocated fire station in this area would also be sufficient to serve new growth in SP-1.

Implementation of the 2035 General Plan would result in new residential, commercial, office, and industrial development in the Planning Area. This growth is likely to result in greater demand for fire protection services. Specifically, as SP-3 develops, it may be necessary to relocate one of the City's existing fire stations in order to improve coverage in the northern area of the city.

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

a. East Alternative–In addition to the impacts discussed above, as SP-2 develops, a fifth station will need to be added in the SP-2 area to service the substantial new population and commercial development on the east side of the city.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Uniform Fire Code and the California Fire Code provide standards for fire protection. In addition, the Yolo County 2030 General Plan establishes standards for fire protection. However, the Woodland Fire Department provides fire services for all land in the Planning Area, including unincorporated county land. The City of Woodland Municipal Code establishes the duties of the bureau of fire prevention of Woodland's Fire Department, and other sections of the chapter establish fire safety standards in the city.

Proposed Project

The 2035 General Plan contains the following goal and policies that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.B Fire Protection Services.** Provide a comprehensive program of fire protection services to protect residents of and visitors to Woodland from injury and loss of life and to protect property from fires.
- **Policy 5.B.1 Response Time and Service Standards.** Strive to maintain a high level of fire protection service to the community by achieving the following response times:
  - Emergency medical service calls: 60 seconds turnout time, at least 90 percent of the time.
  - Fire and special operations response: 80 seconds turnout time, at least 90 percent of the time.
  - Arrival at fire suppression incident: 4 minutes or less travel time of the first arriving engine, at least 90 percent of the time.

- Deployment of an initial full alarm assignment: 8 minutes or less travel time, at least 90 percent of the time.
- Arrival at an emergency medical incident: 4 minutes or less travel time, at least 90 percent of the time.
- Dispatch call answering time: 15 seconds or less, at least 95 percent of the time, and 40 seconds or less, at least 99 percent of the time.
- Dispatch call processing time: 60 seconds or less, 90 percent of the time, and 90 seconds or less, 99 percent of the time.

- **Policy 5.B.2 Staff Training and Competency.** Maintain a Fire Department staff training program that ensures that personnel receive a minimum of 240 hours of training per year. Ensure that personnel maintain competency to execute all responsibilities required for their position.
- **Policy 5.B.3 ISO Target.** Strive to maintain an ISO rating of 3 or better for the city.
- **Policy 5.B.4 Development Project Requirements.** Require development projects to develop and/or fund fire protection facilities, equipment, personnel, and operations and maintenance that maintain the City's standards, as demonstrated through positive fiscal impacts or through specific funding mechanisms in the event of fiscal deficits.
- **Policy 5.B.5 Fire Safety Education.** Coordinate a public education program in order to foster public awareness of fire hazards with the intention of reducing injury and loss of life, damage to property, and degradation of the natural environment.
- **Policy 5.B.6 Adequate Infrastructure.** Pursue the provision of adequate water supplies, hydrants, and appropriate property access to allow for adequate fire suppression throughout the city.
- **Policy 5.B.7 Building Codes.** Adopt and enforce amendments to the City's construction and fire codes, as determined appropriate, to require adequate water infrastructure and automatic fire detection, control, and suppression systems, to systematically reduce the level of risk to life and property from fire, commensurate with the City's fire suppression capabilities.
- **Policy 5.B.8 Development Application Review by Fire Department.** Continue Fire Department review of all development applications, provide comments, and recommend conditions of approval that will ensure adequate on-site and off-site fire protection systems and features are provided.
- **Policy 5.B.9 Cost Recovery.** Continue to evaluate appropriate codes, policies, and methods to generate fees or other sources of revenue to offset the ongoing personnel and maintenance costs of providing fire prevention and response services.
- **Policy 5.B.10 Construction of New Fire Stations.** Consider location of existing stations in relation to planned growth, and explore efficacy of current station locations as part of any new fire station location analysis. Consider where a station relocation might preclude need for a new station with a new engine company. Prior to approval and construction of new fire stations, ensure that adequate funding is available for both the construction and the ongoing operation, maintenance, and staffing of future fire stations.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Goal 5.B establishes a comprehensive program of fire protection services as a priority in the 2035 General Plan. Service standards for fire protection are addressed in Policies 5.B.1 and 5.B.3, which require the Fire Department to strive to achieve certain response times and ISO ratings. Policy 5.B.10 specifically addresses the location of new fire stations in relation to planned growth. Policies 5.B.5, 5.B.7, and 5.B.8 reduce the need for new facilities through education and enforcement of safe building standards, and Policies 5.B.2 and 5.B.6 ensure high-quality staff and equipment, including adequate fire suppression throughout the city. Policies 5.B.4 and 5.B.9 help finance fire services and fire protection facilities. Implementation of the Proposed Project will result in the need for new fire stations. New or relocated fire stations would be located within the built footprint of the Proposed Project analyzed in this EIR, consistent with specified land use designations and allowable development densities and intensities. If siting and construction practices are consistent with the Proposed Project's policies and other existing regulatory standards, environmental impacts should be minimal. The environmental effects of construction and operation of facilities are included in the environmental topic sections throughout this EIR.

A discussion of project-specific impacts from future development and operation of new fire protection facilities is beyond the scope of this programmatic EIR. Individual development projects would be required to conduct environmental review pursuant to CEQA prior to approval. To the extent feasible, the environmental impacts associated with the construction of new fire protection facilities would be mitigated to below a level of significance, consistent with CEQA. Additionally, any new construction of fire facilities would be subject to construction permitting and Fire and Building Code standards.

There are no known additional programmatic significant impacts associated with the services and facilities beyond that which is disclosed and mitigated herein.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.12-2 Impacts Related to Police Protection Services. *Implementation of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time*

or other performance objectives for police protection. The impact is considered less than significant.

Potential Impacts Associated with Implementation of the Proposed Project

Law enforcement services in the city of Woodland are provided by the City of Woodland Police Department for areas within city limits and the Yolo County Sheriff's Department for unincorporated areas.

The City of Woodland Police Department has a staff of 79 paid employees, including 64 sworn patrol officers and 15 non-sworn support personnel. The Police Department currently staffs four full time beats in the northeast, northwest, southwest, and southeast quadrants of the city. An additional fifth beat covering downtown is staffed during the daytime. However, given calls for service under existing conditions, the Police Chief has expressed that this fifth beat should be staffed full-time.

Implementation of the Proposed Project is expected to require new Woodland Police Department facilities, as described below for the East and South Alternatives. The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The Proposed Project is not expected to require new Sheriff's Department facilities. Unincorporated county land will be annexed to the City of Woodland before the commencement of any development resulting from implementation of the Proposed Project will occur.

a. East Alternative–Ultimately to adequately cover existing development plus the anticipated buildout of Spring Lake and future development in SP-1A, SP-2 and SP-3, the City would require seven police beats, staffed continuously. Beyond this, additional staff and policing resources will be needed to account for workload and to meet response time standards.

b. South Alternative–Ultimately to adequately cover existing development plus the anticipated buildout of Spring Lake and the Proposed Project's development in all sub-areas of SP-1 and SP-3, the City would require six police beats, staffed continuously. Beyond this, additional staff and policing resources will be needed to account for workload and to meet response time standards.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County 2030 General Plan encourages the following standards for police protection: an average response time of 12 minutes for 90 percent of priority law enforcement calls in the rural areas and a minimum ratio of 1.75 sworn officers per 1,000 service population.

Proposed Project

The 2035 General Plan contains the following goals and policies that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.A Law Enforcement Services.** Provide a comprehensive program of law enforcement services to deter crime, ensure public safety, and meet the growing demand for police services associated with increasing population and non-residential development.

- **Policy 5.A.1 Response Time.** Strive to maintain a high level of police service to the community by achieving the following response times:
  - Priority 1 (Major Crimes) – 5 Minutes. Dispatch time: 1 minute; Police response time: 4 minutes
  - Priority 2 (Minor Crimes) – 6 minutes. Dispatch time: 1 minute; Police response time: 5 minutes
  - Priority 3 (Major Crimes Cold) – 35[3] minutes. Dispatch time: 15 minutes; Police response time: 10 minutes
  - Priority 4 (Minor Crimes Cold) – 40 minutes. Dispatch time 30 minutes; Police response time: 10 minutes
  - Priority 5 (Service Calls) – 45 minutes. Dispatch time: 35 minutes; Police response time: 10 minutes
- **Policy 5.A.2 Police Support.** Provide law enforcement support in an efficient and cost-effective manner to maintain service standards and provide staffing and equipment resources, including patrol and other vehicles, necessary equipment, and support personnel.
- **Policy 5.A.3 Development Project Requirements.** Require development projects to develop and/or fund police facilities, equipment, personnel, and operations and maintenance that maintain the City's standards, as demonstrated through positive fiscal impacts or through specific funding mechanisms in the event of fiscal deficits. New development should not result in a reduction in service levels (or capabilities) to existing service population.
- **Policy 5.A.4 Public Safety Programs.** Promote and fund public safety programs, including volunteers in policing, neighborhood watch, child identification and fingerprinting, substance abuse prevention, violence prevention, conflict resolution, and other public education and crime prevention efforts.
- **Policy 5.A.5 At-Risk Children and Youth.** Provide and promote services for children and youth at risk of abuse, neglect, youth violence, and exploitation.
- **Policy 5.A.6 Crime Prevention through Design.** Consider public safety issues in public facility, commercial, and residential project design, and enhance public safety through implementation of Crime Prevention Through Environmental Design (CPTED) strategies. These include designing the placement of activities and physical features, such as buildings, entrances and exits, corridors, fences, pavement, signs, lighting and landscaping, in such a way as to clearly define public and private space, maximize visibility, control access and circulation and foster positive social interaction.
- **Policy 5.A.7 Development Application Review by Police Department.** Continue Police Department review of all development applications, provide comments, and recommend conditions of approval that will ensure adequate on-site and off-site protection systems and features are provided.

[3] The Public Review Draft of the 2035 General Plan states that the response time standard is 35 minutes. However, this is an error. The Public Review Draft of the 2035 General Plan should state that the response time standard is 25 minutes, as written here.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

2035 General Plan goals and policies reduce any potential impacts. Goal 5.A provides for sufficient law enforcement services that will adequately meet the needs of increasing population and non-residential development. Policies 5.A.4, 5A.5, 5.A.6, and 5.A.7 reduce the need for additional police services through public safety programs, services for at-risk children, Crime Prevention through Design strategies, and development application review by the Police Department. Development projects are required to fund police facilities according to Policy 5.A.3, and Policies 5.A.1 and 5.A.2 require efficient and high-quality service standards.

It is not expected that implementation of the Proposed Project would result in the need for additional police protection facilities. In the event that new facilities would be needed, they would be located within the built footprint of the Proposed Project analyzed in this EIR. Individual development projects would be required to conduct environmental review pursuant to CEQA prior to approval. The environmental effects of construction and operation of police facilities are included in the environmental topic sections throughout the EIR. There are no known additional significant impacts associated with the services and facilities beyond that which is disclosed and mitigated, as appropriate, by Proposed Project policies and implementation programs.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.12-3 Impacts Related to School Services. *Implementation of the Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for schools. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

WJUSD calculates school capacities for each school based on the number of permanent classrooms, the number of portable classrooms, the number of classrooms used for programs other than classroom instruction, and loading standards. The District currently uses a 24 student per classroom loading factor for kindergarten and first grade, a 32 student per classroom loading factor for grades 2-6, and a 36 student per classroom loading factor for grades 7-12; these are the permitted class sizes per union contract language. By comparison, State standards for student

loading factors are 25 students per classroom for elementary schools and 27 students per classroom for middle and high schools.

The District projects an ongoing annual decline of 0.5 percent in student enrollment in the near term, based on projections made in January 2013. The District uses student generation factors (students per new dwelling units) for single- and multi-family development in order to project student enrollment. Table 4.12-6 summarizes the student generation factors used by the District.

Table 4.12-6. Student Generation Factors Used by WJUSD

Unit Type	Elementary (K–6)	Middle School (7–8)	High School (9–12)	Total Rate (K–12)
Single-family Unit[1]	0.3174	0.1250	0.1809	0.6233
Multi-family Unit[2]	0.1820	0.0599	0.0922	0.3341

Notes:

1 Single-family units are detached homes and homes that share a single wall.

2 Multi-family units are attached units that share multiple walls.

Source: Woodland Joint Unified School District 2013.

The siting of new schools is regulated by CDE, not the City of Woodland. Individual school development projects would be required to conduct environmental review pursuant to CEQA prior to approval. To the extent feasible, the environmental impacts associated with the construction of new schools would be mitigated to below a level of significance. Additionally, any new construction of schools would be subject to construction permitting and Fire and Building Code standards.

a. East Alternative–Assuming that multi-family dwelling units account for approximately 30 percent of all new dwelling units citywide for the East Alternative, it is estimated that the District will add 3,569 new student enrollments by 2035, based on the student generation factors provided in Table 4.12-6 above.

   Using the District's classroom loading factors for determining school capacity, existing facilities accommodate student enrollment growth generated by new development, as shown in Table 4.12-7. Due to the anticipated growth in SP-2, a new school may be necessary in the East Alternative to serve new residential development on the eastern side of the city. WJUSD expects to implement renovation and modernization projects, as feasible, over the planning horizon of the 2035 General Plan, as described in the Environmental Setting section above. These renovations would typically occur inside existing structures.

   However, when using the State's classroom loading factors, the projected enrollment of 1,939 elementary school students exceeds the available capacity of 984 students, and the projected enrollment of 739 middle school students exceeds the available capacity of 703 students.

Table 4.12-7. Enrollment and Capacity in WJUSD (East Alternative)

Grade	2012-2013					2035
	WJUSD Enrollment	State Loading Capacity		District Loading Capacity		Projected New Enrollment[3]
		Existing Total Capacity[1]	Available Capacity	Existing Total Capacity[2]	Available Capacity	
K–6	5,566	6,550	984	8,384	2,818	1,939
7–8	1,538	2,241	703	2,656	1,118	739
9–12	3,003	4,428	1,425	5,248	2,245	1,081
Total	10,107	13,219	3,112	16,288	6,181	3,759

Notes:

[1] Total capacity based on State standards of 25 students per classroom for elementary and 27 students per classroom for middle and high schools.

[2] Total capacity based on a 24 student loading factor for kindergarten and first grade, 32 student loading factor for grades 2–6, and a 36 student loading factor for grades 7–12.

[3] Based on General Plan's projected construction of 7,000 new dwelling units in Woodland by 2035. Assumes that multi-family dwelling units will account for 30 percent of all dwelling units citywide. Calculated using WJUSD student generation factors provided in Table 4.12-6.

Source: Woodland Joint Unified School Distric, 2011; California Department of Education 2013; Dyett & Bhatia 2016.

b. South Alternative–Implementation of the 2035 General Plan could result in up to 7,000 new dwelling units by 2035. Assuming that multi-family dwelling units account for approximately 39 percent of all new dwelling units citywide for the South Alternative (which is based on the housing types associated with the land use designations on residential development opportunity sites), it is estimated that the District will add 3,403 new student enrollments by 2035, based on the student generation factors provided in Table 4.12-6 above.

   Using the District's classroom loading factors for determining school capacity, existing facilities accommodate student enrollment growth generated by new development, as shown in Table 4.12-8. WJUSD expects to implement renovation and modernization projects, as feasible, over the planning horizon of the 2035 General Plan, as described in the Environmental Setting section above. These renovations would typically occur inside existing structures.

   However, when using the State's classroom loading factors, the projected enrollment of 1,856 elementary school students exceeds the available capacity of 984 students.

Table 4.12-8. Enrollment and Capacity in WJUSD (South Alternative)						
Grade	2012–2013					2035
	WJUSD Enrollment	State Loading Capacity		District Loading Capacity		Projected New Enrollment[3]
		Existing Total Capacity[1]	Available Capacity	Existing Total Capacity[2]	Available Capacity	
K–6	5,566	6,550	984	8,384	2,818	1,856
7–8	1,538	2,241	703	2,656	1,118	699
9–12	3,003	4,428	1,425	5,248	2,245	1,026
Total	10,107	13,219	3,112	16,288	6,181	3,581

Notes:
[1] Total capacity based on State standards of 25 students per classroom for elementary and 27 students per classroom for middle and high schools.
[2] Total capacity based on a 24 student loading factor for kindergarten and first grade, 32 student loading factor for grades 2-6, and a 36 student loading factor for grades 7-12.
[3] Based on General Plan's projected construction of 7,000 new dwelling units in Woodland by 2035. Assumes that multi-family dwelling units will account for 39 percent of all dwelling units citywide. Calculated using WJUSD student generation factors provided in Table 4.12-6.

Source: Woodland Joint Unified School District 2011; California Department of Education 2013; Dyett & Bhatia 2016.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The California Education Code contains various provisions governing the siting of new public schools, and the Public Resources Code identifies additional environmental requirements for locations of new schools. In 2000, the CDE School Facilities Planning Division (SFPD) updated the *Guide to School Site Analysis and Development* (Guide), which was originally published in 1966. The Guide assists school districts in determining the amount of land needed to meet their educational purposes according to CDE recommendations.

SB 50 (Statutes of 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development.

In November 2011, WJUSD adopted a Facilities Master Plan to identify and accommodate its facility needs for the short term and identify goals for the long term.

Proposed Project

The 2035 General Plan contains the following goal and policy that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.E Educational Opportunities.** Work cooperatively with school districts, private schools, and higher education institutions to provide superior educational opportunities for all members of the Woodland community.

- **Policy 5.E.2 School Location and Site Design.** Coordinate with the Woodland Joint Unified School District, private schools, and higher education institutions on site location and design to ensure that adequate educational facilities are available to meet the community's needs, are consistent with the General Plan and other City development regulations, and are integrated with neighborhoods.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Based on the State's classroom loading factors, new school facilities will be required in the Planning Area. Implementation of the 2035 General Plan will reduce the impacts related to school services. Specifically, Goal 5.E and Policy 5.E.2 encourages coordination with the District and other educational institutions regarding future school sites. However, the locations of potential future school sites will ultimately be determined by the District based on future enrollment. As a result, the potential impacts associated with the construction of new school facilities cannot fully be predicted.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant.**

Mitigation Measures

Funding for new school construction is provided through State and local revenue sources. Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) governs the amount of fees that can be levied against new development. Payment of fees authorized by the statute is deemed "full and complete mitigation."

Summary of Impact after Mitigation

a. East Alternative–Pursuant to State law the impact is considered less than **significant**.

b. South Alternative– Pursuant to State law the impact is considered **less than significant.**

IMPACT 4.12-4 Impacts Related to Parks and Recreation Services. *Implementation of the Proposed Project would require the provision of 5.0 acres of parkland per 1,000 residents. The Proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for parks. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The Proposed Project anticipates an increase of 20,000 residents in Woodland between 2013 and 2035, and the 2035 General Plan sets a standard for 5.0 acres of parkland per 1,000 residents. The City of Woodland 2002 General Plan Appendix D established a standard for 6.0 acres of parkland per 1,000 residents. Compared to the

2002 General Plan parkland standard, the 2035 General Plan includes a lower park acreage standard due to increased park construction costs and the City's ability to adequately operate and maintain these facilities over time.

The 2035 General Plan requires 5.0 acres of parkland per 1,000 residents. For any new future master or specific plan area, parkland would be required to support residential development according to the 2035 General Plan standard. The precise amount, type, and location of the new parks and recreational facilities would be determined during the planning process.

Development of new parkland would be required to conduct environmental review pursuant to CEQA prior to approval. To the extent feasible, the environmental impacts associated with the construction of new parks would be mitigated to below a level of significance, consistent with CEQA. Additionally, any new construction of recreation facilities within parks would be subject to construction permitting and Fire and Building Code standards.

Similar to new fire and police facilities, new parks and recreation facilities are assumed to be located within the built footprint of the Proposed Project analyzed in this EIR. The environmental effects of construction and operation of recreational facilities are included in the environmental topic sections throughout the EIR. There are no known additional programmatic significant impacts associated with the services and facilities beyond that which is disclosed and mitigated herein.

Table 4.12-9. Current and Future Parks Ratios

Existing Parks and Recreation Facilities	Total	Current Parks Ratio: Acreage per 1,000 Residents[1]
Developed Parkland Total Acres	148.9	2.7
Undeveloped Parkland Total Acres	221.9	4.0

Notes:

[1] Current Parks Ratio based on the 2013 existing population of 55,700 residents and existing parks and recreation facilities acreage, excluding the Woodland Cemetery.

Source: City of Woodland 2016.

a. East Alternative–The East Alternative would result in no additional or different impact than that which is disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The 1975 Quimby Act authorizes cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The State Open Space Standards provide a structure for cities to preserve open space for outdoor recreation and other purposes.

The Yolo County 2030 General Plan identifies existing and future County parks, as well as park standards, including a target threshold for resource parks (regional and open space parks) of 20 acres per 1,000 County residents. This standard applies to unincorporated land within the Woodland Planning Area.

Proposed Project

The 2035 General Plan contains the following goal, policies, and implementation program that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.C Park System.** Establish and maintain a complete system of public parks and community and recreational facilities that provides opportunities for both passive and active recreation and is well suited to the needs of Woodland residents, employees, and visitors.

- **Policy 5.C.1 Parks, Recreation, and Community Services Master Plan.** Maintain, implement, and update as necessary the Parks, Recreation and Community Services Master Plan to carry out the goals and policies of this General Plan. All new development will be consistent with the applicable provisions of the Parks Master Plan.

- **Policy 5.C.2 Sports Park Master Plan.** Maintain, implement, and update as necessary the Master Plan for the Sports Park at the Community and Senior Center.

- **Policy 5.C.3 Park Acreage Standard.** Ensure that the development of parks and recreation facilities keeps pace with development and growth within the city. Of the total acreage, strive to achieve and maintain a standard of 5.0 acres of parks per 1,000 residents for the development of City-owned park facilities.

- **Policy 5.C.4 New Development Goals.** Require that new residential development meet its fair share of the park acreage goal by either dedicating land for new parks, paying a fair share of the costs for new parks and recreation facilities, and/or renovating existing parks and facilities.

- **Policy 5.C.5 Proximity of Parks to Housing.** Strive to provide accessible public park, greenbelt, and/or recreational open space within one-quarter mile of all housing, especially in neighborhoods with higher density housing. Require new development in Specific Plan areas to meet this standard in site planning, and pursue opportunities to establish new parkland in proximity to underserved infill areas, as feasible.

- **Policy 5.C.7 Linear Park System.** Establish and maintain a linear park system of greenbelts, bicycle paths, and pedestrian walkways links City park facilities, schools and Downtown.

- **Policy 5.C.9 Greenbelt Requirements.** Require that a minimum of five percent of newly developed residential land within Specific Plan areas be designated for use as linear parks/neighborhood greenbelts. Link new greenbelts to existing or planned greenbelts to create a greenbelt network that connects housing with recreation, commercial and employment areas. Note: Linear parks/neighborhood greenbelts are included in the City's total parkland acreage and count towards the City's parkland standard of 5.0 acres per 1,000 residents.

- **Policy 5.C.10 Parks in Infill Areas.** Allow new development in infill areas to help meet park and recreation demands by providing mini parks or plazas that are accessible to the public. Seek opportunities to adaptively reuse underutilized infill sites for park uses.

- **Policy 5.C.11 Park Development Funding.** Identify appropriate funding mechanisms to adequately fund the development of new parks and recreational facilities; the renovation of existing parks and recreational facilities; and the ongoing preservation, maintenance and repair of the city's existing open space, parks and recreational resources and facilities.

- **Policy 5.C.12 Park Design.** Ensure that the City's parks, open space, and recreational resources and facilities include a variety of amenities and features to meet the needs of the diverse Woodland community. Consider the following factors in the design of new and renovated parks and recreation facilities:

    - Safety
    - Security
    - Maintenance
    - Water conservation / use of recycled water
    - Urban forest canopy
    - Accessibility
    - Travel distance of users
    - Passive vs. active use areas
    - Restroom facilities
    - Bike access and accommodations
    - Citizen input
    - Adequacy of off-street parking
    - Flexibility for programming activities
    - Lighting

- **Policy 5.C.15 Collaboration with County.** Cooperate with Yolo County in the development of a countywide parks, open space, and trail system.

- **Implementation Program 5.2.** Complete the 2016 Draft Parks, Recreation, and Community Services Master Plan and regularly update it to identify locations of major parks and recreational facilities, specific criteria and standards for the development of sports and recreation facilities, funding sources for the development and maintenance of parks, recreation centers and open space resources. This shall include the provision for the development of new parks in connection with new development and the development of parks to address existing deficiencies. It shall also include provisions for community gardens and urban farms.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Goal 5.3 supports the maintenance and operation of the park system in Woodland, and a parkland ratio standard is provided in Policy 5.C.3. Policies 5.C.1 and 5.C.2 and Implementation Program 5.2 require the City to maintain, implement, and update relevant parks and recreational plans. Helping to maintain the parkland standard across the city, Policy 5.C.7 supports a linear park system and Policy 5.C.5 supports the placement of parks in proximity of

housing. New development is required to meet its fair share of the park acreage goal, including greenbelt parks, according to Policies 5.C.4 and 5.C.9. Policy 5.C.10 allows small parks in infill areas to help maintain the park standard, which reduces the need for developing larger parks, which have potentially greater environmental effects of construction and operation of recreational facilities than smaller parks. The City must identify appropriate funding mechanisms for parks according to Policy 5.C.11. Policy 5.C.15 encourages cooperation with the County in developing a countywide parks, open space, and trail system, to help maintain the parkland standard. Policy 5.C.12 requires that a variety of factors are considered in the design of new and renovated parks, including water conservation, travel distance of users, and citizen input.

The 2035 General Plan establishes a lower parkland ratio standard than the parkland ratio standard in the existing 2002 General Plan. However, this new standard will still ensure that more parkland per capita is created than under existing conditions.

New parks that were needed would be located within the built footprint of the Proposed Project analyzed in this EIR. The potential impact associated with the potential construction of new parks has been considered at the programmatic level throughout the environmental issue sections of this EIR. There are no other known environmental effects associated with park facilities or services that are beyond the impacts disclosed in the relevant environmental issue sections of this EIR.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.12-5 Impacts Associated with Other Public Facilities. *Implementation of the Proposed Project could to result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives for other public facilities. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The City of Woodland 2002 General Plan Appendix D established service standards for general City facilities, as discussed in the Regulatory Settings. For City Hall, the 2002 General Plan established standards of 566 square feet of total space per employee and 400 square feet of office space with related support equipment per employee. For the Municipal Service Center, the 2002 General Plan established 1,450 square feet of building work area per 1,000 population and 450 square feet of building space per administrative/supervisory employee. For Library Facilities, the 2002 General Plan established standards of 507 square feet of library space per 1,000 persons

served; 400 square feet of office space per administrative/supervisory employee; and 1,800 volumes per 1,000 population with an annual acquisition rate of 200 volumes per 1,000 population.

The Proposed Project anticipates an increase of 20,000 residents in Woodland between 2013 and 2035, and it is anticipated that the growth may have an impact on other public facilities, such as City Hall, the Municipal Service Center, and Library Facilities. The 2035 General Plan does not establish precise service standards for these other public facilities; rather, the 2035 General Plan includes policies that direct the City to provide these facilities commensurate with new growth.

Other utilities such as electric, gas, and telecommunications are provided by private companies based on demand. Implementation of the Proposed Project may result in increased demand, and therefore new construction of electric and gas transmission lines and telecommunications facilities. As discussed in regards to fire and police facilities, and parks, in the event that new public facilities would be required, they would be located within the built footprint of the Proposed Project analyzed in this EIR. If siting and construction practices are consistent with the Proposed Project's policies and other existing regulatory standards, environmental impacts should be minimal.

A discussion of project-specific future impacts of development and operation of new public facilities is beyond the scope of this programmatic EIR. Public facility development projects would be required to conduct environmental review pursuant to CEQA prior to approval. To the extent feasible, the environmental impacts associated with the construction of new public facilities would be mitigated to below a level of significance, consistent with CEQA. Additionally, any new construction of public facilities would be subject to construction permitting and Fire and Building Code standards.

a. East Alternative–The East Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Yolo County 2030 General Plan identifies existing library services in the county and establishes policies and actions to provide library services. However, Woodland's library is provided by the City rather than the County. The Yolo County 2030 General Plan also includes policies requiring the County to encourage development of power generating and transmission facilities sufficient to serve existing and planned uses, as well as to require utility lines to follow field edges to minimize impacts on agricultural operations.

Proposed Project

The 2035 General Plan contains the following goals and policies that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.K** Provision of Other Utilities. Promote adequate levels of utility services provided by private companies and ensure that these are constructed to minimize negative effects on surrounding development and neighborhoods.

- **Policy 5.K.1** Coordinate with Private Utility Companies. Continue to communicate major development plans with utility companies and coordinate planning of extension of necessary facilities.

- **Policy 5.K.5** Managing Underground Infrastructure. Develop and manage underground infrastructure, including broadband infrastructure, as "basic infrastructure" that adheres to the City's standards, is available for public use, and is managed as an asset in line with other public property.

- **Policy 5.K.8** Strategic Planning for Communications Infrastructure. Establish a plan for the improvement and expansion of the communications infrastructure network. The plan should address infrastructure needs and development opportunities, provide cost-effective and efficient solutions, and explore the possibility of using City property and rights-of-way for communication infrastructure sites.

- **Goal 5.L** Broadband Distribution and Quality of Service. Facilitate the distribution of the best broadband service possible, to as many users and key transportation corridors within the community as possible, in a timely and cost effective manner that minimizes impacts to visual and natural resources.

- **Policy 5.L.4** Minimize Impacts. Strive to minimize or mitigate the impact of communications projects and infrastructure on the environment and scenic resources.

- **Goal 6.D** Community Facilities and Programs. Support a wide variety of community facilities and programs to serve and meet the needs of the diverse Woodland community.

- **Policy 6.D.1** Adequate Facilities. Ensure there are adequate community facilities to serve all segments of Woodland's growing population. Plan for appropriate community facilities in new growth areas.

- **Policy 6.D.4** Library Expansion. Expand Woodland library facilities and programs commensurate with the city's population growth.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

It is anticipated that growth under the Proposed Project may create additional need for public facilities in Woodland. Goal 6, Policies 6.D.1, and 6.D.4 require community facilities including libraries commensurate with the city's population. In addition, Goals 5.K and 5.L require the City to promote adequate levels of utility services provided by private companies and the distribution of the best broadband service available. Policies 5.K.1, 5.K.5, 5.K.8, and 5.L.4 address the location and impacts of these new utility and broadband services and require undergrounding utilities in new development and minimal impacts from communications projects.

If new public facilities are built to serve development from the Proposed Plan, policies in the Proposed Plan would reduce environmental impacts that might be associated with their construction. However, the exact nature and extent of the need for additional public facilities is unknown at this time.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant.**

Mitigation Measures

Mitigation Measure 4.12-5a – The 2035 General Plan should be amended to include the following new implementation program (Implementation Program Public Services 1):

- Adopt a Municipal Facilities Master Plan that studies and identifies future space needs for city government offices, library facilities, and any other municipal service facilities not addressed in the Parks, Recreation, and Community Services Master Plan, and establishes space standards and ratios, as appropriate.

The 2035 General Plan is an expression of the City of Woodland's vision for future physical growth within the Planning Area and consists of a series of policies and implementation programs necessary for achieving that vision. The 2035 General Plan does not establish service standards for public facilities and therefore is in conflict with the existing service standards for public facilities in the existing 2002 General Plan. The mitigation measure listed above would ensure that future space needs are identified and standards are established for public facilities to support the City as it continues to grow, even though the standards are not included in the 2035 General Plan itself. However, before this Master Plan is prepared, it cannot be known whether the standards within it will be equal to or better than those included in the 2002 General Plan. The only other mitigation would be to not adopt the 2035 General Plan, which is not a feasible action that would still achieve the objectives of the Proposed Project.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation**.

b. South Alternative– The impact is considered **less than significant with mitigation**.

IMPACT 4.12-6 Impacts Related to Increased Use of Existing Parks and Recreational Facilities. Implementation of the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. The impact is considered *less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Additional population would be expected to place added physical demands on existing park facilities by increasing the number of people using the parks, lengthening the periods of time during which the parks would be in active use, and/or increasing the intensity of use over the course of a typical day. In addition, it is anticipated that new parkland would be created to serve new residential growth areas, meaning that the ratio would likely be higher by 2035. As additional parkland would be added over time with new development, impacts related to use overall would be spread over more facilities, and thus the increased use of existing parks and recreational facilities would not result in substantial physical deterioration of existing facilities. See also See also the discussion of impacts in Impact 4.12-4.

a. East Alternative–The East Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The Parks, Recreation, and Community Services Master Plan includes analysis of parks and recreation maintenance.

Proposed Project

The 2035 General Plan contains the following goals, policies, and implementation programs that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.C Park System.** Establish and maintain a complete system of public parks and community and recreational facilities that provides opportunities for both passive and active recreation and is well suited to the needs of Woodland residents, employees, and visitors.

- **Policy 5.C.4 New Development Goals.** Require that new residential development meet its fair share of the park acreage goal by either dedicating land for new parks, paying a fair share of the costs for new parks and recreation facilities, and/or renovating existing parks and facilities.

- **Policy 5.C.11 Park Development Funding.** Identify appropriate funding mechanisms to adequately fund the development of new parks and recreational facilities; and the ongoing preservation, maintenance and repair of the city's existing open space, parks and recreational resources and facilities.

- **Implementation Program 5.2.** Complete the 2016 Draft Parks, Recreation, and Community Services Master Plan and regularly update it to identify locations of major parks and recreational facilities, specific criteria and standards for the development of sports and recreation facilities, funding sources for the development and maintenance of parks, recreation centers and open space resources. This shall include the provision for the development of new parks in connection with new development and the development of parks to address existing deficiencies. It shall also include the provisions for community gardens and urban farms.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The Proposed Project ensures the impact would be less than significant. Specifically, Policies 5.C.4 and 5.C.11 and Implementation Program 5.2 of the 2035 General Plan seek to identify funding for the preservation, maintenance, renovation, and repair of existing parks and recreation facilities. The impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.12-7 Impacts Related to Recreational Facilities. *Implementation of the Proposed Project would result in recreational facilities and/or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Implementation of the Proposed Project would not specifically require new recreational facilities. However, it is anticipated that new recreational facilities would be created to serve new growth. For any new future master or specific plan area, parkland is required to support residential development, and there may be new recreational facilities associated with new parkland. The precise amount, type, and location of the new parks and recreational facilities would be determined during the planning process for individual development projects or Specific Plans, and must be consistent with the requirements of the 2035 General Plan.

Development of new recreational facilities or the expansion of existing facilities would be required to conduct environmental review pursuant to CEQA prior to approval. To the extent feasible, the environmental impacts associated with construction would be mitigated to below a level of significance, consistent with CEQA. Additionally, any new construction or expansion of recreation facilities would be subject to construction permitting and Fire and Building Code standards.

Similar to new fire and police facilities, new parks and recreation facilities are assumed to be located within the built footprint of the Proposed Project analyzed in this EIR. The environmental effects of construction and

operation of recreational facilities are included in the environmental topic sections throughout the EIR. There are no known additional programmatic significant impacts associated with the services and facilities beyond that which is disclosed and mitigated herein.

a. East Alternative–The East Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Regulations

The 1975 Quimby Act authorizes cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The State Open Space Standards provide a structure for cities to preserve open space for outdoor recreation and other purposes.

The Yolo County 2030 General Plan identifies existing and future parks, as well as park standards, including a target threshold for resource parks (regional and open space parks) of 20 acres per 1,000 County residents.

While these regulations do not speak to recreational facilities per se, these are often co-located with parkland and are planned and programmed together.

Proposed Project

The 2035 General Plan contains the following goals, policies, and implementation programs that reduce the potential environmental impact. There are no CAP objectives or strategies that relate to this impact.

- **Goal 5.C Park System.** Establish and maintain a complete system of public parks and community and recreational facilities that provides opportunities for both passive and active recreation and is well suited to the needs of Woodland residents, employees, and visitors.

- **Policy 5.C.1 Parks, Recreation, and Community Services Master Plan.** Maintain, implement, and update as necessary the Parks, Recreation and Community Services Master Plan to carry out the goals and policies of this General Plan. All new development will be consistent with the applicable provisions of the Parks Master Plan.

- **Policy 5.C.2 Sports Park Master Plan.** Maintain, implement, and update as necessary the Master Plan for the Sports Park at the Community and Senior Center.

- **Policy 5.C.3 Park Acreage Standard.** Ensure that the development of parks and recreation facilities keeps pace with development and growth within the city. Of the total acreage, strive to achieve and maintain a standard of 5.0 acres of parks per 1,000 residents for the development of City-owned park facilities.

- **Policy 5.C.4 New Development Goals.** Require that new residential development meet its fair share of the park acreage goal by either dedicating land for new parks, paying a fair share of the costs for new parks and recreation facilities, and/or renovating existing parks and facilities.

- **Policy 5.C.5 Proximity of Parks to Housing.** Strive to provide accessible public park, greenbelt, and/or recreational open space within one-quarter mile of all housing, especially in neighborhoods with higher density housing. Require new development in Specific Plan areas to meet this standard in site planning, and pursue opportunities to establish new parkland in proximity to underserved infill areas, as feasible.

- **Policy 5.C.7 Linear Park System.** Establish and maintain a linear park system of greenbelts, bicycle paths, and pedestrian walkways that links City park facilities, schools and Downtown.

- **Policy 5.C.9 Greenbelt Requirements.** Require that a minimum of five percent of newly developed residential land within Specific Plan areas be designated for use as linear parks/neighborhood greenbelts. Link new greenbelts to existing or planned greenbelts to create a greenbelt network that connects housing with recreation, commercial and employment areas. Note: Linear parks/neighborhood greenbelts are included in the City's total parkland acreage and count towards the City's parkland standard of 5.0 acres per 1,000 residents.

- **Policy 5.C.10 Parks in Infill Areas.** Allow new development in infill areas to help meet park and recreation demands by providing mini parks or plazas that are accessible to the public. Seek opportunities to adaptively reuse underutilized infill sites for park uses.

- **Policy 5.C.11 Park Development Funding.** Identify appropriate funding mechanisms to adequately fund the development of new parks and recreational facilities; the renovation of existing parks and recreational facilities; and the ongoing preservation, maintenance and repair of the city's existing open space, parks and recreational resources and facilities.

- **Policy 5.C.12 Park Design.** Ensure that the City's parks, open space, and recreational resources and facilities include a variety of amenities and features to meet the needs of the diverse Woodland community. Consider the following factors in the design of new and renovated parks and recreation facilities:

    - Safety
    - Security
    - Maintenance
    - Water conservation / use of recycled water
    - Urban forest canopy
    - Accessibility
    - Travel distance of users
    - Passive vs. active use areas
    - Restroom facilities
    - Bike access and accommodations
    - Citizen input
    - Adequacy of off-street parking
    - Flexibility for programming activities
    - Lighting

- **Policy 5.C.15 Collaboration with County.** Cooperate with Yolo County in the development of a countywide parks, open space, and trail system.

- **Implementation Program 5.2.** Complete the 2016 2035 Parks, Recreation, and Community Services Master Plan and regularly update it to identify locations of major parks and recreational facilities, specific criteria and standards for the development of sports and recreation facilities, funding sources for the development and maintenance of parks, recreation centers and open space resources. This shall include the provision for the development of new parks in connection with new development and the development of parks to address existing deficiencies. It shall also include provisions for community gardens and urban farms.

- **Implementation Program 5.3.** Conduct regular surveys to determine specific recreation needs of various ages, capabilities and interests.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Goal 5.C supports the establishment, maintenance and operation of recreational facilities in Woodland, and Policy 5.C.3 ensures that development of recreation facilities keeps pace with development and growth within the city. Policies 5.C.1 and 5.C.2 and Implementation Programs 5.2 and 5.3 require the City to maintain, implement, and update relevant parks and recreational plans. Helping to maintain recreational opportunities across the city, Policy 5.C.7 supports a linear park system and Policy 5.C.5 supports the placement of parks and recreational facilities in proximity of housing. New development is required to meet its fair share of the park acreage goal, including greenbelt parks, according to Policies 5.C.4 and 5.C.9. Policy 5.C.10 allows small parks in infill areas to help maintain the park standard, which reduces the need for developing larger parks, which have potentially greater environmental effects of construction and operation of recreational facilities than smaller parks. The City must identify appropriate funding mechanisms for parks and recreational facilities according to Policy 5.C.11. Policy 5.C.15 encourages cooperation with the County in developing a countywide parks, open space, and trail system to promote regional recreation. Policy 5.C.12 requires that a variety of factors are considered in the design of new and renovated parks and recreational facilities, including flexibility for programming activities, travel distance of users, and citizen input.

New recreational facilities would be located within the built footprint of the Proposed Project analyzed in this EIR. The potential impact associated with the potential construction of new recreational facilities has been considered at the programmatic level throughout the environmental issue sections of this EIR. There are no other known environmental effects associated with recreational facilities that are beyond the impacts disclosed in the relevant environmental issue sections of this EIR.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

4.13 TRANSPORTATION AND CIRCULATION

4.13.1 INTRODUCTION

This section describes potential impacts to the transportation system associated with the adoption of the 2035 General Plan and 2035 CAP. The impact analysis examines the vehicular, transit, bicycle, pedestrian, railway, and aviation components of the city's overall transportation system.

The transportation impact analysis is based on data and information collected in 2013 plus analysis performed over the past three years to test alternatives and develop the final project description for environmental review. The 2013 data represents baseline conditions for purposes of the transportation impact analysis. Changes in baseline conditions since 2013 are accounted for in the transportation analysis process since impacts are determined based on long-term growth associated with the general plan alternatives. Hence, impacts are based on the incremental growth from 2013 to 2035 and to 2050. Some traffic changes due to population and employment growth have likely occurred between 2013 and 2016, but this is part of the larger increment of growth noted above.

Several comments on the NOP relevant to transportation and circulation were received. Caltrans submitted comments with the main theme focused on the importance of analyzing the State Highway System (SHS) and financial support from the City for SHS improvement costs. The impact analysis includes specific segments of Interstate 5 (I-5), State Route 113 (SR 113), and State Route 16 (SR 16). Information is also provided about how the Proposed Project influences new transportation metrics referenced in the Caltrans comment letter including vehicle miles of travel (VMT). As to financial support, the City's Major Projects Financing Plan (MPFP) already includes a transportation impact fee program that includes SHS projects. A citizen commented that the 2035 General Plan should reflect the long term goal for off-road bikeways and walkways. This comment is not relevant to the EIR. The Yolo Solano Air Quality Management District (YSAQMD) indicated that the transportation section of the EIR should include a comprehensive discussion of the existing transportation system and should analyze the potential impacts of the 2035 General Plan alternatives to the system. YSAQMD also indicated that the discussion should describe the future planned transportation circulation system for all modes, including transit, bicycle, pedestrian, and motor vehicles, and whether the 2035 General Plan update will encourage or discourage alternative travel modes. These comments have been incorporated throughout this section.

4.13.2 ENVIRONMENTAL SETTING

The automobile is the most widely used mode of transportation in Woodland. According to the US Census Bureau, 2010-2014 American Community Survey, about 90 percent of City of Woodland residents work commute by car, truck, or van.[1] The share of commuters that walk or bike to work in the City of Woodland is about two percent for each mode. Additionally, about three percent of commuters use public transportation to get to work.

Data from the 2010–2014 American Community Survey also show the amount of time commuters take to get to work. Based on the data, about 66 percent of workers living in Woodland traveled to work in less than 25 minutes with an average travel time estimated to be 22 minutes.

[1] U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

4.13.2.1 ROADWAY SYSTEM

The City of Woodland uses a functional classification system to describe and plan its roadway system. Exhibit 4-13.1 displays the existing functional classification and the number of travel lanes on roadways and freeways in the city. Descriptions of each roadway classification are provided below.

- **Freeways**: Provide mobility between Woodland and regional destinations. Freeways are access controlled, divided roadways with at least two lanes in each direction. Freeway access is provided by grade-separated interchanges.

- **Major Two-Lane Highways**: Provide mobility between Woodland and regional destinations. They generally have two travel lanes, periodic passing and climbing lanes, and at-grade intersections.

- **Principal Arterial Streets**: Provide mobility for high traffic volumes between various parts of the city. They typically link freeways to collectors and local streets and generally have higher speeds and more access control. Principal arterials within the city may have up to four travel lanes.

- **Minor Arterial Streets**: Provide mobility for high traffic volumes be- tween various parts of the city. They typically have lower speeds and less access control than a Principal Arterial street due to the intensity of the development in the urban environment. Minor arterials within the city may have up to four travel lanes.

- **Collector Streets**: Provide for relatively short distance travel between and within neighborhoods, and generally have lower speeds and traffic volumes than arterials. Driveway access to collectors is limited less than on arterials, but may still be discouraged. Collectors within the city have two travel lanes.

- **Local Streets**: Provide direct roadway access to adjacent land uses and serve short distance trips within neighborhoods. Traffic volumes and speed limits on local streets are low, and these roadways have no more than two travel lanes.

Woodland's system of arterials, collectors, and local streets connect neighborhoods, employment centers, and other destinations.

4.13.2.2 REGIONAL ROADWAY SYSTEM

The following three major State and Interstate highways are present within the Planning Area and maintained by Caltrans:

- **I-5** is a north/south route that extends the length of California into Oregon and Washington and connects Mexico to Canada. The freeway is one of the more significant goods movement routes between the two countries and serves a number of long distance truck and recreational trips. Within the City of Woodland, I-5 has two general purpose lanes in each direction.

- **SR 113** is a north/south route extending from west of Rio Vista to south of Yuba City. The segment between Davis and Woodland is a four-lane freeway and connects I-80 and I-5. SR 113 is also an alternative to SR 99 for regional travel between the San Francisco Bay Area and the rural communities north of Woodland. It continues from I-5 in Woodland to SR 99 as a two-lane conventional highway.

- **SR 16** is an east/west route extending from SR 20 in Colusa County to SR 49 in Amador County. In the Woodland area, SR 16 connects directly to Main Street on the west side of the City before routing north to I-5. SR 16 is the primary route to Cache Creek Resort Casino and is a two-lane conventional highway in the study area. SR 16 used to extend directly through town as Main Street and although the route designation has changed, SR 16 traffic still contributes to traffic on Main Street.

This system of highways handles the bulk of the long-distance trips that cross through the City of Woodland on the way to other destinations, but it also handles large volumes of commute trips between residential neighborhoods and employment centers in Yolo County and the Sacramento region.

4.13.2.3 PEDESTRIAN FACILITIES

Conditions for walking vary across the city, from industrial districts with little pedestrian infrastructure to suburban neighborhoods with typical sidewalk to the denser, walkable grid of Downtown Woodland. The City has emphasized pedestrian travel by enhancing facilities including crosswalks, pedestrian count-down signals, new sidewalks, and traffic calming measures. Exhibit 4.13-2 illustrates select pedestrian facilities commonly found on various roadways within the city.

Sidewalks are present on the majority of roadways within the city as shown in Table 4.13-1. Most minor arterials, collectors and residential streets have sidewalks on both sides of the street, while principal arterials, especially those on the periphery of the city, typically have sidewalks only on one side. Sidewalks are included on all roadways within the city's newer planned communities and downtown grid.

Table 4.13-1: Existing Sidewalk Coverage By Functional Classification

Functional Classification	Sidewalk on one side of the street only	Sidewalk on both sides of the street	Total sidewalk coverage
Principal Arterial	67%	11%	78%
Minor Arterial	12%	56%	68%
Collector	5%	87%	92%
Residential[1]	6%	89%	95%

[1] Percentage based on random sample of local roadways within residential neighborhoods.
Source: Fehr & Peers 2013

The City of Woodland also has off-street facilities for pedestrian travel. Most of these pathways are located in city parks and serve residents who walk for recreation. The off-street facilities typically do not provide direct access to key destinations like commercial and employment centers. Notable off-street facilities include the William Crawford Senior Park cut-through and a multi-use path that accesses the Woodland Community & Senior Center. Multi-use paths are also proposed within the Spring Lake community.

The City has implemented community programs and adopted guidelines to enhance the pedestrian environment and routinely requires new development to finance and install pedestrian facilities. The City has historically received $100,000 per year from the Community Development Block Grant (CDBG) program for curb ramp installation and has developed the Traffic Safety Commission to advise and make recommendations to the City Council on all traffic safety matters within Woodland.

4.13.2.4 BICYCLE FACILITIES

The 2002 City of Woodland Bicycle Transportation Plan identifies existing and planned bicycle facilities within the city. Bicycle facilities that existed in 2013 are shown in Exhibit 4.13-3. The primary purpose of the Bicycle Transportation Plan is to identify on-street and off-street bicycle facilities to serve the needs of recreational and commute riders. Fulfilling this purpose is expected to encourage greater levels of bicycling that will contribute to reductions in vehicle travel, air pollution, greenhouse gases (GHGs), and noise pollution. The plan also presents the appropriate design features of bikeways, such as physical dimensions, signs, and markings.

Bikeways in the City of Woodland are classified according to the following three types:

- Class I - off-street bike paths;
- Class II - on-street bike lanes marked by pavement striping and signage; and
- Class III - on-street bike routes that share the road with motorized vehicles.

Many roadways have on-street bike lanes (Class II) or are signed as a bicycle route (Class III). Since 2013, a few Class I bicycle facilities have been constructed along Pioneer Avenue, County Road 102, Heritage Parkway and throughout the Spring Lake Specific Plan area.

4.13.2.5 TRANSIT FACILITIES

The Yolo County Transportation District (YCTD) operates Yolobus, which provides local and intercity bus service within the City of Woodland, Yolo County, and to Downtown Sacramento and Sacramento International Airport. Exhibits 4.13-4A and B display the 2013 weekday and weekend transit routes. Each route is described below:

- **Routes 42A and 42B** provide hourly intercity service, seven days a week. Route 42A travels in a loop that begins in downtown Sacramento and serves West Sacramento, Davis, Woodland, and the Sacramento International Airport, with return service to downtown Sacramento. Route 42B serves the same destinations, but in the opposite counterclockwise direction.

- **Route 45** is an alternative weekday express route to Routes 42A and 42B. Route 45 provides five morning and four afternoon trips between Woodland and downtown Sacramento.

- **Route 209** provides one morning and one afternoon trip each weekday between the Spring Lake community and the County Fair Mall Transit Center.

- **Route 210** provides local hourly service, Monday to Friday, to west Woodland.

- **Route 211** provides local hourly service, seven days a week, to west Woodland.

- **Route 212** provides local hourly service, seven days a week, to east Woodland.

- **Route 214** provides local hourly service, Monday to Friday, to east Woodland.

- **Route 215** provides six morning, six afternoon, and five evening round trips daily between Woodland and Cache Creek Casino Resort.

- **Route 216** provides one morning and one afternoon round-trip between Woodland and Knights Landing. It operates on Monday, Wednesday, and Friday plus the second Saturday of each month.
- **Route 217** provides one morning and one afternoon round trip between Woodland and Dunnigan. It operates on Tuesdays and Thursdays each week.
- **Route 242** is a commuter service providing one morning and one after- noon trip each weekday between Woodland and Davis.

Routes 42A and 42B have the highest weekly ridership, serving nearly 55 percent of all transit riders. On weekdays, many segments along these routes, including between Woodland and Davis and between West Sacramento and Downtown Sacramento, experience high ridership. Route 215 serving patrons and workers of Cache Creek Casino Resort, has the second highest weekly ridership. In the month of March 2013, Yolobus served an average of 3,560 passenger trips per weekday, 2,500 passenger trips per Saturday, and 2,220 passenger trips per Sunday. Table 4.13-2 lists the weekday, Saturday, and Sunday ridership by route.

Table 4.13-2: Yolobus Ridership by Route

Bus Route	Weekday Ridership	Saturday Ridership	Sunday Ridership
42A & 42B	1,861	1,470	1,229
45	25	n/s	n/s
209[1]	2	n/s	n/s
210	137	n/s	n/s
211	212	138	101
212	172	91	83
214	150	n/s	n/s
215	745	823	804
216	8	n/s	n/s
217	4	n/s	n/s
242	33	n/s	n/s
Total	3,560	2,522	2,217

[1] New route. Service began on March 4, 2013.
[2] n/s – No Service.
Source: Yolobus Riders Report, March 2013

Service for Patrons with Limited Mobility

Although Yolobus public fixed-route services are accessible to the disabled community, the agency also offers door-to-door service for patrons unable to travel on fixed-route bus lines, as required by the ADA. The complementary Paratransit Service operates within the same times and places as the fixed- route buses. It is provided by Yolobus Special and Davis Community Transit on a prearranged basis for any trips within the designated service area.

4.13.2.6 RAILWAYS

Railways within the Planning Area serve as a vital component of goods movement. Exhibit 4.13-5 displays existing rail lines that traverse the City. Woodland's industrial sector relies on the railway system to connect it to

regional destinations. Two freight railways operate on the current railways including the Sierra Northern Railway and the California Northern Railroad. The main railways plus rail spurs have approximately 29 at-grade crossings of public roads in the City, including 15 crossings adjacent to East and North East Streets. Rail spurs are essential for industrial operations in the City of Woodland and are cited as a key factor when evaluating site locations for new industrial businesses. Rail cars are frequently stored in the area northeast of the Main Street/East Street intersection.

The California Northern Railroad operates approximately 261 miles of track within California linking freight customers in Northern California with the Union Pacific Railroad. Transported commodities include tomato products, olives, rice, cheese, frozen foods, beer, wine, petroleum products, and chemicals. The Sierra Northern Railway (formerly the Sierra Railroad Company and the Yolo Shortline Railroad) operates approximately 75 miles of track in Northern California including a 17-mile line between the Port of Sacramento in West Sacramento and Woodland. Transported commodities include lumber, particle board, wallboard, wood chips, bulk gypsum, bulk limestone, bulk plastics, canned goods, food and food products, chemicals and steel. Trains operate from 6:00 AM to 6:00 PM Monday through Friday, with additional weekend service according to customer needs.

4.13.3 REGULATORY FRAMEWORK

4.13.3.1 FEDERAL

No federal laws, policies, plans, or programs apply directly to the Proposed Project.

The federal Clean Air Act, the Moving Ahead for Progress in the 21st Century Act (MAP-21), and Americans with Disabilities Act (ADA) may have some relevance or influence for individual projects or actions as part of subsequent 2035 General Plan implementation.

4.13.3.2 STATE

California Complete Streets Act, AB 1358 (Statutes of 2008)

The California Complete Streets Act requires the legislative body of a city or county, upon revision of the circulation element of their general plan (after January 1, 2011), to identify how the jurisdiction will provide for the routine accommodation of all users of the roadway (i.e., complete streets) including motorists, pedestrians, bicyclists, individuals with disabilities, seniors, and users of public transportation.

Guides and Plans for Operating Conditions of Caltrans Facilities

For Caltrans facilities, acceptable operating conditions are defined by the *Caltrans Guide for the Preparation of Traffic Impact Studies* (December 2002), the *State Route 99 & Interstate 5 Corridor System Management Plan* (May 2009), the *Transportation Corridor Concept Report Interstate 5* (September 2010), *Transportation Corridor Concept Report State Route 16* (June 2012), and *Transportation Corridor Concept Report State Route 113* (July 2014).

4.13.3.3 REGIONAL

Sacramento Area Council of Governments (SACOG) 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS)

The 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy is the regional transportation plan for the SACOG region. As such, it provides the basis for air quality conformity findings related to the national Clean Air Act (CAA) and determinations that the region is complying with greenhouse gas (GHG) reduction targets for automobiles and light trucks established under California's Senate Bill 375 (SB 375).

Yolo County 2030 General Plan

The Circulation Element of the Yolo County 2030 General Plan plans for the transportation system in the county. Policy CI-3.1 includes service thresholds, some of which apply to unincorporated county land in the Planning Area, as specified below.

- Policy CI-3.1 Maintain Level of Service (LOS) C or better for roadways and intersections in the unincorporated county. In no case shall land use be approved that would either result in worse than LOS C conditions, or require additional improvements to maintain the required level of service, except as specified below. The intent of this policy is to consider level of service as a limit on the planned capacity of the County's roadways.

- Policy CI-3.4 Define level of service consistent with the latest edition of the Highway Capacity Manual and calculate using the methodologies contained in that manual. At a minimum, weekday AM and PM peak hour traffic volumes will be used in determining compliance with the level of service standard. For recreational and other non-typical peak hour uses, weekday afternoon, weekday late evening, or weekends shall be considered.

Yolo County's General Plan also has references to State highway performance expectations that have been superseded by more recent documents described above under the heading, "Guides and Plans for Operating Conditions of Caltrans Facilities."

Yolo County 1996 Congestion Management Program

Yolo County Transit Authority adopted the Yolo County Congestion Management Program in March 1996. The Congestion Management Program (CMP) establishes roadway and transit level of service (LOS) thresholds for regional roadways and transit routes in Yolo County. The CMP roadway LOS thresholds are intended to be used to evaluate individual development projects to ensure impacts to the CMP network are identified and mitigated.

4.13.3.4 LOCAL

City of Woodland Streets Master Plan (2009)

The Streets Master Plan contains details about how to implement the *2002 General Plan Circulation Element* roadway improvements. Consistency with the plan is a consideration for the assessment of significant transportation impacts related to whether projects disrupt planned facilities.

City of Woodland Community Design Standards (2004)

The City's design standards determine how modifications to the existing transportation network are made as the network expands to accommodate planned population and employment growth. Consistency with these standards is a consideration for the assessment of significant transportation impacts related to safety.

City of Woodland 2002 General Plan

The 2002 General Plan includes goals and policies that influence transportation facilities planning, design, and operation. Policy 3.A.2 is the current basis for determining significant roadway impacts in the City of Woodland.

- **Policy 3.A.2** The City shall develop and manage its roadway system to maintain LOS "C" or better on all roadways, except within one-half mile of state or federal highways and freeways and within the Downtown Specific Plan area. In these areas, the City shall strive to maintain LOS "D" or better. Exceptions to these level of service standards may be allowed in infill areas where the City finds that the improvements or other measures required to achieve the LOS standards are unacceptable because of the right-of-way needs, the physical impacts on surrounding properties, and/or the visual aesthetics of the required improvement and its impact on community character.

The 2002 General Plan also contains goals, policies, and implementation measures addressing other modes but they have not been established as significance thresholds for environmental impact purposes.

City of Woodland 2002 Bicycle Transportation Plan

The Bicycle Transportation Plan identifies existing and planned bicycle facilities and is used in the assessment of significant bicycle impacts related to whether projects disrupt existing, or interfere with planned, facilities.

Spring Lake Specific Plan (2001)

The Spring Lake Specific Plan identifies the planned locations of transportation facilities for all modes within the specific plan boundaries. As such, consistency with this plan is a consideration for the assessment of significant transportation impacts.

4.13.4 Environmental Impacts and Mitigation Measures

4.13.4.1 Methodology

The transportation analysis addresses the roadway, transit, bicycle, pedestrian, and rail components of the transportation system assuming implementation of the 2035 General Plan and 2035 CAP, including 2035 CAP Strategies E-1, E-2, E-3, E-4, T/LU-1, T/LU-4, T/LU-7, MO-3, MO-4, and MO-5. Analysis of the roadway system is based upon the projected capacity utilization of existing and planned roadways while the other components of the transportation network are evaluated on the basis of whether the East or South Alternative would disrupt or interfere with the physical or operational condition of existing or planned facilities or services in 2035.

The influence the Proposed Project policy choices on the roadway system was quantified through an analysis of the roadway system that measures daily VMT on the regional roadway network and p.m. peak hour capacity utilization for local City of Woodland streets and Caltrans freeway facilities. The analysis included 203 roadway

segments and involved a multi-step process to transform the land use and network changes associated with the East and South Alternatives into VMT and traffic volume forecasts. The process started with use of a modified version of SACOG's regional SACMET travel model.

Modifications to the model were made to tailor it for Woodland and the Proposed Project analysis. The transportation network, traffic analysis zone (TAZ) system, and select model parameters such as trip generation rates were refined to improve the model's ability to replicate existing observed traffic volume conditions although the model may still require further refinements if used for subsequent project scale analysis. The network refinements focused on adding more local roadways and incorporating modifications proposed for the circulation diagrams corresponding to each Alternative. More TAZs were added to improve how traffic is assigned to the roadway network.

Detailed land use forecasts were developed and inputted for each Alternative by TAZ, along with proposed transportation network changes designed to support new growth areas. As noted above, the growth forecasts represent 2035 conditions for the East and South Alternatives. Once all the inputs were prepared, the modified SACMET model was run to generate VMT and traffic volume forecasts.

The final step in the forecasting and analysis process compared the p.m. peak hour traffic volume forecasts to roadway segment volume thresholds to assess vehicle LOS. This type of capacity utilization is used to assess the need for potential roadway network capacity expansion based on typical peak weekday conditions. The analysis is not fully sensitive to traffic operational conditions given the fluctuation that can occur in traffic conditions within any one-hour period, but provides sufficient information to gauge the potential need for roadway capacity expansion. The general concept of vehicle LOS is to grade the quality of traffic operating conditions from a driver's perspective using report card style grades ranging from A (the best) to F (the worst). These grades are an indication of the comfort and convenience associated with driving and do not reflect the perspective of other roadway users such as pedestrians and bicyclists. Table 4.13-3 provides general definitions of each LOS grade.

Table 4.13-3. Level of Service Definitions

LOS	Description
A	LOS A describes primarily free-flow operation.
B	LOS B describes reasonably unimpeded operation.
C	LOS C describes stable operation.
D	LOS D indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed.
E	LOS E is characterized by unstable operation and significant delay
F	LOS F is characterized by flow at extremely low speeds or stop and go conditions

Source: Transportation Research Board 2010, Highway Capacity Manual, Volume 3, pp. 16-7 – 16-8 and Fehr & Peers 2016.

To determine the p.m. peak hour vehicle LOS for each study roadway segment, the baseline traffic counts and the future year traffic volume forecasts from the modified SACMET model were compared to the LOS volume thresholds below in Table 4.13-4.

Table 4.13-4. PM Peak Hour Roadway Segment Utilization Analysis Traffic Volume Thresholds						
Functional Class	Lanes	LOS Volume Threshold				
		A	B	C	D	E
Principal Arterial	2	-	-	1,280	2,080	2,320
	4	-	-	2,450	4,390	4,780
	6	-	-	4,100	6,730	7,250
Minor Arterial	2	-	-	1,090	1,890	2,170
	4	-	-	2,270	4,000	4,450
Collector	2	-	630	920	1,040	1,110
	4	-	1,370	1,960	2,140	2,280
Local Road	2	-	-	450	600	660
Major Highway	2	120	290	790	1,600	2,050
Freeway	4	2,220	4,020	5,760	7,140	8,020
	6	3,400	6,160	8,800	10,820	12,120
	8	4,640	8,400	11,900	14,560	16,280
Four Freeway Lanes + Auxiliary Lane in One Direction	5	2,520	4,560	6,520	8,060	9,045
Four Freeway Lanes + Auxiliary Lanes in Both Directions	6	2,820	5,100	7,280	8,980	10,070
Six Freeway Lanes + Auxiliary Lane in One Direction	7	3,710	6,720	9,580	11,760	13,160
Six Freeway Lanes + Auxiliary Lanes in Both Directions	8	4,020	7,280	10,960	12,700	14,200
Source: City of Woodland Street Master Plan.						

In addition to the roadway segment analysis, key intersections in the City were evaluated to assess their p.m. peak hour performance (see Table 4.13-5). This analysis is more sensitive than the roadway segment analysis because it considers the conflicting movements and competition for green time at the intersection. However, performing this type of analysis for conditions multiple decades into the future is largely speculative given the limitations associated with predicting individual turning movement volumes. As such, this evaluation is intended for comparison purposes only.

Table 4.13-5. City of Woodland Weekday PM Peak Hour Intersection Operations1				
Intersection	Control Type	LOS / Average Delay2		
		Existing	East Alternative	South Alternative
1. E Main St / East St	Signal	C / 22	C / 23	C / 27
2. E Main St / N Pioneer Ave	Signal	B / 18	D / 39	D / 53
3. E Main St / Co. Rd 102	Signal	C / 20	C / 28	C / 28
4. Maxwell Ave / Co. Rd. 102	Signal	C / 24	D / 46	D /37
5. E Gibson Rd / East St	Signal	B / 15	B / 17	B / 19

Notes:
[1] Signal timings were assumed to be optimized under each scenario.
[2] Average delay expressed in seconds per vehicle.
Source: Fehr & Peers 2016

4.13.4.2 THRESHOLDS OF SIGNIFICANCE

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines. All of the thresholds below use language directly from the Appendix G checklist, with one exception. The Appendix G threshold that reads, "Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?" has been separated into three separate thresholds below so as to better analyze each of the individual components.

Implementation of the Proposed Project would have a significant adverse impact if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
    - For City of Woodland streets, acceptable LOS is defined by Policy 3.A.2 of the *City of Woodland General Plan Policy Document*, 2002. The policy establishes LOS C or better as acceptable except in the following areas where LOS D is allowed:
        - Within one-half mile of state or federal highways and freeways
        - Within the Downtown Specific Plan area
    - For Caltrans facilities, acceptable LOS is defined by the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002), the State Route 99 & Interstate 5 Corridor System Management Plan (May 2009), the Transportation Corridor Concept Report Interstate 5 (September 2010), Transportation Corridor Concept Report State Route 16 (June 2012), and Transportation Corridor Concept Report State Route 113 (July 2014). Considering all of these documents, LOS C was identified as the appropriate threshold for I-5 and SR 113 unless the existing (or No Project) is LOS D, E, or F, in which case, the threshold should be maintenance of the existing (or No Project) LOS. For SR 16, LOS E was identified as the appropriate threshold.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
    - For the CMP network, acceptable LOS is defined by the following thresholds contained in Figure 1 on page 4 of the CMP.
        - SR 16 from Colusa County to Woodland – LOS D
        - I-5 from Colusa County to Sacramento County – LOS D except within the City Limits where LOS E applies
        - SR 113 from I-80 to Sutter County – LOS D except within the City Limits where LOS C applies

- East Street from Gibson Road to North City Limits – LOS D within ½ mile of a State or Federal highway; otherwise LOS C
- Gibson Road from County Road 98 to County Road 102 – LOS D within ½ mile of a State or Federal highway; otherwise LOS C
- Main Street from County Road 102 to West City Limits – LOS D within downtown and ½ mile of a State or Federal highway; otherwise LOS C
- County Road 98 from City Limits to City Limits – LOS D within ½ mile of a State or Federal highway; otherwise LOS C.
- County Road 102 from City Limits to City Limits – LOS D within ½ mile of a State or Federal highway; otherwise LOS C.

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

4.13.4.3 ISSUES NOT DISCUSSED FURTHER

The following topics were evaluated as part of the impact analysis, but are not identified as specific impacts.

- **VMT** – VMT results for the Proposed Project are presented above in Table 4.13-1. To the extent that VMT changes associated with the Proposed Project generated environmental impacts such as air pollution or GHG emissions, those impacts are identified in the appropriate subject matter chapters of this EIR. A separate VMT significance impact threshold has not been established for the 2035 General Plan. Instead, the 2035 General Plan VMT results are recognized as the composite outcome of the City's desired land use and transportation network. The City recognizes that VMT reductions may be achieved through the implementation of individual development projects as part of 2035 General Plan implementation and has included 2035 General Plan Policy 3.A.4, which establishes a VMT per capita threshold of 30 for measuring transportation impacts for subsequent projects. This value is approximately 10 to 11 percent lower than the projected VMT per capita for the East and South Alternatives and represents the potential to achieve VMT reductions through project design and transportation demand management (TDM) strategies as required under Policy 3.A.5. A modification to this policy to reflect this clarification is proposed below. Over time, the actual VMT/capita associated with the 2035 General Plan implementation is predicted to trend downward from the results in Table 4.13-1.

  Other important considerations related to VMT analysis are that Senate Bill (SB) 743 proposes to change the metric used to identify potential significant transportation impacts in CEQA analysis. SB 743 directed the

California Governor's Office of Planning and Research (OPR) to identify a new metric and to recommend analysis methodology and thresholds. OPR selected VMT as the preferred metric and is working to finalize guidance material that is anticipated to go into effect in 2019. SB 743 did not change the discretion that lead agencies have to select methodology or define their own significance thresholds, but the guidance being developed by OPR should be carefully considered by lead agencies when they ultimately finalize their own recommended practices. A key factor should be how the lead agency/community values VMT reduction especially with regard to its influence on reducing greenhouse gases, promoting active transportation, and encouraging infill development, all of which, are identified as objectives in the legislative intent of SB 743. A proposed policy that addresses this is identified below.

- **Changing Trends** – Transportation and the future of travel is going through a transition that will influence the future forecasts upon which the impact analysis is based. Emerging technology and mobility services are increasingly becoming a factor in decisions regarding transportation investment and system performance. Vehicle availability is growing through car sharing, transportation network companies (e.g., UBER, Lyft, etc.), and micro-rentals (e.g., Zipcar) while public transportation infrastructure faces funding challenges related to investment priorities.

  The Proposed Project analysis extends to 2035 when autonomous vehicles are expected to be part of the network. Fully autonomous vehicles (e.g., driverless vehicles) are not expected to require parking spaces, but could increase vehicle use, demand for curb space to drop off passengers and goods, and VMT while causing reductions in transit demand. Research quantifies some of the potential travel behavior responses, but many questions remain about how our future networks will be designed and operated.[2] This impact analysis does not speculate about these potential effects but does disclose that new effects are likely to occur that cannot yet be definitively quantified.

4.13.4.4 IMPACT ANALYSIS

IMPACT 4.13-1 Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in Unacceptable Levels of Service on City of Woodland Roadways. *Implementation of the Proposed Project could cause unacceptable LOS conditions on some roadway segments, depending on the Alternative. The impact is considered significant for the East Alternative and less than significant for the South Alternative.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project includes land use and transportation network changes that would increase future traffic volumes on City roadways. Exhibits 4.13-7 and 4.13-8 show the circulation diagrams of the East and South Alternatives, including the existing and expected future number of lanes for each roadway.

Table 4.13-6 shows the projected VMT under the East and South Alternative in 2035, as well as the existing levels of VMT. The Proposed Project is expected to result in a total daily VMT of approximately 2,100,000, with some variation in expected total and per capita VMT between the East and South Alternatives.

[2] http://www.fehrandpeers.com/autonomous-vehicle-research-july-2016/

Table 4.13-6: City of Woodland Daily VMT Forecasts

Scenario	VMT[1]	Population[2]	Employment[3]	VMT/Capita[4]	VMT/Service Population[5]
Existing (2013)	1,476,600	45,207	26,694	32.7	20.5
East Alternative (2035)	2,107,500	62,780	42,268	33.6	20.1
South Alternative (2035)	2,092,800	62,953	41,156	33.2	20.1

Notes:

[1] Includes travel from all vehicles. The allocation of VMT includes 100 percent responsibility for all trips with both trips ends in the City of Woodland and 50 percent responsibility for trips with only one trip in the City.

[2] Population estimates and forecasts are based on SACMET household size distribution.

[3] Employment estimates and forecasts based on SACMET land use yields.

[4] VMT Per Capita is calculated by dividing total daily VMT by population. Since total VMT includes VMT generated by commercial vehicles, visitors, and workers/students that live outside Woodland, it is not an estimate of the VMT 'generated' per capita for Woodland residents.

[5] VMT Per Service Population is calculated by dividing total daily VMT by population plus employment. Similar to the VMT per capita metric, this form of VMT includes VMT generated by commercial vehicles, visitors, and students that live outside Woodland. As such, it is not an estimate of the VMT 'generated' per service population for Woodland residents and workers.

Source: Fehr & Peers 2016

LOS results are displayed in Exhibits 4.13-10, 4.13-12, and 4.13-13 and summarized in Appendix G. Overall, most roadway segments are projected to operate at LOS D or better. The Proposed Project has a higher LOS threshold than the 2002 General Plan. For this impact, the Proposed Project LOS results were evaluated to identify locations where the 2002 General Plan LOS thresholds would not be met. These locations are listed below.

a. East Alternative–The East Alternative would result in the following six roadway segments with unacceptable p.m. peak hour LOS conditions under 2035 based on 2002 General Plan policies.

- County Road 102 from E. Gibson Road to Farmers Central Road – LOS D
- Kentucky Avenue from N. West Street to N. College Street – LOS D
- E. Gum Avenue from Bourn Drive to Pioneer Avenue – LOS E
- Maxwell Avenue east of County Road 102 – LOS D
- East Street from Lane Drop South of E. Gibson Road to Sports Park Drive – LOS D
- Maxwell Avenue west of County Road 103 – LOS D

b. South Alternative–The South Alternative would result in the following four roadway segments with unacceptable p.m. peak hour LOS conditions under 2035 based on 2002 General Plan policies.

- County Road 102 from E. Gibson Road to Farmers Central Road – LOS D
- Kentucky Avenue from N. West Street to N. College Street – LOS D
- E. Gum Avenue from Bourn Drive to Pioneer Avenue – LOS D
- Maxwell Avenue south of Bronze Star Drive – LOS D

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Applying the policies of the City of Woodland 2002 General Plan would require expanding the capacity of the impacted roadways or making a policy change to allow for the LOS D and E outcomes listed above. Capacity expansion beyond the functional classification and lanes identified in the Proposed Project circulation diagrams was not considered feasible by the City due to right-of-way impacts on adjacent properties, environmental impacts including induced vehicle travel, and inconsistency with complete street concepts to accommodate all modes and users. Hence, the Proposed Project makes policy accommodations for the LOS results above for all the segments under the East Alternative and all but one segment under the South alternative as explained below.

Proposed Project

The following 2035 General Plan goals, policies, and implementation programs and 2035 CAP objectives and actions reduce any potential impacts associated with the Proposed Project.

2035 General Plan

- **Goal 3.A Multimodal Transportation System.** Develop and maintain a multi-modal transportation system that provides for the efficient movement of people and goods, supports vibrant neighborhoods and districts, and reduces air pollution and greenhouse gas emissions.

- **Policy 3.A.1 Vehicle Level of Service (LOS) Standard.** Strive to develop and manage the roadway system to maintain LOS D or better as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board) during weekday AM and PM peak hour conditions with the following exceptions described below and mapped on Figure 3-1.

    A. LOS C - Kentucky Ave from East Street to County Road 98. This level of service is required to accommodate the mix of commercial/industrial truck traffic with residential driveways.

    B. LOS E – Freeway ramp terminal intersections

    C. LOS F – LOS F is allowed for the following roadway segments and intersections where the City finds that the improvements or other measures required to achieve the LOS standard are unacceptable because of their impact on other community values.

        a. Main Street from 6th Street to Cleveland St.
        b. Maxwell Ave from Farnham Avenue to County Road 102

- **Policy 3.A.4 Reduce Vehicle Miles Traveled (VMT).** Apply a VMT transportation performance metric threshold of 30 VMT per capita when measuring transportation impacts for subsequent projects and making General Plan consistency findings.

- **Policy 3.A. 5 Transportation Demand Management (TDM) Ordinance.** Develop a TDM ordinance that presents tools and programs (e.g., alternative work schedules, telecommuting, ridesharing, or parking pricing) to encourage and create incentives for the use of alternative travel modes.

- **Policy 3.A.10 Overcome Barriers and Remove Gaps.** Eliminate barriers and gaps in the existing roadway, bikeway, and pedestrian networks by doing the following.

  - Pursue funding to construct grade-separated crossings of freeways, rail lines, and other barriers to improve connectivity.

  - Construct new pedestrian and bike paths in existing neighborhoods and strive to ensure that bike and sidewalk networks within communities are at least as efficient (e.g., miles traveled, connectivity, etc.) as the network for motorists.

  - Remove barriers to pedestrian travel, such as utility poles, as feasible.

  - Prioritize the construction of the SR113 bike and pedestrian overcrossing at Sports Park Drive and redesign of the Gibson Road/SR 113 overpass to provider safer and more convenient connectivity between the west and east areas of town.

  - New development must demonstrate adequate bicycle and pedestrian accessibility from key parts of the city and eliminate gaps, which may require off-site improvements, where appropriate at the discretion of the City.

- **Policy 3.A.11 New Development**. Require all new development to provide convenient bicycle and pedestrian environments and access through building orientation, site layout, traffic management, and connections to transit service and local commercial and community facilities. Development must provide appropriate pedestrian amenities such as street lighting, benches, arcades, canopies, shade trees, art, and seating areas.

- **Implementation Program 3.3.** Adopt a transportation demand management (TDM) ordinance that presents strategies for reducing congestion and promotes walking, biking, transit, and other sustainable modes.

2035 CAP

- **Transportation and Land Use Objective 2, Strategy T/LU-4, Action.** Work with the Yolo-Solano Air Quality Management District, neighboring jurisdictions, and other organizations to motivate local and regional employers to provide opportunities for employee telecommuting and alternative work schedules (e.g., 9/80 schedules) that reduce work commute trips.

- **Transportation and Land Use Objective 2, Strategy T/LU-4, Action.** Work with the local Chamber of Commerce and other business groups to achieve membership of 10 percent of businesses in the Yolo Transportation Management Association or offer a similar employer program that provides incentives to employees for reducing commute trips (e.g., participation in carpools) and guarantees employees a ride home in case of emergency.

- **Transportation and Land Use Objective 2, Strategy T/LU-4, Action.** Establish a program to engage the community in efforts to reduce vehicle miles traveled, including setting specific goals for participation, identifying and promoting programs, and rewarding positive results.

- **Transportation and Land Use Objective 2, Strategy T/LU-4, Action.** Encourage telecommuting and live/work arrangements through policies and regulations that allow home occupations, home offices, and

live/work uses, provided they are compatible with surrounding neighborhood uses and do not cause significant negative impacts.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The Proposed Project would result in a transportation system that allows greater utilization of the roadway system during peak hours, which would minimize the need to expand existing capacity while the City focuses on building complete streets, improving walking and bicycling as viable travel choices, and making transit more effective. These goals are directly connected to the City's desires to provide a healthy community with livable neighborhoods, reduce air pollution, and minimize greenhouse gas emissions. A key part of these changes is embedded in Policy 3.A.1 of the 2035 General Plan that changes the Citywide LOS from C to D and allows other exceptions where LOS F is allowed. In addition, Goal 3.A supports efficient vehicle movement through maintenance of a multi-modal transportation system. Policy 3.A.4 will require individual development projects to reduce VMT per capita, which may also contribute to lowering p.m. peak hour traffic volumes. Policies 3.A.5, 3.A.10, and 3.A.11 and Implementation Program 3.3 complement Policy 3.A.4 by requiring actions on the part of new development and the City that will reduce vehicle trip making. Additionally, the 2035 CAP supports strategies and programs that encourage telecommuting, live/work arrangements, transportation demand management and the reduction of vehicle miles traveled.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. Proposed Project policies would reduce the impact but the impact would remain significant without mitigation for the segment of E. Gum Avenue from Bourn Drive to Pioneer Avenue. The impact is **significant**.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

a. East Alternative – The following mitigation options would apply to the East Alternative.

Mitigation Measure 4.13-1a – The Draft General Plan should be amended to include the following modification of the Circulation Diagram in the East Alternative.

East Alternative Circulation Diagram: <u>Include E. Gum Avenue from Bourn Drive to Pioneer Avenue as a 2-lane minor arterial.</u>

This action would result in potential physical changes to the roadway under this classification that may include access control and minor turn-lane widening at intersections. Under this classification, the LOS would be improved to LOS C and the impact would be **less than significant with mitigation**.

OR

Mitigation Measure 4.13-1b – The 2035 General Plan should be amended to include the following modified policy:

- **Policy 3.A.1 Vehicle Level of Service (LOS) Standard.** Strive to develop and manage the roadway system to maintain LOS D or better as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board) during weekday AM and PM peak hour conditions with the following exceptions described below and mapped on Figure 3-1.

  A. LOS C - Kentucky Ave from East Street to County Road 98. This level of service is required to accommodate the mix of commercial/industrial truck traffic with residential driveways.

  B. LOS E – Freeway ramp terminal intersections and E. Gum Avenue from Bourn Drive to Pioneer Avenue.

  C. LOS F – LOS F is allowed for the following roadway segments and intersections where the City finds that the improvements or other measures required to achieve the LOS standard are unacceptable because of their impact on other community values.

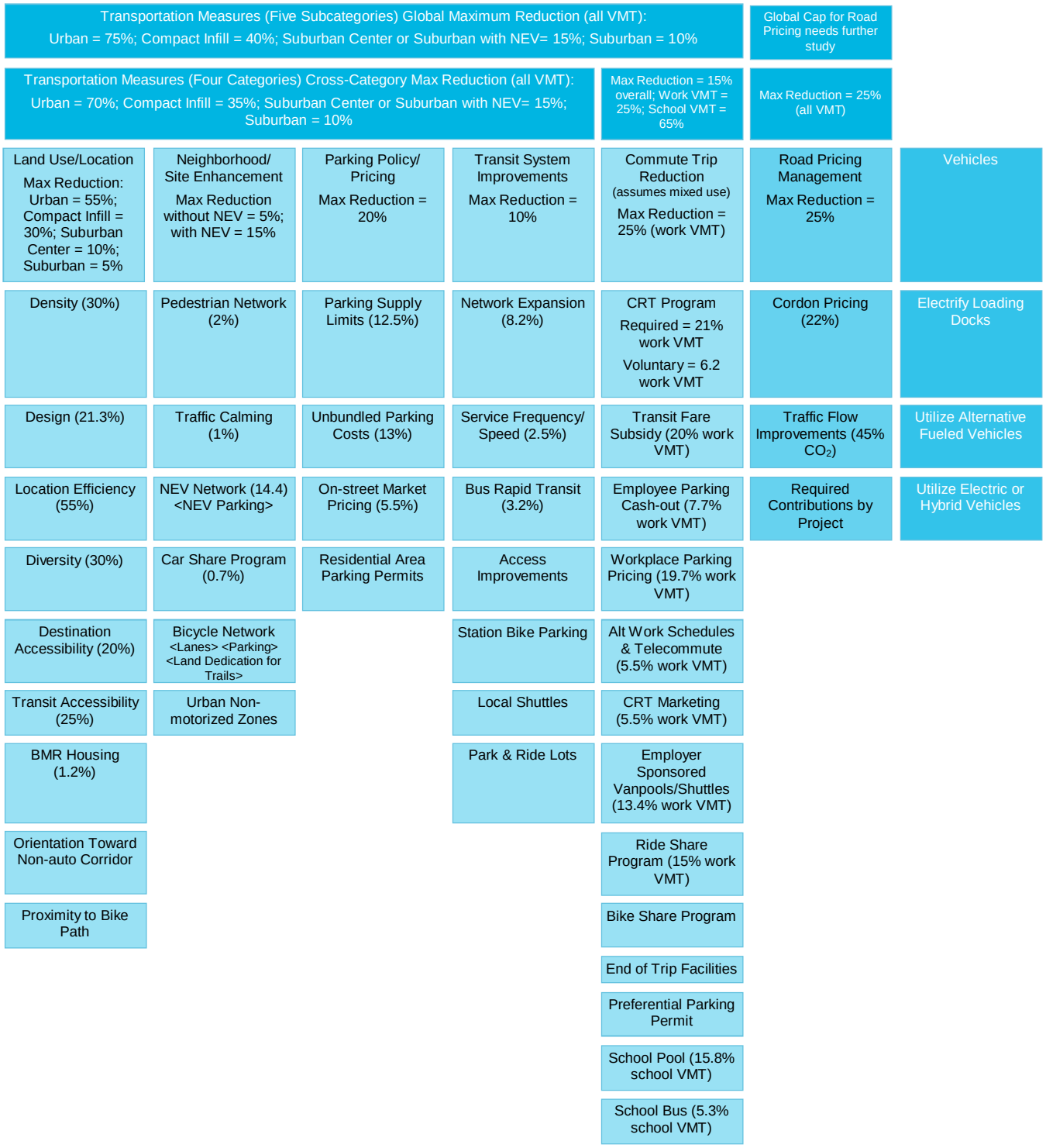
  - Main Street from 6th Street to Cleveland St.
  - Maxwell Ave from Farnham Avenue to County Road 102

This action would recognize that potential physical changes to this section E. Gum Avenue to increase its capacity are not desirable due to access or right-of-way impacts on adjacent properties or the environment. The impact would be **less than significant with mitigation**.

AND

Mitigation Measure 4.13-1c – The 2035 General Plan should be amended to include the following modified policy and new implementation program:

- **Policy 3.A.4 Reduce Vehicle Miles Traveled (VMT**). Require new development projects to achieve a 10 percent reduction in VMT per capita or VMT per service population compared to the general plan 2035 VMT performance, or a 10 percent reduction compared to baseline conditions for similar land uses ~~Apply a VMT transportation performance metric threshold of 30 VMT per capita~~ when measuring transportation impacts for subsequent projects and making General Plan consistency findings. Reducing peak period VMT in particular is desirable due to the added benefit of minimizing severe congestion and reducing emissions. Use of VMT reduction strategies such as those in Chart 6-2 below taken from *Quantifying Greenhouse Gas Mitigation Measures*, CAPCOA, 2010 or similar professional research documents is encouraged.



Implementation Program 3.8 After final adoption of SB 743 CEQA Guidelines changes and any associated technical advisory recommendations by the State of California, the City will assess the VMT reduction goal contained in Policy 3.A.4. The assessment should consider substantial evidence presented by the State in recommending any alternative VMT reduction goals as CEQA thresholds plus the community values expressed by the goals and policies. The City should strive to set thresholds consistent with the City's envisioned future while striving to achieve reasonable reductions in vehicle travel that produce air pollution and greenhouse gases.

This action would strengthen the policy's influence on reducing vehicle travel associated with new development projects helping to reduce p.m. peak hour traffic volumes. The impact would be **less than significant with mitigation.**

Summary of Impact after Mitigation

a. East Alternative – The impact would be less **than significant with mitigation**.

b. South Alternative – No mitigation is required for the South Alternative.

IMPACT 4.13-2 Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System by Resulting in Unacceptable Levels of Service on Caltrans Roadways. *Implementation of the Proposed Project would exacerbate unacceptable No Project LOS D conditions on the I-5 Mainline east of County Road 102 under 2035 conditions. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project includes land use and transportation network changes that would increase future regional traffic volumes on I-5. This is sufficient to exacerbate unacceptable LOS D conditions.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The 2035 General Plan includes goals, policies, and implementation programs related to Level of Service and traffic congestion, which are discussed under Impact 4.13-1. Also discussed under Impact 4.13-1 is the 2035 CAP's Transportation and Land Use Objective 2, which strives to reduce traffic congestion and vehicle miles travelled.

a. East Alternative –There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative – There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

As discussed above under Impact 4.13-1, the goals, policies, and implementation programs in the 2035 General Plan and actions in the 2035 CAP minimize potential impact by supporting efficient vehicle movement and reduced traffic congestion through reduction of trip making and lowering p.m. peak hour traffic volumes. However, the current policies and actions are not sufficient to reduce the impact to less than significant levels.

a. East Alternative – The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant**.

b. South Alternative – The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.13-2: Implement Mitigation Measure 4.13-1b.

This action would strengthen the policy's influence on reducing vehicle travel associated with new development projects helping to reduce p.m. peak hour traffic volumes.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation.**

b. South Alternative–The impact is considered **less than significant with mitigation.**

IMPACT 4.13-3 Conflict with an Applicable Congestion Management Program by Resulting in Unacceptable Levels of Service on CMP Network Roadways. *Implementation of the Proposed Project would cause unacceptable LOS conditions on one CMP roadway segment. The impact is considered potentially significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project includes land use and transportation network changes that would increase future traffic volumes on City roadways. These conditions are allowed under the Proposed Project but reflect a change in LOS conditions compared to the Yolo County CMP. The roadway segment on County Road 102 from E. Gibson Road to Farmers Central Road would be LOS D.

a. East Alternative– The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative– The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The adopted CMP would require the City to develop a mitigation plan for the affected roadway segments to expand their capacity or reduce demand below the LOS volume threshold. The mitigation would also impair reduction of air emissions. The Proposed Project policy approach is to rely on demand reduction as explained below.

Proposed Project

The 2035 General Plan includes goals, policies, and implementation programs related to Level of Service and traffic congestion, which are discussed under Impact 4.13-1. Also discussed under Impact 4.13-1 is the 2035 CAP's Transportation and Land Use Objective 2, which strives to reduce traffic congestion and vehicle miles travelled.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

As discussed above under Impact 4.13-1, the goals, policies, and implementation programs in the 2035 General Plan and actions in the 2035 CAP minimize potential impact by supporting efficient vehicle movement and reduced traffic congestion through reduction of trip making and lowering p.m. peak hour traffic volumes. However, the current policies and actions are sufficient to reduce the impact to less than significant levels.

a. East Alternative – The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant**.

b. South Alternative – The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.13-3a – Implement Mitigation Measure 4.13-1b.

This action would strengthen the policy's influence on reducing vehicle travel associated with new development projects

Mitigation Measure 4.13-3b – The 2035 General Plan should be amended to include the following modification of the circulation diagram.

East Alternative Circulation Diagram: <u>Include County Road 102 from E. Gibson Road to Farmers Central Road as a 4-lane principal arterial.</u>

This action would result in a physical capacity expansion to the roadway under this classification that would improve the LOS to C or better.

Summary of Impact after Mitigation

a. East Alternative–The impact is considered **less than significant with mitigation.**

b. South Alternative– The impact is considered **less than significant with mitigation.**

A potential indirect effect of Mitigation Measure 4.13-3b is an increase in VMT due to the increase in roadway capacity. This effect is captured in the VMT forecasts contained in Table 4.13-3 for buildout where this segment of County Road 102 is planned as a four-lane principal arterial.

IMPACT 4.13-4 Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Taking into Account All Modes of Transportation. *Implementation of the Proposed Project would not result in conflicts with applicable plans, ordinances or policies that have not already been discussed in Impacts 4.13-1 through 4.13-3. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project addresses competition for urban space that often occurs between driving, walking, and bicycling by endorsing complete streets and introducing a street typology component to the roadway functional classification systems. This means that the size of the roadway and which modes have the highest priorities will be influenced by the land use context of the roadway.

The Proposed Project changes performance expectations for City of Woodland roadways through Policy 3.A.1. This impact was disclosed and addressed under Impact 4.13-1. In addition, the Proposed Project would affect performance of the State Highway System and the CMP network. Those impacts are disclosed under Impacts 4.13-2 and 4.13-3.

For other transportation system components including the bicycle, pedestrian, and transit systems, the Proposed Project does not conflict with existing plans, ordinances, or policies. As explained above, population and employment growth will increase demand for transit, bicycling, and walking in the City of Woodland and the Proposed Project's goals and policies are designed to accommodate the increased demand within a complete streets context.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The following 2035 General Plan goals, policies, and implementation programs and 2035 CAP objectives and actions reduce any potential impacts associated with the Proposed Project.

2035 General Plan

The 2035 General Plan includes goals, policies, and implementation programs related to the performance of roadways, which are discussed under Impact 4.13-1. In addition, the 2035 General Plan includes the following goals, policies, and implementation programs regarding Complete Streets and pedestrian, bicycle, and transit facilities and service.

- **Policy 3.A.12 Transportation Evaluation**. Evaluate projects for potential impacts to traffic operations, traffic safety, transit service, bicycle facilities, and pedestrian facilities for the purpose of assessing the timing and phasing of traffic improvements.

- **Goal 3.B Complete Streets.** Provide complete streets that accommodate driving, walking, bicycling, and public transit and that are designed to enable safe, attractive, comfortable access and travel for users of all ages and abilities.

- **Policy 3.B.3 Complete Street Requirements**. To the extent feasible, all new street construction and reconstruction shall be designed to achieve complete streets. Designs should consider the needs of all roadway users including vulnerable populations such as young children, seniors, and people with disabilities when determining roadway widths and other barriers to travel, especially near schools, parks, senior centers, community centers, and other activity hubs.

- **Goal 3.E Comprehensive Pedestrian System.** Provide a comprehensive, and integrated pedestrian system that encourages walking and creates an enjoyable way to experience Woodland.

- **Policy 3.E.4 Interconnected Network**. Require new development to create complete pedestrian networks with linkages such as walkways, paseos, and shared-use paths that interconnect pedestrian facilities.

- **Goal 3.F Comprehensive Bicycle System.** Provide a comprehensive and integrated bicycle system that facilitates bicycling as a viable mode of travel.

- **Policy 3.F.2 Bikeway Network**. Promote the development of a comprehensive system of recreational and commuter bicycle routes that provide safe and convenient connections between the city's: major employment and housing areas; existing and planned bikeways; and schools, parks, retail shopping, and residential neighborhoods.

- **Policy 3.F.4 Bicycle Facilities**. Require residential, commercial, and industrial developments to include bicycle lanes or pathways in accordance with the Bikeway Master Plan or Specific Plans when constructing new roadways or upgrading existing streets.

- **Policy 3.F.6 Bicycle and Transit Integration**. Work with YCTD to integrate public transportation systems and facilities with bike networks and accommodations.

- **Policy 3.F.8 Woodland-Davis Bikeway**. Work with Davis and Yolo County to implement the Woodland-Davis Bikeway project and pursue grant funding.

- **Policy 3.F.9 Phasing**. Ensure that bikeways connecting to the existing bikeway system be provided in the first phase of all new growth areas.

- **Goal 3.G Effective Transit System.** Promote a transit system that serves as a viable alternative to the automobile for those without access to a vehicle and those that choose to live and work in areas where land use density and intensity are supportive of transit.

- **Policy 3.G.1 Transit Services**. Work with YCTD to plan and implement transit services that are timely, cost-effective, and responsive to growth patterns and existing and future transit demand.

- **Policy 3.G.2 Right-of-way Preservation**. Consider the need for future transit right-of-way in reviewing and approving plans for development. Rights-of-way may either be exclusive or shared with other vehicles.

- **Policy 3.G.5 YCTD Service Planning**. Coordinate with YCTD in the bus service planning process to ensure that routes serve areas with greatest demand and that intercity and inter-regional bus service is responsive to local needs.

- **Policy 3.G.9 Bike and Pedestrian Connections**. Ensure transit stops are connected to an integral part of the city's pedestrian and bicycle network.

- **Policy 3.G.10 Private Transit**. Encourage privately-owned transit systems, such as taxicabs, Transportation Network Companies (Uber/Lyft, etc.), employer shuttles, and private bus companies to provide convenient transportation options.

- **Goal 3.K. Transportation Funding.** Pursue funding to construct, maintain, and operate the transportation system for all travel modes to achieve and maintain the City's transportation goals.

- **Policy 3.K.3 Bicycle Facilities**. Utilize grant monies, license fees, development impact fees and fines, along with capital improvement monies to help fund the development and installation of bikeways and bicycle parking facilities.

- **Policy 3.K.4 Transit Infrastructure**. Require new development to pay a fair share of capital improvements related to transit service.

- **Implementation Program 3.1**. Develop an active transportation plan to guide development and maintenance of Woodland's pedestrian and bicycle network and promote active transportation modes. In the active transportation plan:

- Identify existing bicycle and walking facilities
- Propose improvements and actions to enhance bicycle and walking facilities
- Identify locations to add, increase, or improve sidewalk and streetscapes in established neighborhoods to provide a fully integrated pedestrian network.
- Facilitate the concept of a fully circumscribed path around the perimeter of Woodland for walking and biking
- Establish goals, policies, and actions related to safety, accessibility, public health, and connectivity

- **Implementation Program 3.5.** Apply for grants for the SR 113 bike and pedestrian overcrossing at Sports Park Drive and the redesign of the Gibson Road/SR 113 overpass.
- **Implementation Program 3.7.** Update and adopt design standards and guidelines to address all modes of travel and prioritize selected modes for roadway segments based on the functional classification and its street typology.

2035 CAP

As discussed under Impact 4.13-1, 2035 CAP Transportation and Land Use Objective 2 strives to reduce traffic congestion and vehicle miles travelled. In addition, the following actions address Complete Streets and pedestrian, bicycle, and transit facilities and service.

- **Transportation and Land Use Objective 1, Strategy T/LU-1, Action.** Partner with the University of California, Davis, and Yolo County to develop bicycle commute routes between the campus and points within Woodland.
- **Transportation and Land Use Objective 1, Strategy T/LU-1, Action.** Enhance walking and biking opportunities through downtown by improving alleys for pedestrian and bicycle use.
- **Transportation and Land Use Objective 1, Strategy T/LU-1, Action.** Adopt a "Complete Streets" program that provides safety and convenience for all forms of transportation, including passenger vehicle, bicycle, transit, and pedestrian travel.
- **Transportation and Land Use Objective 1, Strategy T/LU-1, Action.** Develop a network of bicycle lanes and paths that provide safe and convenient routes for city residents to travel to and from homes and daily destinations.
- **Transportation and Land Use Objective 1, Strategy T/LU-1, Action.** Update The City's bicycle master plan to incorporate new concepts and funding strategies for bicycle route development, including consideration of modifying existing streets to better accommodate space for safe bicycle use (e.g., creating one-way streets), creating off-street bicycle paths, and providing connectivity with bike routes outside of Woodland.

- **Transportation and Land Use Objective 2, Strategy T/LU-5, Action.** Work with transit operators to increase mass transit use by identifying mechanisms for encouraging increased ridership, including making bicycle racks available on all buses, and creating and implementing comprehensive public information campaigns.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Population and employment growth will increase demand for transit, bicycling, and walking in the City of Woodland. Key adopted plans that govern or direct how this growth will be accommodated are listed below.

- City of Woodland Streets Master Plan (2009)
- City of Woodland 2002 General Plan
- City of Woodland 2002 Bicycle Transportation Plan
- Spring Lake Specific Plan (2001)

The 2035 General Plan and 2035 CAP contain numerous goals, policies, implementation programs, strategies, and actions that are largely taken directly or derived from these adopted plans with regards to transit, bicycling, and walking. Further, this update to the General Plan complies with Assembly Bill (AB) 1358 requiring cities and counties to include a complete streets policy in their general plans, which stresses balance and compatibility across modes.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.13-5 Result in Changes to Air Traffic Patterns. *Implementation of the Proposed Project includes land use changes that would have only a limited influence on air traffic patterns. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project will change land use patterns but not to a degree that would affect existing air traffic patterns or that would allow future air traffic patterns to conflict with the City's planned growth. The land use

changes of the 2035 General Plan all occur with the existing Urban Limit Line, so land use growth that may be incompatible with aviation facilities and their operation is not anticipated.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

No existing laws or regulation would reduce the impact.

Proposed Project

Although the City of Woodland does not have any public airports, the Proposed Project does address the compatibility of nearby airports. The following 2035 General Plan goals, policies, and implementation programs reduce any potential impacts associated with the Proposed Project. There are no CAP objectives or strategies that relate to this impact.

- **Goal 3.J Air Transportation Facilities.** Support the continued operation of local air transportation facilities while ensuring compatibility between urban development in Woodland and aircraft operations.

- **Policy 3.J.1 Airport Land Use Compatibility Plan.** Ensure consistency with the Airport Land Use Compatibility Plan (ALUCP) for Sacramento International Airport.

- **Policy 3.J.2 New Airports and Land Strips.** Discourage the development of new airports or landing strips that would adversely affect planned development within the Urban Limit Line.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

- **Policy 2.A.1 Urban Limit Line**. A permanent Urban Limit Line (ULL) is established around Woodland to permanently circumscribe urban development and comply with provisions for agricultural lands. Public services and facilities shall not extend beyond the permanent Urban Limit Line. The City shall take such administrative steps as may be required to implement Policy 2.A.1. The City shall also identify funding for implementing a permanent urban limit line, including mitigation for developing on agricultural land. The City shall continually reevaluate residential land use densities, housing policies, and zoning to determine the potential for increased residential densities for both infill sites and undeveloped land within the Urban Limit Line. The City shall continually review existing non-residential zoning to determine the potential for conversion to higher density residential uses within the permanent Urban Limit Line. The City will encourage and support appropriately located agricultural and wildlife conservation easements to support implementation

of the permanent urban limit line. This policy enacts Woodland Measure A (Ballot of June 2006), Urban Limit Line, and can only be modified by the voters.

Summary of Impact Analysis

The Proposed Project includes policies intended to avoid or minimize any compatibility issues between urban development within the City and airport facilities including air traffic flight patterns. 2035 General Plan Goal 3.J establishes the continued operation of local air transportation facilities and compatibility with Woodland land uses as a priority. General Plan Policies 3.J.1 and 3.J.2 support this goal of compatibility by ensuring consistency with the ALUCP and discouraging new aviation facilities that conflict with planned development in the Woodland ULL.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.13-6 Substantially Increase Hazards Due to a Design Feature. *Implementation of the Proposed Project will modify the existing transportation network to accommodate existing and future users that could change existing travel patterns or traveler expectations. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project will modify the existing transportation network generally to expand existing facilities or to construct new facilities to accommodate planned population and employment growth.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

The City of Woodland already requires the modification of existing public facilities or the construction of new facilities to comply with applicable design standards contained in the *City of Woodland Community Design Standards* (2004), which have been developed to minimize the potential for conflicts or collisions. This standard practice would minimize this impact.

Proposed Project

The Proposed Project would not increase hazards due to design features of transportation facilities. All existing facility modifications and new facilities resulting from the circulation diagram proposed improvements would be constructed to *City of Woodland Community Design Standards* (2004) that have been developed to minimize the potential for conflicts or collisions.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Implementation of the Proposed Project will adhere to applicable design standards.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.13-7 Result in Inadequate Emergency Access. *Implementation of the Proposed Project will alter land use patterns and increase travel demand on the transportation network that may influence emergency access. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project will modify the existing transportation network generally to expand existing facilities or to construct new facilities to accommodate planned population and employment growth.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws and regulations.

Proposed Project

The 2035 General Plan includes goals, policies, and implementation programs related to the performance of roadways, which are discussed under Impact 4.13-1. In addition, the 2035 General Plan includes the following goals and policies that would reduce the impact of new development on emergency access. Beyond those discussed in Impact 4.13-1, there are no additional CAP objectives or strategies that relate to this impact.

- **Policy 3.A.7 Street Grid Network and Density.** Promote the use of grid and modified grid street patterns in new residential, commercial, or mixed-use developments that propose to construct new streets. Modified grids may include combinations of grid and curvilinear streets. Greenbelts may intersect street grid to create an interconnected trail network that encourages biking and walking. The density of new streets should be similar to the existing residential neighborhoods in Woodland that have approximately nine centerline miles or arterials and collectors per square mile.

- **Policy 3.B.8 Accessibility.** Endeavor to ensure that all streets are safe and accessible to people with disabilities and others with limited mobility.

- **Policy 5.A.3 Development Project Requirements**. Require development projects to develop and/or fund police facilities, equipment, personnel, and operations and maintenance that maintain the City's standards, as demonstrated through positive fiscal impacts or through specific funding mechanisms in the event of fiscal deficits. New development should not result in a reduction in service levels (or capabilities) to existing service population.

- **Policy 5.B.4 Development Project Requirements**. Require development projects to develop and/or fund fire protection facilities, equipment, personnel, and operations and maintenance that maintain the City's standards, as demonstrated through positive fiscal impacts or through specific funding mechanisms in the event of fiscal deficits.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The Proposed Project contains policies that are designed to ensure adequate facilities and services are provided for under daily and emergency response conditions. Responsibility for building and maintaining adequate facilities extends to development projects through these policies to ensure that changes to facilities and services are planned in accordance with growth over time.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.13-8 **Result in Potential Conflicts with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Otherwise Decrease the Performance or Safety of Such Facilities.** *Implementation of the Proposed Project would not result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The Proposed Project does not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities nor would it adversely affect performance or safety of such facilities. The Proposed Project contains provisions that will enhance these modes to encourage greater use of transit and more walking and bicycling in the future. All new facilities contained in the circulation diagram would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

There are no applicable existing laws or regulations.

Proposed Project

The 2035 General Plan includes goals, policies, and implementation programs related to improving the bike, pedestrian, and transit networks, which are discussed under Impacts 4.13-1 and 4.13-4. These impacts also include discussion of related objectives and actions in the 2035 CAP under Transportation and Land Use Objectives 1, 2, and 5.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The Proposed Project goals and policies are designed to accommodate the new travel demand by providing adequate facilities and services including complete streets. Implementation of the Proposed Project would not disrupt any existing, or interfere with any planned, transit, bicycle, or pedestrian facilities or services.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant**.

Mitigation Measures

No mitigation is required.

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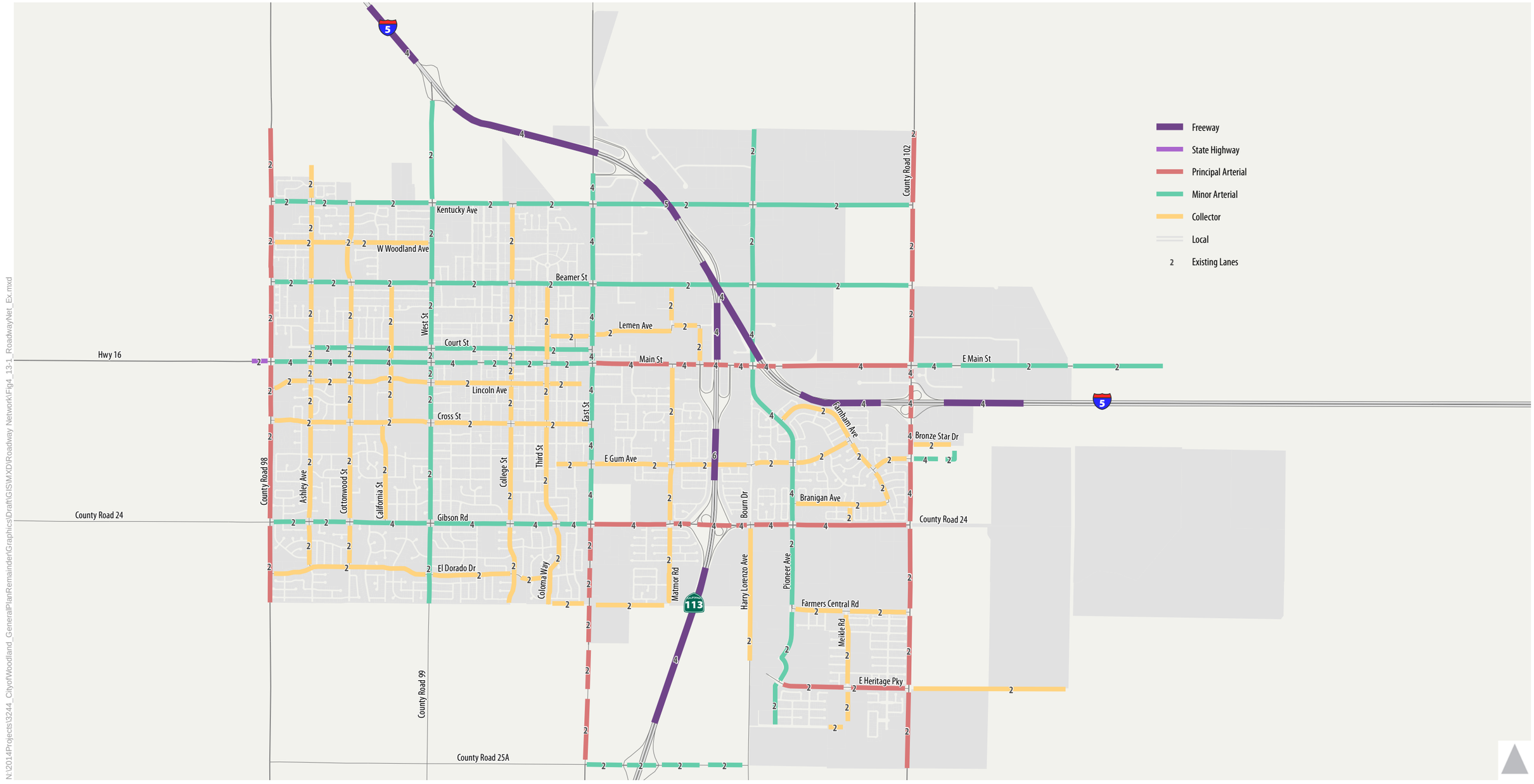

Exhibit 4.13-1

Baseline (2013) - Circulation Diagram

Exhibit 4.13-2

Baseline 2013 Photos of Existing Sidewalk Conditions

Principal Arterial - Sidewalk on One Side

Collector Sidewalk

Downtown Core Sidewalk

Enhanced Crossing with Median Refuge

Enhanced Crossing with Beacon

Recreational Park Path

Data Source: Fehr & Peers, 2013

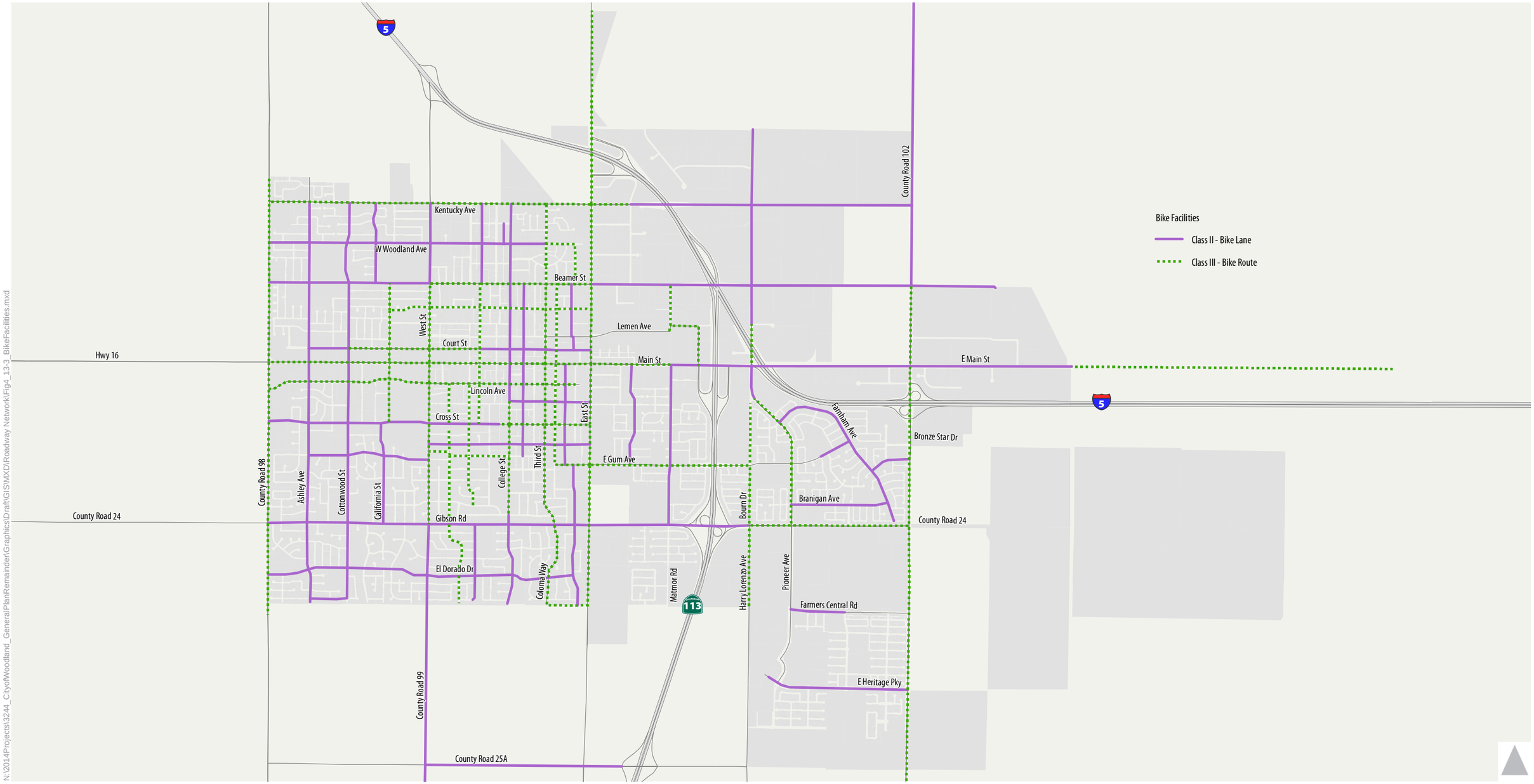

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Exhibit 4.13-3

Baseline (2013) - Bicycle Facilities

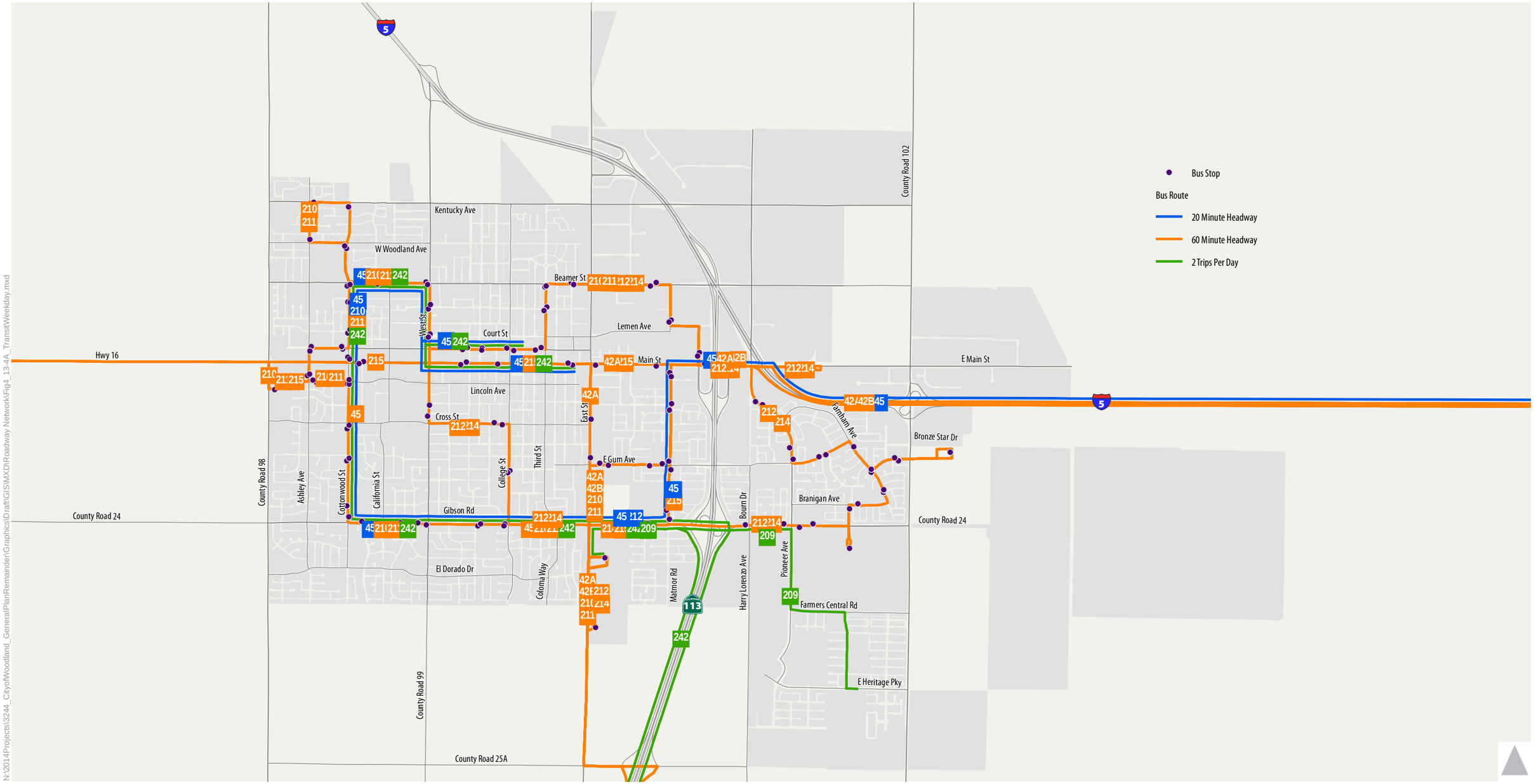

Exhibit 4.13-4A

Baseline (2013) - Weekday Transit Facilities

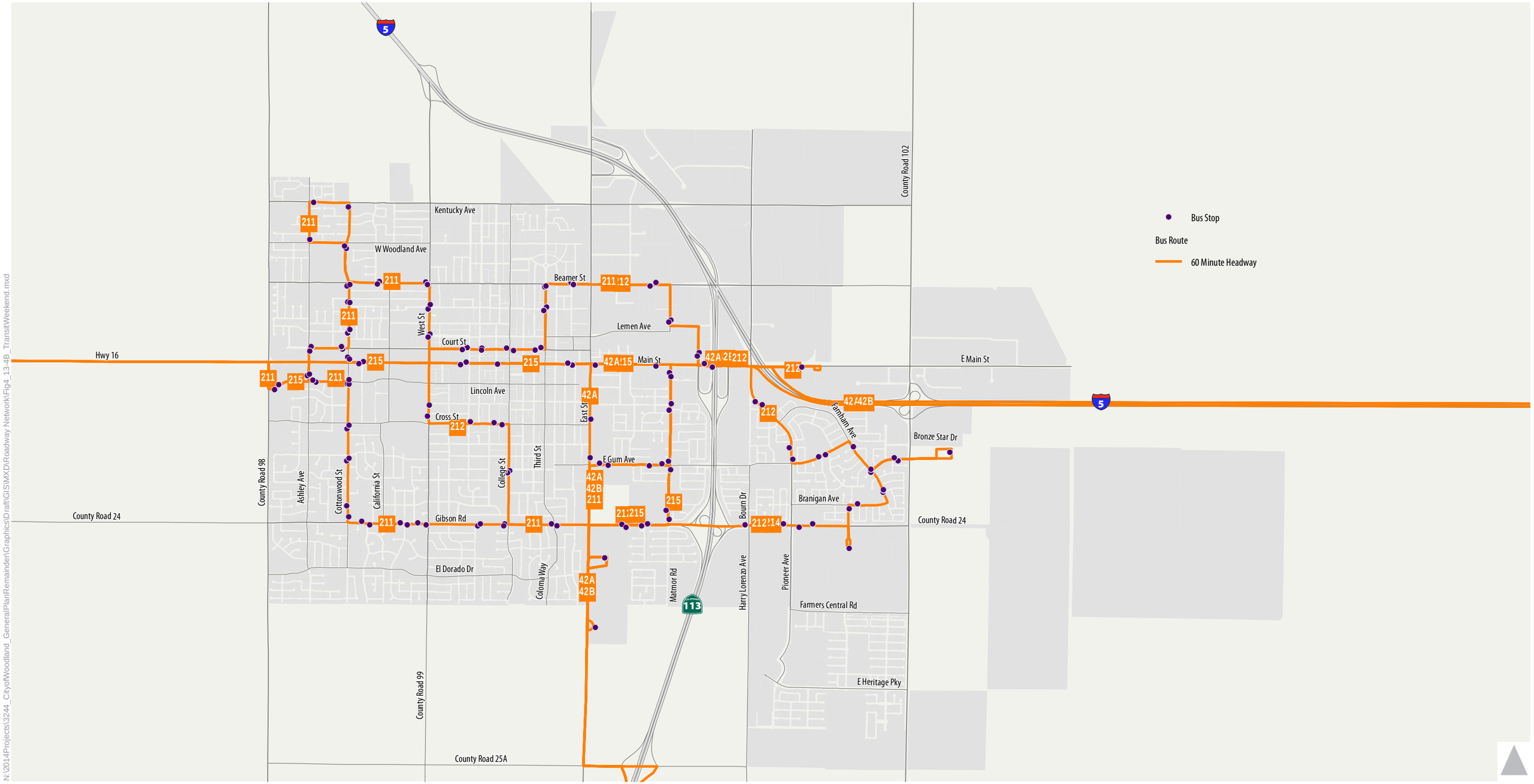

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Exhibit 4.13-4B

Baseline (2013) - Weekend Transit Facilities

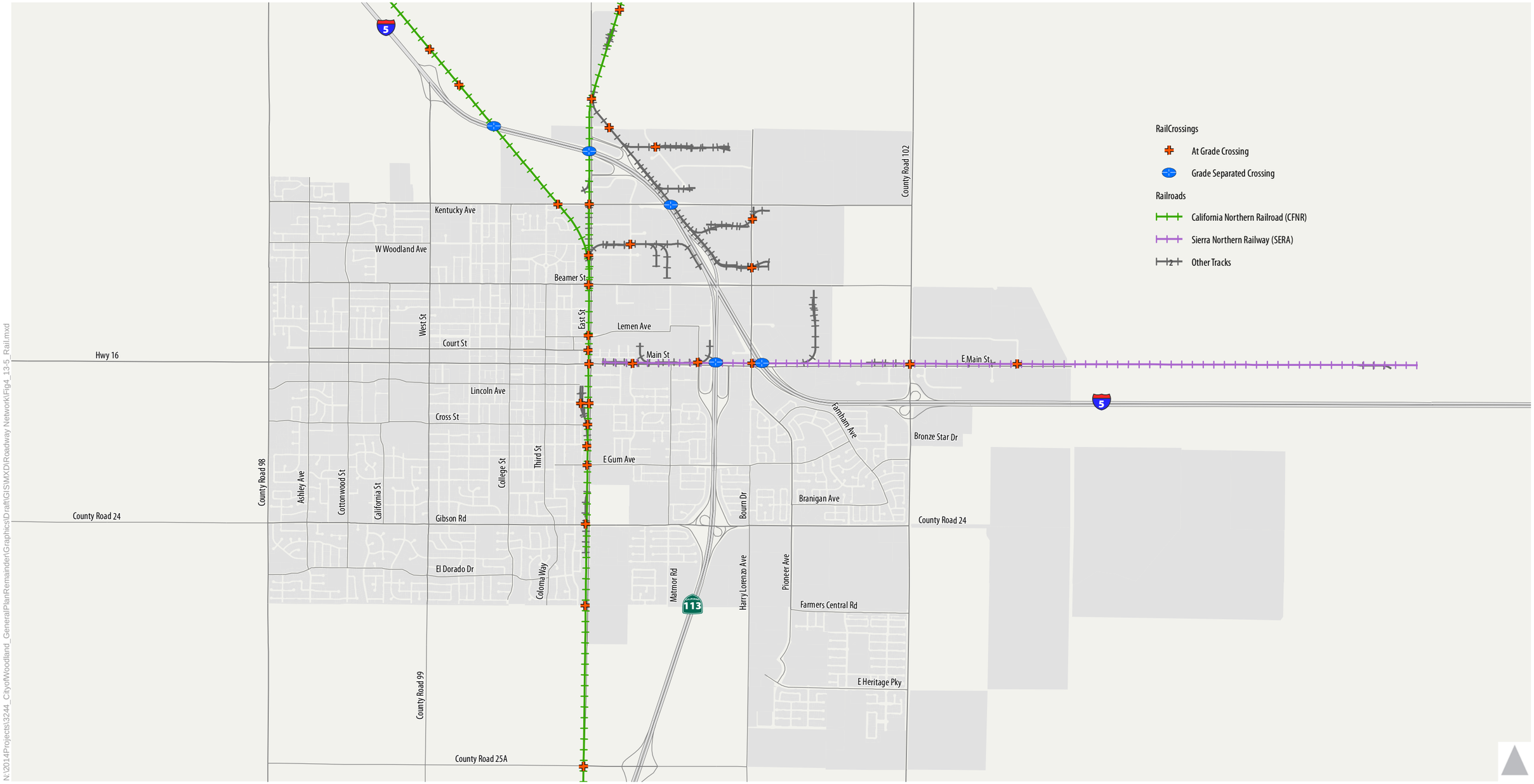

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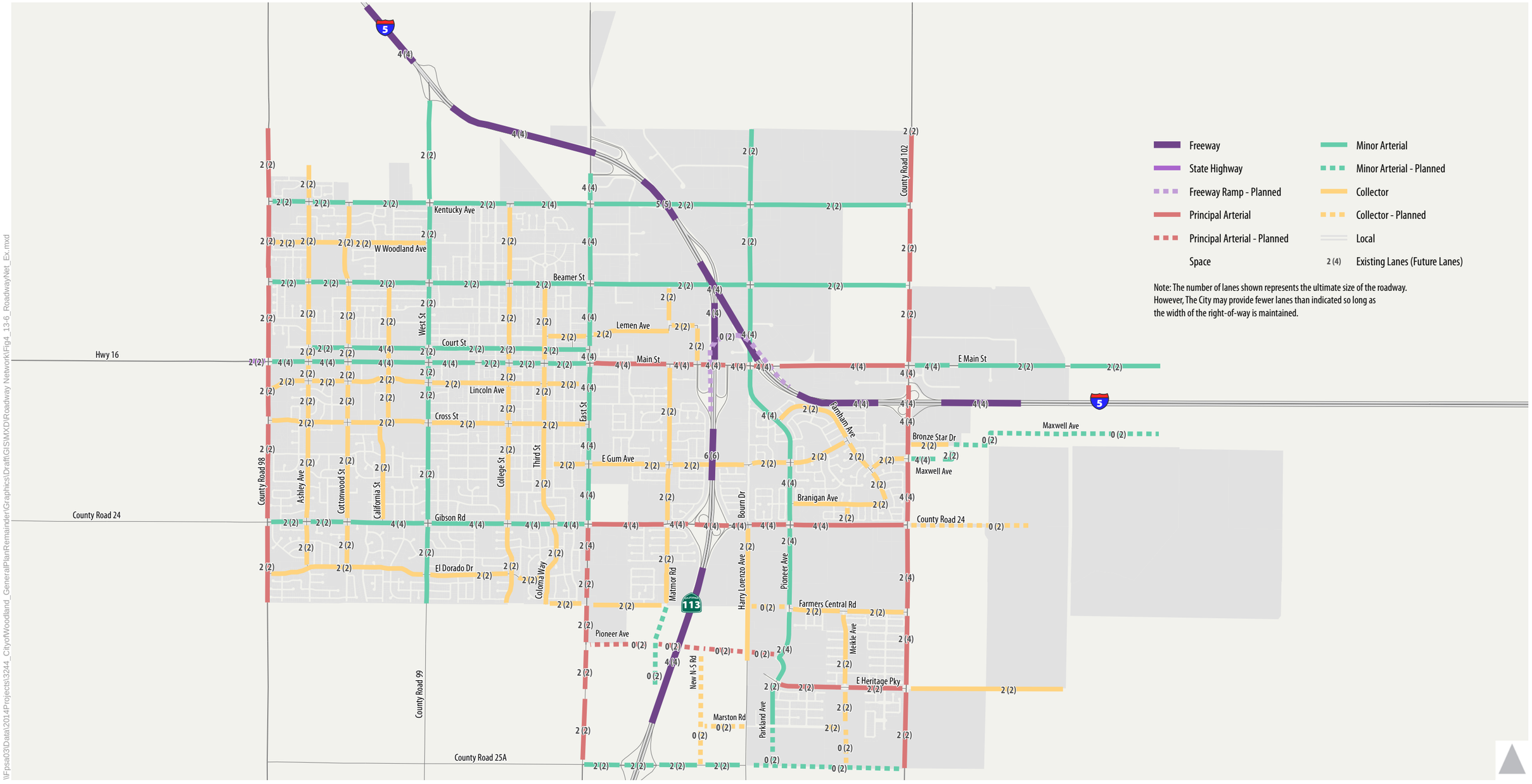
Exhibit 4.13-5

Baseline (2013) - Rail Facilities



\\Fpsa03\Data\2014Projects\3244_CityofWoodland_GeneralPlanRemainder\Graphics\Draft\GIS\MXD\Roadway Network\Fig4_13-6_RoadwayNet_Ex.mxd

Exhibit 4.13-6

2035 No Project - Circulation Diagram

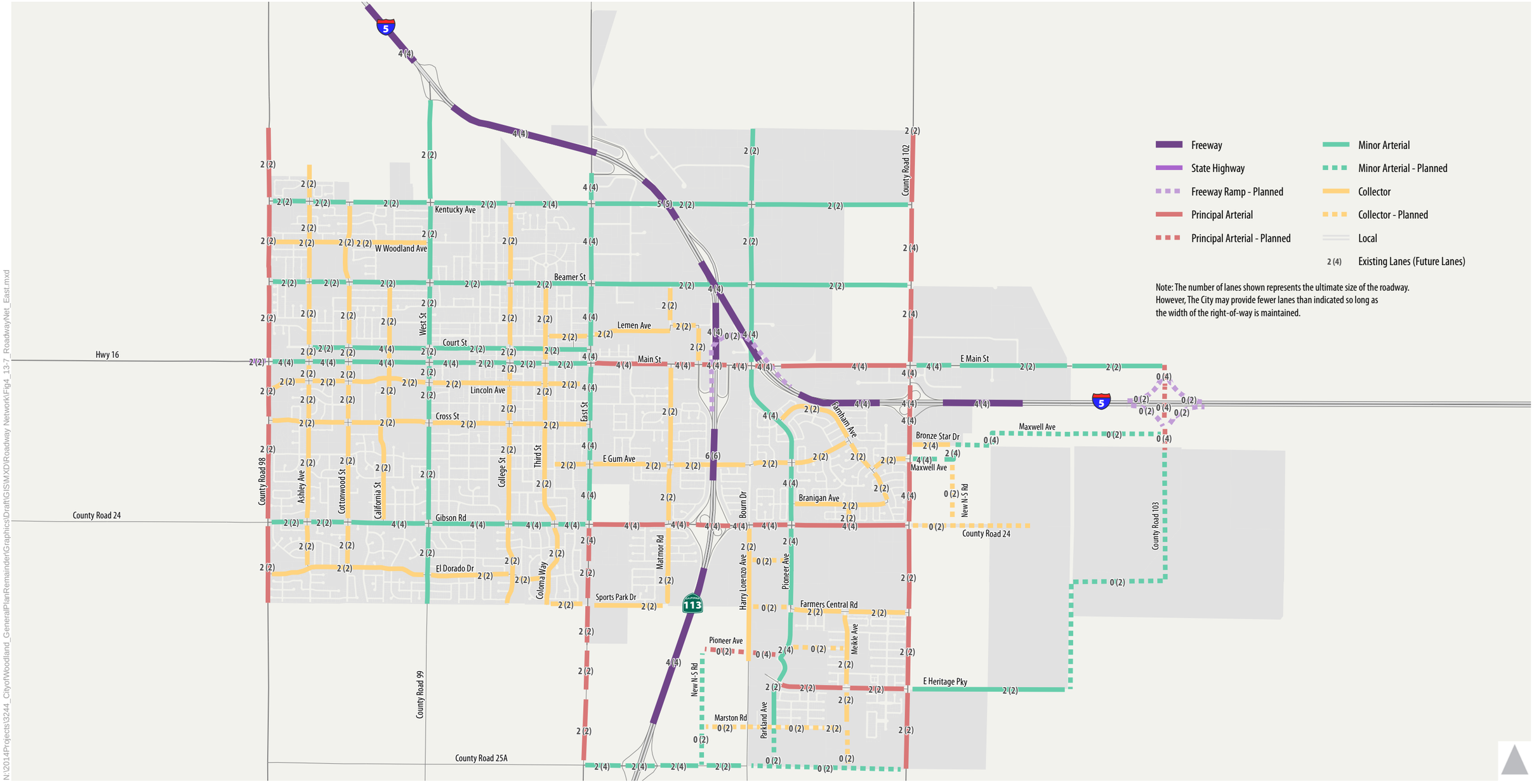


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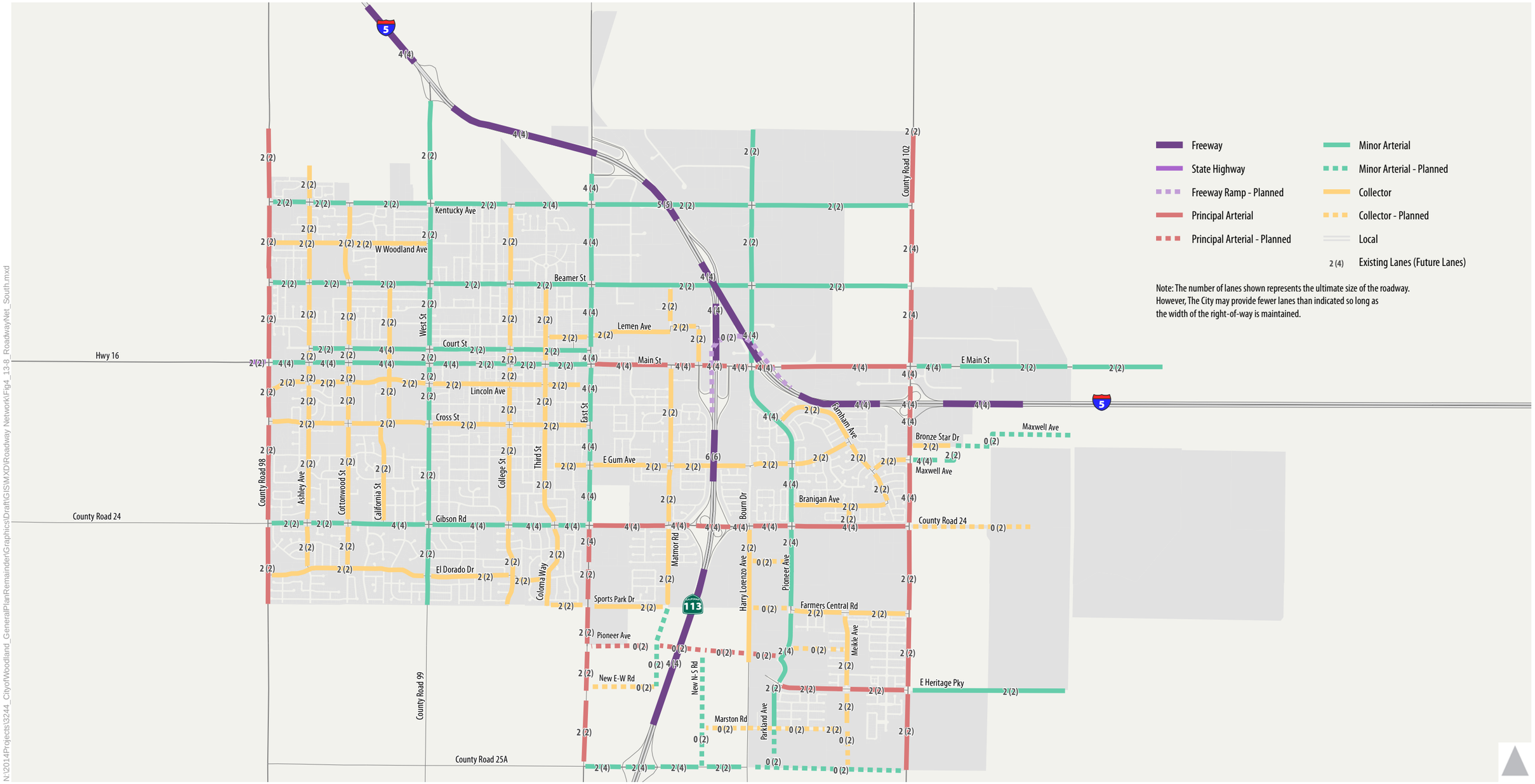
Exhibit 4.13-7

2035 East Alternative - Circulation Diagram



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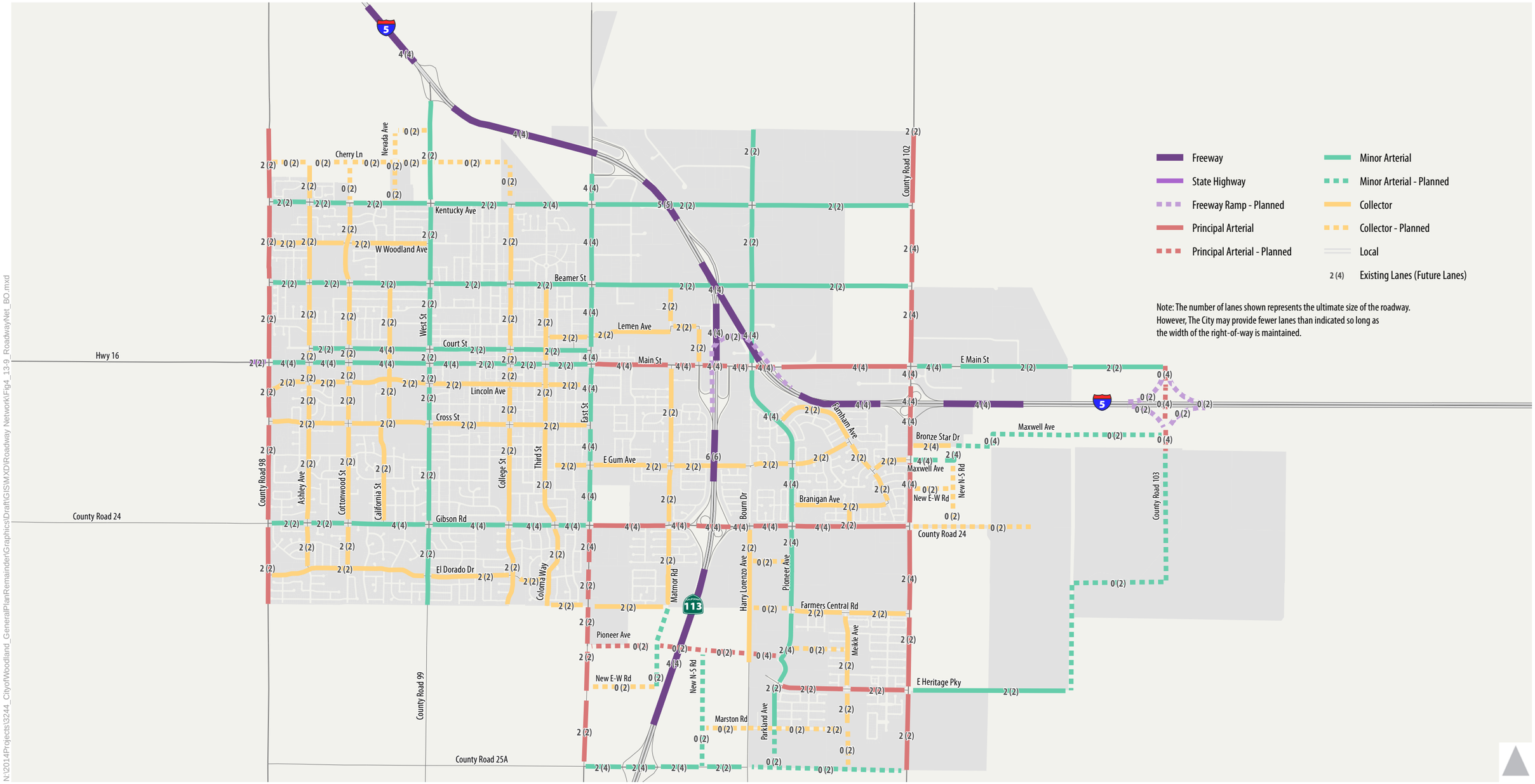

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Exhibit 4.13-9

2050 Build Out - Circulation Diagram

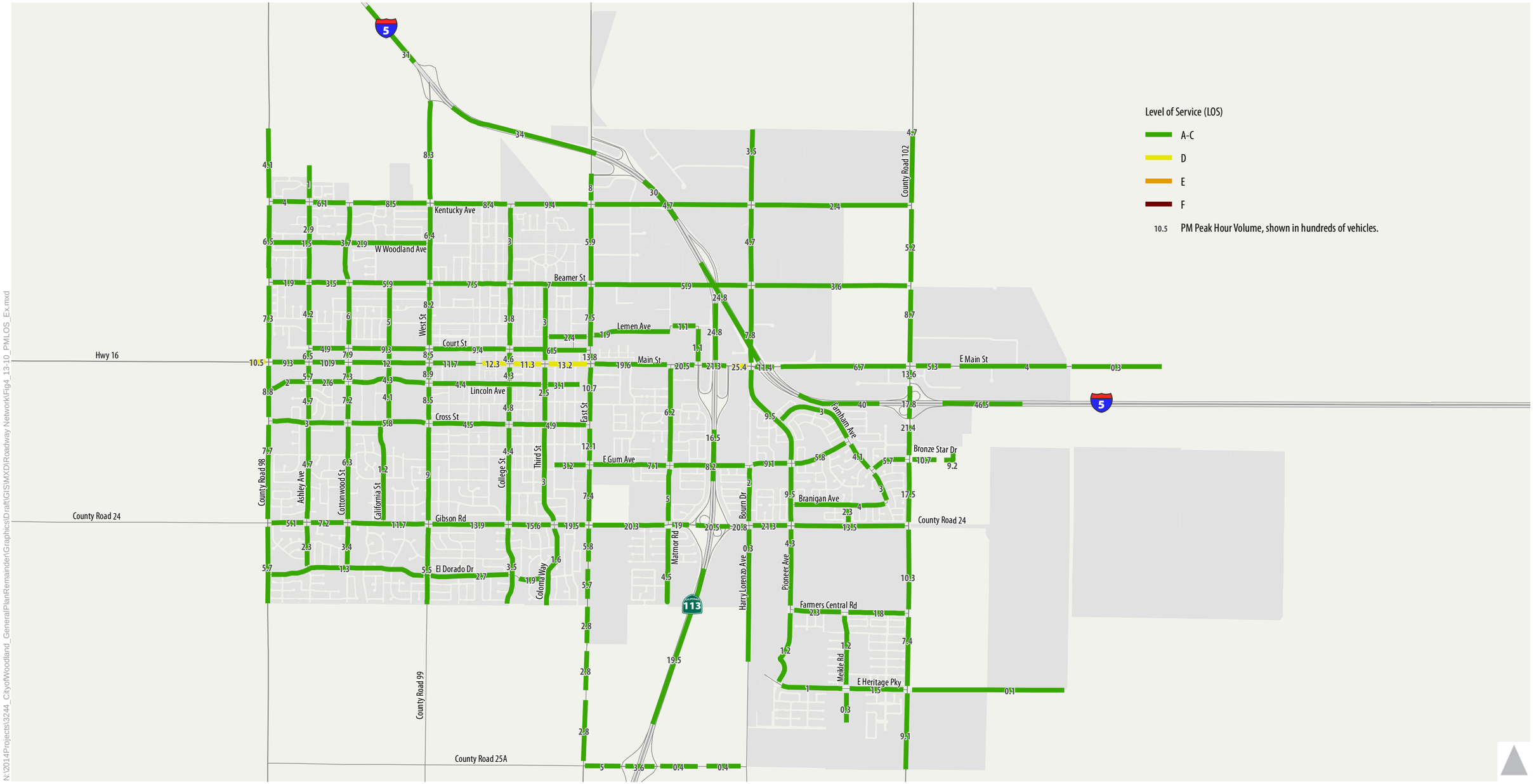

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Exhibit 4.13-10

Baseline (2013) - PM Peak Hour Volume & Level of Service

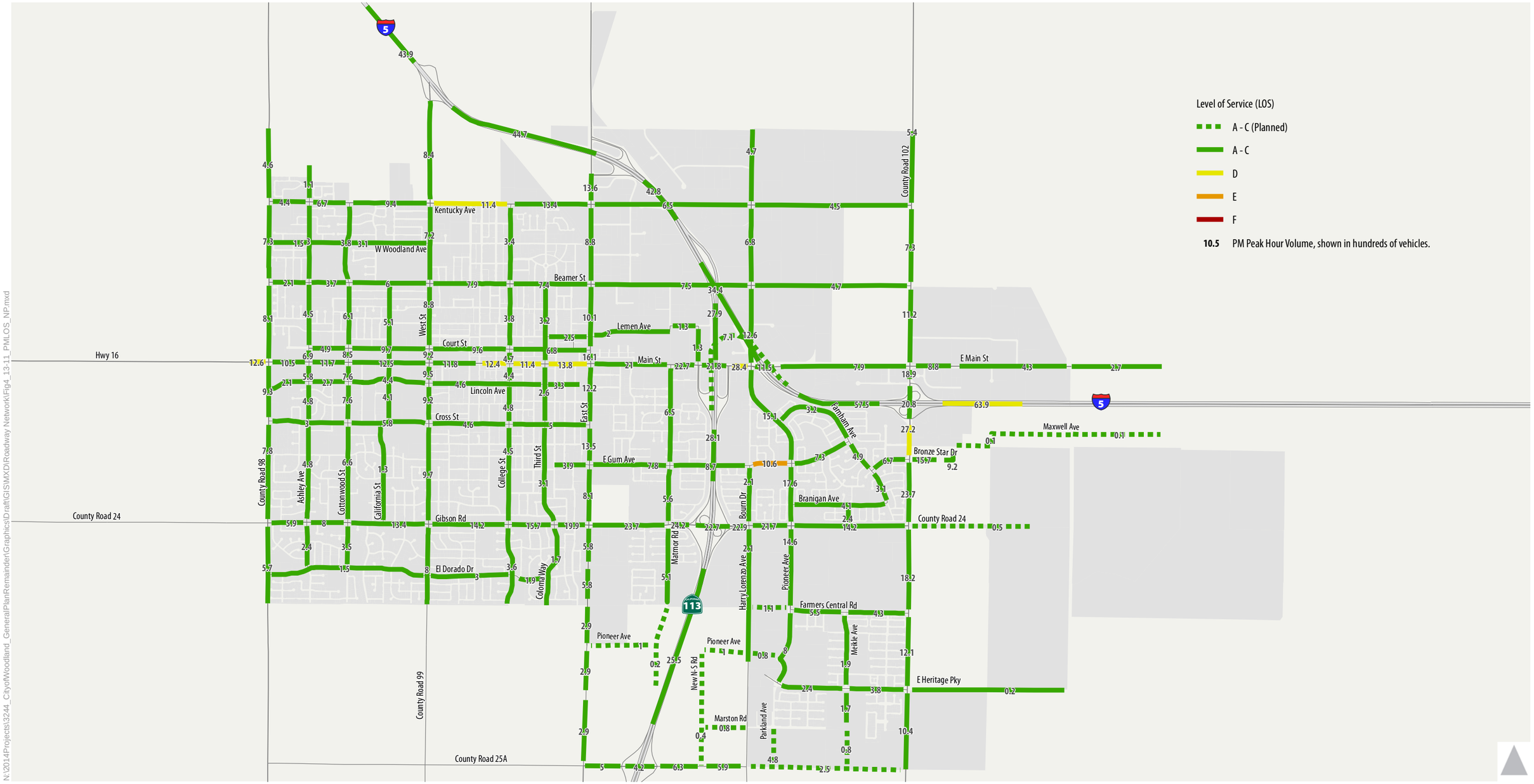

Exhibit 4.13-11

2035 No Project - PM Peak Hour Volume & Level of Service

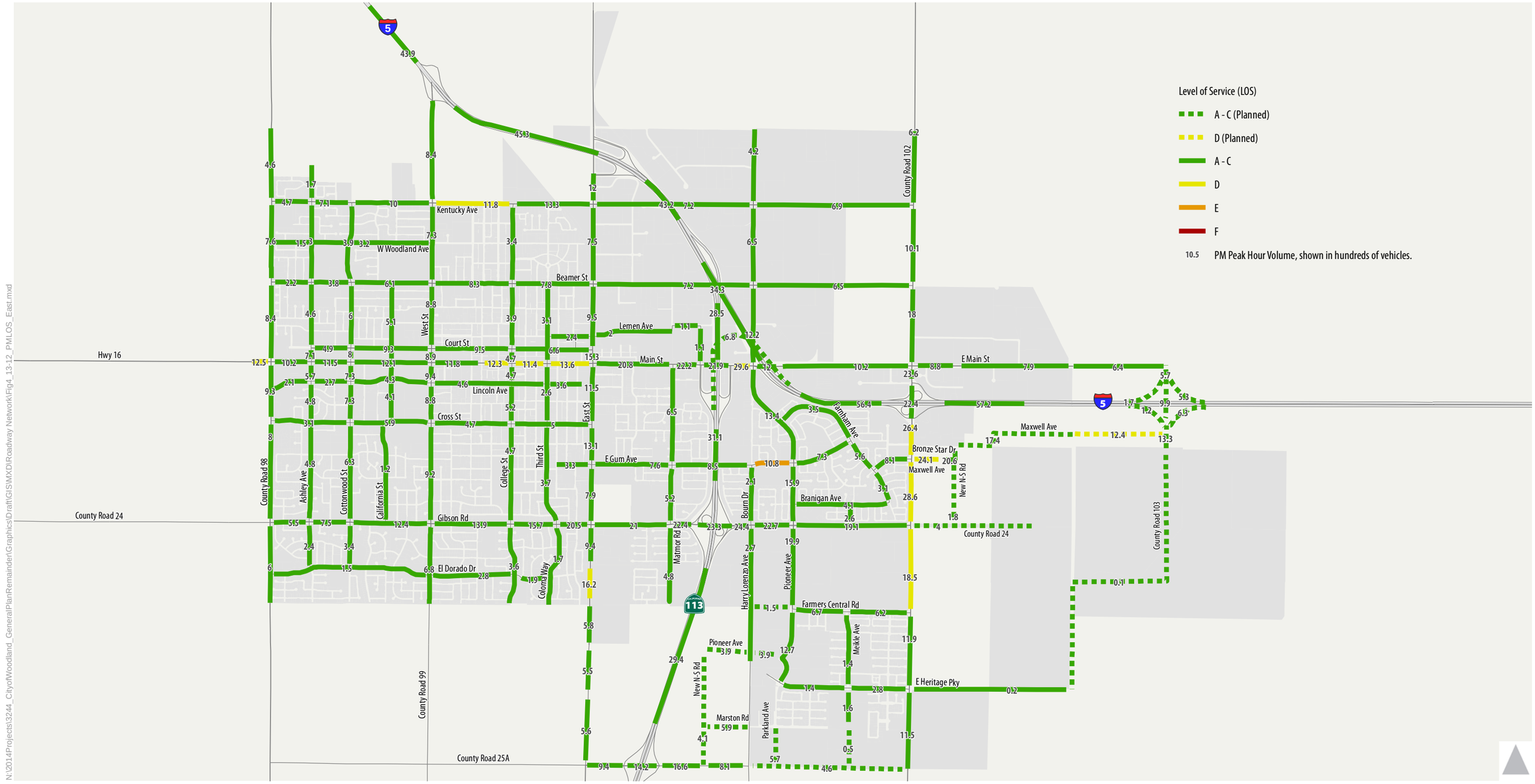

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Exhibit 4.14-12

2035 East Alternative - PM Peak Hour Volume & Level of Service

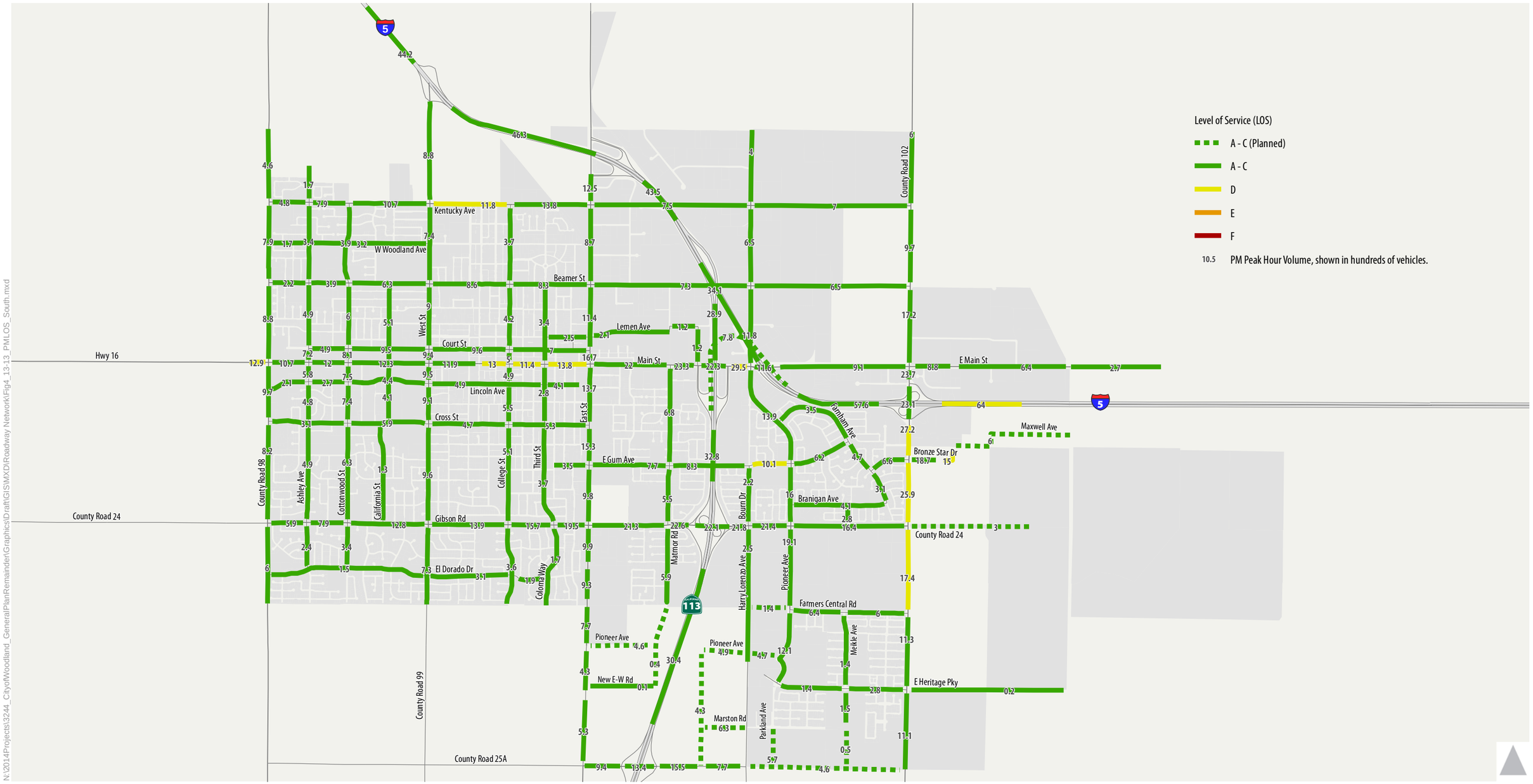

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Exhibit 4.14-13

2035 South Alternative - PM Peak Hour Volume & Level of Service

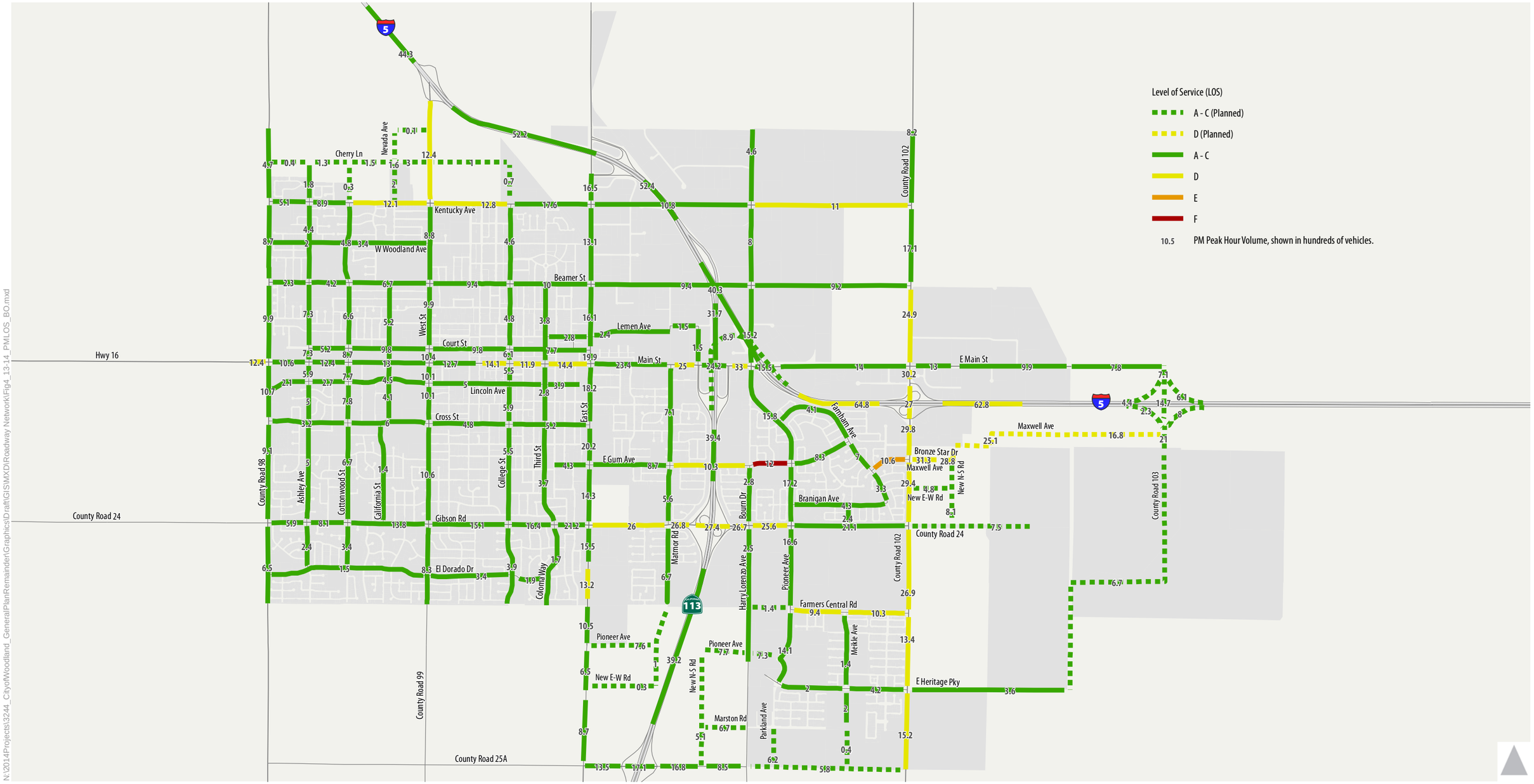

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Exhibit 4.13-14

2050 Build Out - PM Peak Hour Volume & Level of Service

4.14 UTILITIES

4.14.1 INTRODUCTION

This section describes the conditions of public utilities, including water, wastewater, stormwater, and solid waste disposal in Woodland, and identifies the related potential environmental impacts and development constraints upon implementation of the Proposed Project.

The following data resources were used for this section's analysis: California Department of Public Health (CDPH) Chromium-6 Fact Sheet from 2006; California Department of Water Resources (DWR) from 2003; California Integrated Waste Management Board Resolution 2008-185 from 2008; Central Valley Regional Water Quality Control Board (RWQCB) TMDL for Mercury Staff Report from 2004; City of Woodland Annual Water Quality Report from 2015 City of Woodland 2011 Groundwater Management Plan; City of Woodland Source Reduction and Recycling Element from 1992; City of Woodland Storm Drainage Facilities Master Plan Update and Preliminary Engineering Draft Main Report from 2006; City of Woodland Technical Report Evaluating General Plan Impacts on the City's Water Pollution Control Facility from 2015; Sacramento Area Council of Governments (SACOG) population projections; State Water Resources Control Board (SWRCB) and California Coastal Commission Nonpoint Source Program Strategy and Implementation Plan from 2000; University of California-Davis (UC Davis) Solid Waste Management Policy from 2009; Woodland General Plan Update Development Scenarios Analysis from 2015; 2015 Woodland Urban Water Management Plan (UWMP) adopted in June 2016; Yolo County Planning and Public Works Department's Countywide Siting Element of the Yolo County Integrated Waste Management Plan (IWMP) (Yolo County Planning & Public Works) from 2012; Yolo County Background Report for the General Plan Update from 2005; Yolo County Flood Control and Water Conservation District's (YCFCWCD) Groundwater Monitoring Program, Data Management System, and Update of Groundwater Conditions in the Yolo County Area from 2004; Yolo County Local Agency Commission Municipal Service Review and Sphere of Influence Study from 2011; and the Yolo County Water Resources Association By-laws from 2016.

The City received one NOP comment relevant to this section, from the California Department of Transportation, District 3, recommending that the City prepare a Master Drainage Study as part of the Proposed Project EIR that addresses potential flooding on SR-16, SR-113, and I-5, particularly the flooding of Cache Creek. Impacts and mitigation related to flooding are addressed in Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality."

Electricity and natural gas are discussed in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy." Communications are discussed in Section 4.12 of this EIR, "Public Services and Recreation."

4.14.2 ENVIRONMENTAL SETTING

4.14.2.1 WATER SUPPLY

Potable Water

The City of Woodland Public Works Department provides municipal water to residents in the Planning Area. Treated Sacramento River water supplied by the Woodland-Davis Clean Water Agency's (WDCWA) Regional Water Treatment Facility (RWTF) is the primary source of drinking water within the Planning Area. Groundwater

is a backup to the surface water supply and will supplement surface water during times of high demand or reduced surface water availability.

Surface Water

Faced with meeting anticipated water quality, reliable water supply needs, and wastewater discharge regulations, in September 2009, the cities of Woodland and Davis established the WDCWA. The WDCWA's Davis-Woodland Water Supply Project is a regional surface water supply project to supplement local ground water supplies in the region. The project will divert up to 45,000 acre-feet of water per year from the Sacramento River and serve more than two-thirds of the urban population of Yolo County, as well as UC Davis as a project partner. Groundwater from Woodland and Davis will continue to supplement water supplies when local water demand cannot be met, particularly during summer months and other dry periods when Term 91[1] and Shasta Critical Year Reductions may limit WDCWA's water diversions from the Sacramento River.

WDCWA has also secured a senior Sacramento River water right for 10,000 acre-feet from the Conaway Preservation Group that is limited to the months of April through October (City of Woodland 2016). The WDCWA project included a newly constructed river water intake structure and pipeline that will transport "raw" water 5.1 miles from the Sacramento River to a new 30 million gallons-per-day (mgd) water treatment plant located in Woodland. Woodland has a dedicated capacity of 18 mgd of supply from the water treatment plant (City of Woodland 2016). Woodland also has an additional 2,000,000 gallons of storage and a dedicated 4-mgd pump to supplement this supply. Groundwater would be used to supplement surface water supplies and could account for up to 30 percent of total demand in dry years.

Groundwater

The Sacramento Valley Groundwater Basin is the major groundwater basin in the Sacramento River hydrologic region. This groundwater basin has 18 groundwater subbasins. The Yolo subbasin encompasses approximately 400 square miles in the southern portion of the Sacramento Valley Groundwater Basin, primarily in Yolo County, and it is not in overdraft (DWR 2003, City of Woodland 2016). This subbasin is bounded on the east by the Sacramento River, on the west by the Coast Range, on the north by Cache Creek, and on the south by Putah Creek (City of Woodland 2016).

Woodland continues to operate several groundwater wells located throughout the city to supplement surface water supplies. Of the 18 wells owned and operated by the City, 70 percent have been in operation for 30 years or longer. The typical life of a well is between 30 and 50 years. Several of the older wells are planned to be converted to landscape irrigation or destroyed in the near future. Woodland is planning to implement an Aquifer Storage and Recovery (ASR) program beginning in fall 2016, which will further improve groundwater supplies in Woodland.

Historically, groundwater elevations in the region have ranged from roughly 20 feet to -60 feet mean sea level (msl) (City of Woodland 2016). Groundwater elevations generally declined from the 1950s to the 1970s; however, in response to regional water supply projects implemented by Yolo County Flood Control and Water

[1] Term 91 is a water permit condition, which applies to permits issued after 1965, that curtails downstream diverters from taking diversions from streams when the State Water and Central Valley Projects are releasing water from storage to meet water quality standards (SWRCB Office of Delta Watermaster, 2014)

Conservation District, groundwater elevations have increased since that time (City of Woodland 2016). In the vicinity of Woodland, the base of fresh groundwater occurs at a depth of approximately 2,500 feet below msl (City of Woodland 2016). Woodland's groundwater wells pump from the intermediate aquifer at 200 to 600 feet below ground (City of Woodland 2006). Groundwater quality is discussed in Section 4.9 of this EIR, "Hydrology and Flooding."

Distribution and Storage

The distribution system consists of 260 miles of transmission and distribution lines, a 3 million-gallon, ground-level storage tank, two million gallons in dedicated storage at the RWTF, and a 400,000-gallon elevated storage tank, which is generally sufficient for peak demands and to regulate water pressure. There are about 15,635 existing service connections in the distribution system (City of Woodland 2016). Exhibit 4.14-1 shows Woodland's municipal water infrastructure.

The City has planned for the use of ASR wells to store treated surface water from excess supply in winter months to supplement supply in peak demand summer months and to prepare for future drought conditions (City of Woodland 2016). One ASR well was completed in 2013 and two additional wells are planned to complete construction in early 2017. Ultimately, five ASR wells are planned for the system. Three ASR wells are planned to be operational by mid-2017. Exhibit 4.14-1 shows Woodland's municipal water infrastructure.

Water Supply

Table 4.14-1 shows the actual and projected water supplies in Woodland from the City's 2015 UWMP. Groundwater provided the 2015 water supply, but by 2020, most of the water supply is projected to come from surface water, supplemented by recycled water, with groundwater to serve as supplemental for emergency conditions. The City's surface water availability is projected to grow to a water supply of approximately 24,650 acre-feet per year (af/yr) by 2035.

Table 4.14-1. City of Woodland Actual and Projected Water Supplies in Acre-Feet Per Year

	2015	2020	2025	2030	2035
Surface Water	—	20,160	20,160	20,160	24,650
Groundwater[1]	8,650	—	—	—	—
Purchased or Imported Water	—	—	—	—	—
Recycled Water	—	800	800	800	800
Total	**8,650**	**20,960**	**20,960**	**20,960**	**25,450**

Notes:

[1] Groundwater provided all water supplies in 2015. Water supplies are projected to be sourced by surface water and recycled water by 2020. According to the 2015 UWMP, "the City plans to use groundwater as an emergency supply in the future and plans to maintain and replace groundwater wells as needed to meet all future demands for the near-term and provide a minimum emergency supply capacity in the future."

Source: City of Woodland 2016

Water Demand

In 2015, the city's water demand was approximately 2.8 billion gallons per year (7.6 mgd), down from 4.5 billion gallons per year (12.4 mgd) in 2010. During 2007-2009 and 2012-2015, California experienced drought

conditions that resulted in increased water conservation and water use awareness. In 2015, single-family residential uses accounted for nearly half of demand (46 percent), followed by multi-family residential and commercial (15 percent each), industrial and landscape (7 percent each), and institutional/governmental (4 percent) (City of Woodland 2016).

Future water demand in Woodland is expected to grow over the planning horizon. As shown in Table 4.14-2, the City's water demand is projected to reach approximately18,700 af/yr in the year 2035, the horizon year of the Proposed Project. This water demand projection is based on the City's compliance with its 2009 Water Conservation Act (Senate Bill x7-7 or SBx7-7) per capita water use targets (interim target of 261 gallons per capita per day [gpcd] in 2015 and final target of 232 gpcd in 2020 and in subsequent years). The 2020 final target of 232 gpcd is a reduction of 20 percent from the City's SBx7-7 baseline of 290 gpcd, where the baseline is the daily per capita water use calculated over the 10-year period of 1995-2004.

Table 4.14-2. City of Woodland Total Water Demands, af/yr

Demand	2015	2020	2025	2030	2035[1]
Potable and Raw Water Demand	8,650	15,113	16,226	17,417	18,691
Recycled Water Demand	0	800	800	800	800
Total Water Demand	**8,650**	**15,913**	**17,026**	**18,217**	**19,491**

Notes:

[1] Recycled water demands are based on projected water use for Woodland industrial use, landscape, and park irrigation needs.

[2] Potable and raw water demand projections are calculated based on projected population and 2020 target gallons per capita per day, as calculated using DWR methodologies for SBx7-7.

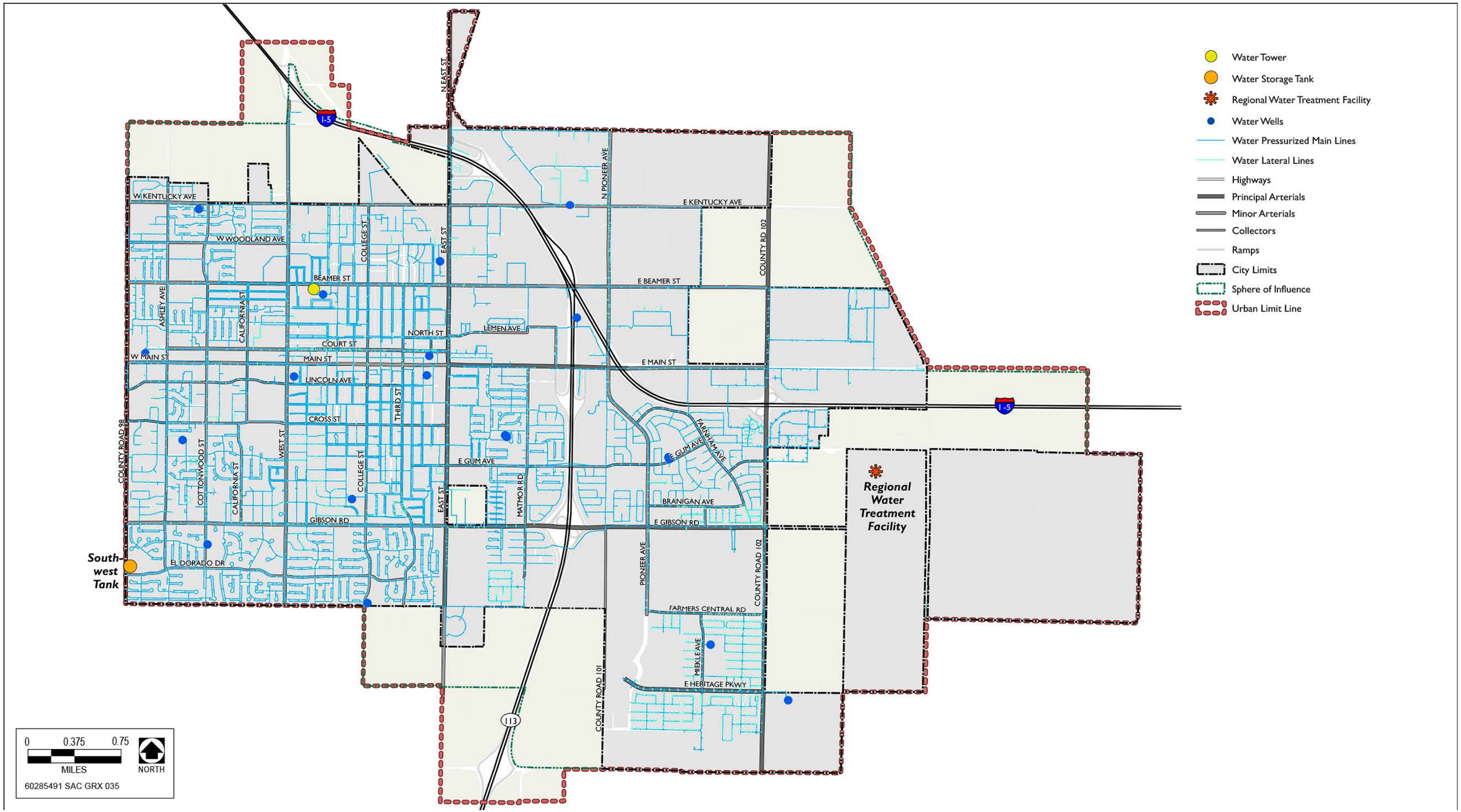
Source: City of Woodland 2016

Water Conservation

The City of Woodland has supported efforts to reduce water demand through conservation and other measures. In compliance with State law, the City has installed water meters throughout Woodland and uses a consumption-based billing schedule for water utility billing (City of Woodland 2016). The completion of the water meter installation program was expected to reduce demand by about 15 percent per year, helping the City to meet the State's SBx7-7 goals of reducing per capita urban water use by 20 percent from pre-meter levels by January 2021. In fact, the City had achieved a total annual water use reduction of 46 percent from the SBx7-7 baseline by 2015. Urban retail water suppliers that do not meet water conservation requirements of SBx7-7 are not eligible for State water grants or loans. The City is already successfully meeting or exceeding the water conservation requirements required by SBx7-7.

Recycled Water

The City of Woodland has evaluated the feasibility of recycled water and has planned for a new recycled water utility (UWMP 2016). The initial recycled water program would extend purple pipe to the northeast portion of the City designated for Industrial use and also serve two City parks with recycled water (City of Woodland 2016). Construction of the project began in May 2016. Recycled water deliveries are expected to begin in fall 2016. The recycled water utility is planned to be expanded to serve primarily industrial uses and landscape irrigation.



Source: City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013, Dyett & Bhatia 2013

Exhibit 4.14-1. **Municipal Water Infrastructure**

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Planned Improvements

The Davis-Woodland Water Supply project has allowed Woodland to secure surface water supplies for current and future demand. The City plans to utilize ASR wells to balance winter surface water supply with summer demand and store treated surface water ahead of the next drought. As noted above, the City has planned for five ASR wells to be ultimately constructed, which will require two additional ASR wells to be constructed after 2017. The State's new hexavalent chromium regulation generally prohibits long-term use of existing wells; any new native groundwater wells would likely require a wellhead treatment system over the planning period. Native groundwater is water that is unaltered by the effects of human activities (Pearsall 1996).

The City has several miles of old and undersized cast iron pipe dating back to the early 1900s. These pipes have seen an increase in the frequency of water main breaks. The City has begun a program to replace the aging water mains over time.

4.14.2.2 WASTEWATER COLLECTION AND TREATMENT

The City of Woodland's Public Works Department is the community's wastewater service provider. Woodland's wastewater collection system conveys wastewater by gravity pipelines to the Water Pollution Control Facility (WPCF) located east of the city along County Road 24, where it is treated and then discharged to a large, unimproved channel. Treated wastewater eventually drains to the Tule Canal on the east side of the Yolo Bypass.

Woodland's wastewater collection system consists of 270 miles of sewer main and 80 miles of service line. One 18-inch forcemain along Main Street (the tomato waste line from the Pacific Coast Producers plant to CR 103) is not a part of the City system. The City has more than 15,000 wastewater service connections and serves the city of Woodland as well as a small unincorporated area north of the city called Barnard Court. Exhibit 4.14-2 shows the City's existing wastewater infrastructure system.

Current Capacity

While most of the City's wastewater infrastructure can meet existing and future demand, the capacity of the sewer system in the Downtown area is currently constrained. The Beamer Trunk Line, as shown in Exhibit 4.14-2, serves Woodland's Downtown and is near capacity.

The City constructed the WPCF in 1989. Since that time, the City has upgraded the facility twice—once in 1999 and a second time in 2006, when the City expanded and upgraded the treatment plant's hydraulic capacity from 7.8 million mgd to 10.4 mgd. The City is currently upgrading the WPCF to expand solids handling capacity, replace equipment, and improve the treatment process. The wastewater treatment plant capacity is measured in two ways: (1) hydraulic capacity, which is the maximum inflow/outflow (gallons per day) that a plant can treat; and (2) solids (biological oxygen demand) capacity, which are the maximum biological solids (pounds per day) that a plant can adequately treat.

In recent years, hydraulic inflows to the WPCF have been reduced due to water conservation, and the average flow to the WPCF is currently about 5.0 mgd, according to a technical report that was completed to evaluate the 2035 General Plan impacts on the WPCF. Future average flow to the WPCF is expected to grow moderately, from about 6.6 mgd by 2020 to 8.3 mgd by 2035 (Correspondence with the City of Woodland, June 2016). The

projected future capacity of the WPCF is about 9.2 mgd for average wastewater flows, which could serve up to 105,000 residents (City of Woodland 2015b).

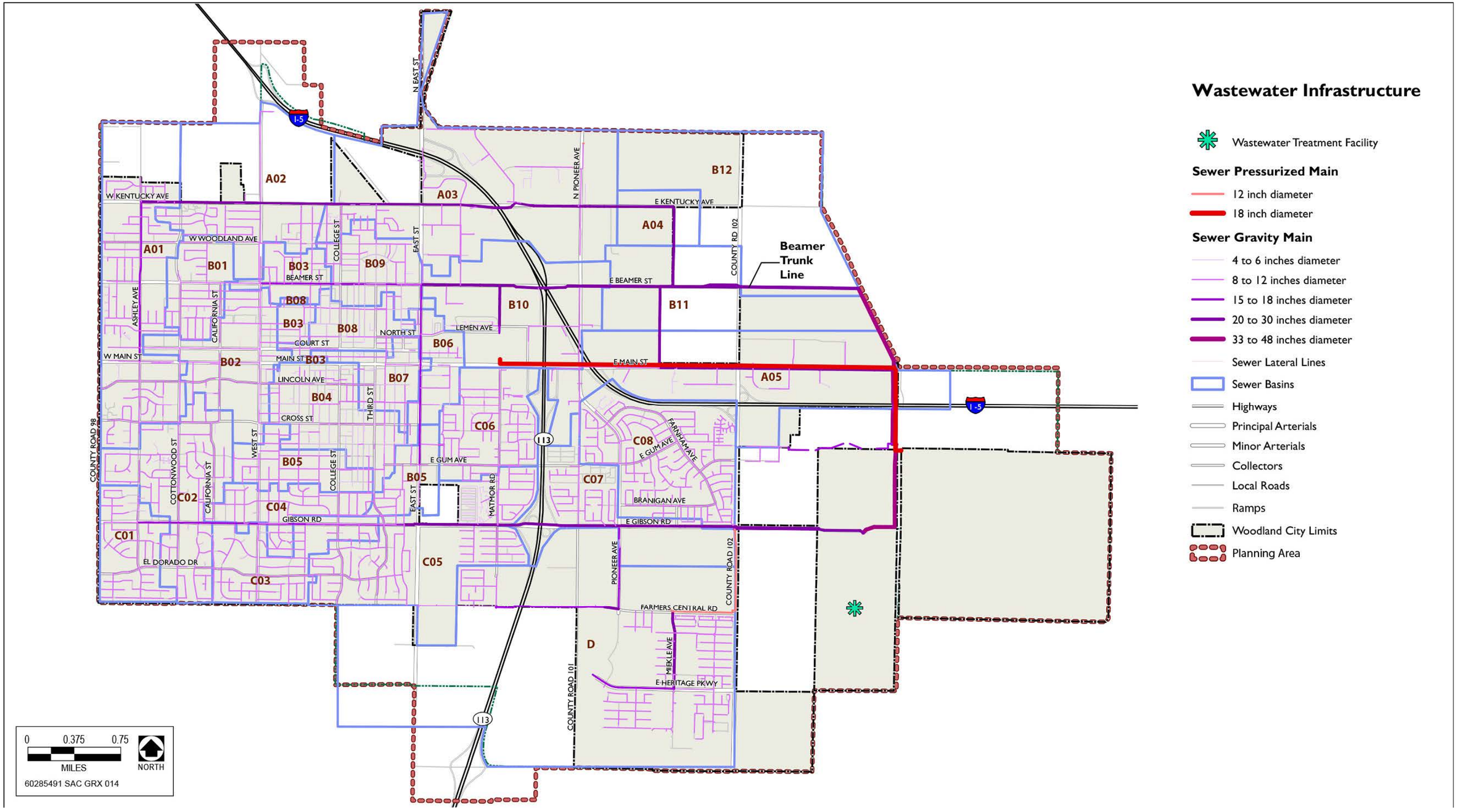
However, while hydraulic inflows have decreased, biological solids have remained the same, or have slightly increased in recent years. The City is constructing the conversion of three of the oxidation ditches at the WPCF to the Modified Ludzack-Ettinger (MLE) process, which enhances nitrogen removal in addition to solids capacity. As of September 2016, the improvements to solids handling capacity are nearly complete and are in use. The upgrades to the oxidation ditches result in a higher solids capacity of 13,300 lb/day compared to the existing 10,300 lb/day. This capacity will be sufficient to serve a residential population of 70,000 (at 0.19 pounds of biochemical oxygen demand [BOD 5] per capita day). The construction work is expected to be completed in fall 2016, and its capacity can be relied on for the purposes of this analysis. With conversion of a fourth oxidation ditch to MLE, the WPCF can treat up to 19,900 lb/day, which could serve approximately 105,000 residents. Commercial and industrial demand for wastewater varies depending on the type of use and wastewater discharge and strength. The City requires pretreatment of high strength users to mitigate impacts to the WPCF. The WPCF has a "practical" limit of about 26,000 lb/day, with various additional upgrades and modifications to the plant, like the addition of primary treatment and anaerobic digestion. Additional upgrades and modifications will be made to the WPCF as needed to ensure adequate capacity is available over the horizon of the 2035 General Plan.

Historically, wastewater flows and biological loads have been linked. However, water conservation has resulted in lower flows to WPCF with the same biological load. In the future, hydraulic capacity will not be the limiting system factor. Rather, the ability for WPCF to treat higher amounts of biological solids will determine overall wastewater system capacity, and the City will make modifications and upgrades to the WPCF, as needed, over the horizon of the 2035 General Plan.

Woodland Water Pollution Control Facility

The WPCF includes the following processes: (1) mechanical treatment—bar screens and grit removal, (2) oxidation ditches, (3) secondary clarification, (4) polymer chemical addition, (5) cloth media filtration, (6) ultraviolet (UV) disinfection, and (7) discharge. The City also leases 890 acres adjacent to the WPCF to Pacific Coast Producers, which operates an industrial wastewater treatment process used to treat wastewater from a local tomato processing facility. The City and Pacific Coast Producers are co-permitted and are jointly responsible for maintaining wastewater discharge standards.

As noted, treated wastewater is discharged to an unimproved channel, which eventually drains to the Tule Canal on the east side of the Yolo Bypass.



Source: City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013, Dyett & Bhatia 2013

Exhibit 4.14-2. **Wastewater Infrastructure**

Wastewater Quality

Woodland's treated wastewater has historically had high electrical conductivity (EC). EC indicates the amount of salts or salinity of water. Salts that dissolve in water break into positively and negatively charged ions. Because dissolved ions increase salinity, as well as conductivity, the two measures are related. High water salinity can limit the growth of certain crops. Groundwater supplies, water softeners, general water consumption, and effluent contribute to increased salt content. EC is expected to decline as the City converts to primarily treated surface water and residents reduce reliance on water softeners (City of Woodland 2016).

Planned Improvements

In the coming years, the City will prioritize improvements to increase the capacity of the sewer system in Downtown, which is currently a significant limitation on the area's ability to intensify and serve more growth. The City is currently lining, replacing, and adding to existing sewer lines, which will delay the need for increased capacity. The City is evaluating the need for a new 18-inch relief line along East Street from Oak Avenue to Gibson Road to divert flow from the Beamer Trunk to the Gibson Truck, as well as a new 12-inch relief line on Gum Street from 4th Street to East Street to reduce flow along 4th Street and Oak Avenue. This main would also link with the East Street relief line. If it is needed in the future, the City plans to add capacity to the sewer system Downtown by relieving the Beamer Trunk Line with a line to the Kentucky Trunk Line or with redirection of flows to the Gibson Trunk Line. The Kentucky Trunk Line runs underneath Kentucky Avenue in the northern portion of the Planning Area and has additional capacity (Development Scenarios Analysis Report 2015). The Gibson Trunk Line runs underneath Gibson Road in the southern portion of the Planning Area and has additional capacity.

As discussed above, improvements to increase the solids handling capacity at the WPCF are nearly complete, as of September 2016. In addition, the City is reviewing alternatives for biosolids disposal to reduce the cost and remove the accumulated biosolids from the sludge disposal ponds in the WPCF. The City will also continue to soil/cement line the sludge disposal ponds as the biosolids in each pond are excavated.

In addition, the City will investigate potential mitigation strategies to the odor associated with WPCF. Additional discussion on odor issues can be found in the Air Quality section of the Conservation and Open Space Element of the 2035 General Plan.

Additionally, as discussed above in the Potable Water section, the City is currently constructing a recycled water pipeline to the northeast industrial area which will serve a large industrial user, two parks, and landscaping located along the pipeline route.

4.14.2.3 STORMWATER

Most of the land in the Planning Area is developed, resulting in impervious surfaces from the placement of roads, parking lots, buildings, and other infrastructure. These facilities reduce the amount of water infiltration into the ground, increasing direct runoff, which can increase soil erosion and sedimentation in receiving channels and result in water quality degradation and flooding concerns.

The City's stormwater system includes 130 miles of stormwater drain pipes, 14 miles of drainage channels, 1,600 catch basins, 1,874 drain inlets, nine detention ponds, and nine stormwater pumps in three locations. The Public Works Department is responsible for operation and maintenance of the system. The City maintains a Storm Drainage Facilities Master Plan, which is used to plan and implement improvements to the stormwater infrastructure in Woodland. The existing stormwater infrastructure is mapped in Exhibit 4.14-3.

Existing Storm Drain System

Woodland's storm drain system collects water through gutters, ditches, and catch basins. The storm drain system conveys water generally west to east by gravity through canals and four main trunk lines 30 to 84 inches in diameter, as shown in Exhibit 4.14-3. The trunk lines discharge into open channels that convey the flow to the East Main Street Lift Pump Station. It is then pumped into a canal along the south side of Cache Creek Settling Basin and then flows into the Tule Canal in the Yolo Bypass and then to the Sacramento River. The City also has several retention/detention basins around the city to slow and divert storm water from larger storms.

Flooding

City streets are subject to flooding during periods of moderate to heavy rainfall, as the storm drain system is not adequately sized for these flows. Older parts of the city, particularly west of East Street, do not have a system of under-street storm drain pipes. Rather, runoff is conveyed through intersections in valley gutters, gutter culverts, or inverted siphons, and must travel long distances to reach a drain inlet, as shown in Exhibit 4.14-3. In these areas, when capacity of drain inlets and pipes is exceeded, localized street flooding occurs and can remain for three to four hours after rainfall has subsided. Significant problem areas where localized street flooding occurs include Browns Corner (West Main Street and County Road 98) and West Street (South of Del Mar); flooding is discussed in more detail in the Safety Element.

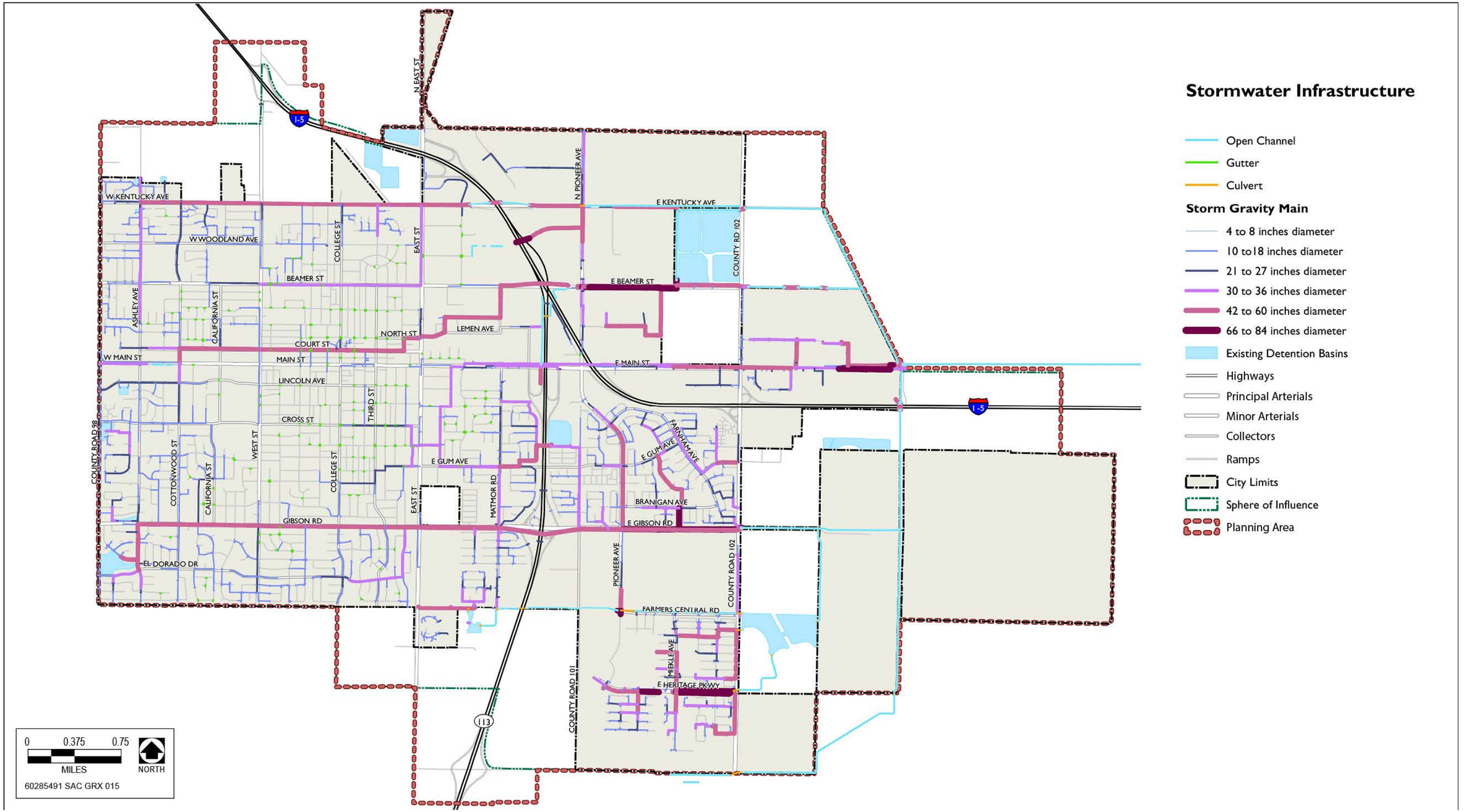
- **Browns Corner.** Browns Corner has experienced significant flooding problems during the last several years from overland flows from unincorporated areas west of Woodland. The City is currently working with farmers to minimize impacts to the residents.

- **West Street.** West Street is experiencing problems with flows from fields south of Woodland that flow north on West Street and flood Del Mar Street and Miramonte Drive. The City is currently working with farmers and Yolo County to divert the flows eastward.

- **Cache Creek.** Parts of northern and eastern Woodland also experience shallow flooding from Cache Creek during large rainstorms. A flood management feasibility study for Lower Cache Creek is currently underway. For discussion of the flood risk associated with the Cache Creek 100-year floodplain see Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality."

Planned Improvements

The City is engaged in studies with the Army Corps of Engineers and State of California Department of Water Resources to study flood management alternatives for Lower Cache Creek. The City is also engaged in a Storm Drain Master Plan update to guide storm water related improvements required for development in the southern portion of the city.



Source: City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013, Dyett & Bhatia 2013

Exhibit 4.14-3. **Stormwater Infrastructure**

4.14.2.4 SOLID WASTE COLLECTION AND DISPOSAL

Solid waste and yard waste collection and disposal and curbside recycling in Woodland are provided by a franchise agreement with Waste Management, with disposal and material processing at Yolo County Central Landfill. According to the Yolo County Integrated Waste Management Plan, as of 2012, the landfill had approximately 79 years of disposal capacity.

4.14.3 REGULATORY FRAMEWORK

4.14.3.1 FEDERAL

Water

Federal Safe Drinking Water Act, Title XIV of The Public Health Service Act

The Safe Drinking Water Act (SDWA) passed by Congress in 1974, authorizes the EPA to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable MCLs in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people.

In California, the State Department of Health Services conducts most enforcement activities. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

Federal Water Pollution Control Act of 1972 (Clean Water Act), 33 U.S.C. §1251, et seq.

The principal federal law regulating water quality in the United States is the 1972 Federal Water Pollution Control Act, also known as the Clean Water Act. The fundamental purpose of the Clean Water Act is the protection of designated beneficial uses of water resources. The Clean Water Act establishes a system of water quality standards, discharge limitations, and permits, and requires states to adopt water quality standards to protect public health and welfare, enhance the quality of water, and serve the other purposes of the Clean Water Act.

The Clean Water Act was amended in 1987 to include urban and stormwater runoff, which required many cities to obtain a National Pollutant Discharge Elimination System (NPDES) permit for storm water conveyance system discharges. Section 402(p) of the Clean Water Act prohibits discharges of pollutants contained in stormwater runoff, except in compliance with a NPDES permit, as more fully described below.

Under Section 404 of the Clean Water Act, the U.S. Army Corp of Engineers regulates discharges of dredged or fill material into waters of the United States, requiring issuance of a Section 404 permit. Under Section 401 of the Clean Water Act, a state water quality certification must be obtained whenever an application for a federal permit for discharge of pollutants into waters of the United States is submitted, such as a Section 404 permit. The Section 401 certification requires that any activity affecting waters of the United States be in compliance with all applicable water quality standards, limitations, and restrictions.

U.S. Environmental Protection Agency

The 1986 amendments to the Safe Drinking Water Act and the 1987 amendments to the Clean Water Act established the U.S. Environmental Protection Agency (EPA) as the primary authority for water programs. The U.S. EPA is the federal agency responsible for providing clean and safe surface water, groundwater, and drinking water, and protecting and restoring aquatic ecosystems. Woodland is in EPA Region 9 (Pacific Southwest), which includes Arizona, California, Hawaii, Nevada, Pacific Islands, and Tribal Nations.

Wastewater

Federal Water Pollution Control Act of 1972 (Clean Water Act)

See previous regulatory discussion under federal regulations for Water.

National Pollutant Discharge Elimination System

See previous regulatory discussion under federal regulations for Water.

Stormwater

Nonpoint Source Pollution Control Program Plan

California's Nonpoint Source Pollution Control Program Plan 1998 – 2013 was developed by the SWRCB and California Coastal Commission, in cooperation with the nine RWQCBs, to conform to the requirements of Coastal Zone Reauthorization Act (CZARA) and the CWA (State Water Resources Control Board, California Coastal Commission 2000). The plan is intended to protect the state's water quality by expanding its polluted runoff control efforts. It specifies 60 management measures to prevent or reduce water quality degradation from agriculture, forestry, urban areas, marinas and boating, hydromodification, and wetlands. The plan provides a single statewide approach to dealing with nonpoint source (NPS) pollution. A total of 28 state agencies are working collaboratively through the Interagency Coordinating Committee to implement the plan.

Construction General NPDES Permit

Stormwater discharges from construction activities on one acre or more are regulated by the RWQCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (Construction General Permit, 99-08-DWQ). All dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-006-DWQ. The RWQCB established the Construction General Permit program to reduce surface water impacts from construction activities. The Construction General Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction activities. The SWPPP must be prepared before construction begins, and in certain cases, before demolition begins.

The SWPPP must include specifications for BMPs that would be required during project construction. BMPs are measures that are undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from construction areas. The SWPPP must describe measures to prevent or control runoff after construction is complete and identify procedures for inspecting and maintaining facilities or other project elements. Examples of typical construction BMPs include scheduling or limiting activities to certain times of

year; installing sediment barriers such as silt fences and fiber rolls; maintaining equipment and vehicles used for construction; implementing tracking controls such as stabilizing entrances to the construction site; and developing and implementing a spill prevention and cleanup plan. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, and vehicle and equipment washing and fueling.

Solid Waste Collection and Disposal

There are no relevant laws, policies, plans, or programs that apply to the Proposed Project.

4.14.3.2 STATE

Water

California Department of Water Resources

The California Department of Water Resources (DWR) was established in 1956 by the California Legislature and is responsible for the operation and maintenance of the California State Water Project, which stores water and distributes it to 29 agricultural and urban water suppliers throughout the state. DWR is also responsible for overseeing the statewide process of developing and updating the California Water Plan (Bulletin 160 series); protecting and restoring the Sacramento–San Joaquin Delta; regulating dams, providing flood protection, and assisting in emergency management; educating the public about the importance of water and its proper use; and providing technical assistance to service local water needs.

California State Water Resources Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) address water quality and rights regulation. Created by the California Legislature in 1967, the five-member SWRCB protects water quality by setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. The SWRCB is also solely responsible for allocating surface water rights. Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions.

California Porter–Cologne Water Quality Control Act, CA Water Code Division 7

The Porter–Cologne Water Quality Act is the principal state law enacted to establish requirements for adequate planning, implementation, management, and enforcement of water quality controls. The Porter–Cologne Act, which became Division 7 of the California Water Code, established a regulatory program to protect water quality and beneficial uses of all state waters, outlined the responsibilities and authorities of the nine RWQCBs, and established the SWRCB. For the Sacramento River Hydrologic Region, water quality is regulated by the RWQCB, Region 5 of the SWRCB. Each RWQCB is directed to create a water quality control plan, to include three main components: (1) beneficial uses that are to be protected; (2) water quality objectives that protect those uses; and (3) an implementation plan to accomplish those objectives.

California Urban Water Management Planning Act, CA Water Code Sections 10610-10656

In 1983, the California Legislature enacted the Urban Water Management Planning Act, which requires every urban water supplier that provides water to 3,000 or more customers, or over 3,000 acre-feet (af) of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple-dry years. The UWMP is required in order for a water supplier to be eligible for the DWR-administered state grants, loans, and drought assistance. The UWMP provides information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices (BMPs), and water shortage contingency planning for a specified service area or territory.

SB 610 (Statutes of 2001) and 221 (Statutes of 2001), CA Water Code Section 10910

On January 1, 2002, Senate Bill (SB) 610 took effect. SB 610, which was codified in the Water Code beginning with section 10910, requires the preparation of a water supply assessment (WSA) for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. SB 610 stipulates that when environmental review of certain large development projects is required, the water agency that is to serve the development must complete a WSA to evaluate water supplies that are or will be available during normal, single-dry, and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with a proposed project. DWR has identified that general plans are an important source of information for urban water management plans, which are, in turn, an important source of information to support SB 610 water assessments for specific projects (DWR 2003).

Enacted in 2001, SB 221, which was codified in the Water Code beginning with section 10910, requires that the legislative body of a city or county, which is empowered to approve, disapprove, or conditionally approve a subdivision map, must condition such approval upon proof of sufficient water supply. The term “sufficient water supply” is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision. The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses, including agricultural and industrial uses.

AB 1881 (Statutes of 2006), State Updated Model Water Efficient Landscape Ordinance (2006)

The State’s updated Model Water Efficient Landscape Ordinance required cities and counties to adopt landscape water conservation ordinances by January 31, 2010. The City of Woodland adopted Ordinance No. 1564 enacting new water conservation regulations codified in Article XI of the City’s Code of Ordinances.

California Emergency Gray Water Regulations, CA Plumbing Code Chapter 16A

In 2009, as part of the Governor’s declared State of Emergency, Chapter 16A “Nonpotable Water Reuse Systems” was incorporated into the 2007 California Plumbing Code. Chapter 16A establishes minimum requirements for the installation of gray water systems in residential occupancies regulated by the California Department of Housing and Community Development, providing guidance and flexibility designed to encourage the use of gray water. The standards allow small gray water systems to be installed in homes without a construction permit, substantially reducing the barriers to installing small residential gray water systems in California. The purpose of the regulations is to conserve water by facilitating greater reuse of laundry, shower, sink, and similar sources of

discharge for irrigation and/or indoor use; to reduce the number of noncompliant gray water systems by making legal compliance easily achievable; to provide guidance for avoiding potentially unhealthful conditions; and to provide an alternative way to relieve stress on private sewage disposal systems.

SBx7-7, The Water Conservation Act of 2009

California legislation enacted in 2009 as SB 7 of the 7th Special Legislative Session (SBx7-7) instituted a new set of urban water conservation requirements known as "20 Percent By 2020" referring to the legislation's goal of reducing statewide per capita water use by 20 percent by the year 2020. SBx7-7 requires urban water agencies such as the City of Woodland to set per-capita water use targets within their service areas to be met by 2020.

AB 1739 (Statutes of 2014), SB 1168 (Statutes of 2014) and 1319 (Statutes of 2014), Sustainable Groundwater Management Act

In September 2014, the Sustainable Groundwater Management Act (SGMA) was passed. It is a legislative package including three different bills: AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley) that creates a framework for local groundwater management, with a limited role for State intervention. The Act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in and adopt management plans for their local water basins. New requirements for groundwater management under the SGMA do not apply to the 2015 UWMP, but will apply to the 2020 UWMP.

Drinking Water Program

Previously under the California Department of Public Health, as of 2015 the Drinking Water Program is now under the Division of Drinking Water under the State Water Resources Control Board. The Drinking Water Program regulates public water systems; certifies drinking water treatment and distribution operators; supports and promotes water system security; provides support for small water systems and for improving technical, managerial, and financial capacity; and provides funding opportunities for water system improvements. The Field Operations Branch of the Drinking Water Program is responsible for the enforcement of the federal and California Safe Drinking Water Acts and the regulatory oversight of approximately 7,500 public water systems to ensure the delivery of safe drinking water to all Californians. In this capacity, Field Operations Branch staff performs field inspections, issues operating permits, reviews plans and specifications for new facilities, takes enforcement actions for noncompliance with laws and regulations, reviews water quality monitoring results, and supports and promotes water system security. The Division of Drinking Water consists of three branches; Woodland falls under the Northern California Field Operation Branch in Region 09-Sacramento.

Wastewater

California Porter–Cologne Water Quality Control Act, CA Water Code Division 7

See previous regulatory discussion under State regulations for Water.

State Water Resources Control Board

On May 2, 2006, the SWRCB adopted Statewide General Waste Discharge Requirements (WDRs) (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by

requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, prevent sanitary sewer waste from entering the storm sewer system, and develop a Sewer System Management Plan. The General WDR also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

Stormwater

Phase II Small Municipal Separate Storm Sewer System (MS4) Permit

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer systems (MS4s). MS4 permits were issued in two phases. Under Phase I, the Regional Water Quality Control Boards have adopted NPDES storm water permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 people) municipalities, and most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. In 2003, as part of Phase II, the State Water Resources Control Board issued a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities. The Phase II Small MS4 General Permit covers Phase II Permittees statewide and includes the city of Woodland. All projects within the city of Woodland must comply with City's Post Construction Standard Plan, discussed below, to reduce post-runoff in compliance with the City's Phase II MS4 permit.

Solid Waste Collection and Disposal

AB 939 (Statutes of 1989), California Integrated Waste Management Act

AB 939, California's Integrated Waste Management Act of 1989, mandates that 50 percent of solid waste be diverted by the year 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. This requires each region to prepare a source reduction and recycling element to be submitted to CalRecycle.

SB 1016 (Statutes of 2008), Disposal Measurement System Act of 2008

SB 1016 maintains the 50 percent diversion rate requirement established by AB 939, but established a per capita disposal measurement system to make the process of goal measurement, as established by AB 939, simpler, timelier, and more accurate. The new disposal-based indicator—the per capita disposal rate—uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

AB 341 (Statutes of 2012), Solid Waste Diversion

Effective July 1, 2012, AB 341 establishes a policy goal for California that at least 75 percent of the solid waste generated be source-reduced, recycled, or composted by 2020. It also mandated commercial recycling and established recycling requirements for businesses and multi-family complexes. Under the law, local jurisdictions must implement a commercial solid waste recycling program that consists of education, outreach and monitoring of businesses, and it requires that local jurisdictions submit progress reports, including education, outreach, monitoring, and enforcement efforts and exemptions.

AB 1826 (Statutes of 2014), Mandatory Commercial Organics Recycling

AB 1826, passed in 2014 and effective in April of 2016, requires local businesses to recycle organic waste, depending on the amount of waste they generate per week. It also requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residences. It phases in the mandatory recycling or commercial organics over time.

California's Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) administers programs formerly managed by the state's Integrated Waste Management Board and Division of Recycling and is the state's leading authority on recycling, waste reduction, and product reuse. CalRecycle plays an important role in the stewardship of California's vast resources and promotes innovation in technology to encourage economic and environmental sustainability. CalRecycle brings together the state's recycling and waste management programs and continues a tradition of environmental stewardship. The mandated responsibilities of CalRecycle are to reduce waste, promote the management of all materials to their highest and best use, and protect public health and safety and the environment.

4.14.3.3 REGIONAL

Water

Yolo County 2030 General Plan

Yolo County has jurisdiction over the portion of the Planning Area (25 percent) that is unincorporated. The Conservation and Open Space Element of the Yolo County 2030 General Plan includes the following policies and actions that support the goal of ensuring an abundant, safe, and sustainable water supply to support the needs of existing and future generations.

- **Goal CO-5 Water Resources.** Ensure an abundant, safe, and sustainable water supply to support the needs of existing and future generations.
- **Policy CO-5.1** Coordinate with water purveyors and water users to manage supplies to avoid long-term overdraft, water quality degradation, land subsidence and other potential problems.
- **Policy CO-5.2** Support projects that provide reliable and sustainable surface water from a variety of energy efficient sources. Sources should be sufficient to serve existing and planned land uses in prolonged drought periods and protect natural resources and surface water flows.
- **Policy CO-5.3** Manage the County's groundwater resources on a sustainable yield basis that can provide water purveyors and individual users with reliable, high quality groundwater to serve existing and planned land uses during prolonged drought periods.
- **Policy CO-5.11** Facilitate and encourage the development of new reliable future sources of supply consistent with local land use plans and regional water needs, including the completion of the Tehama-Colusa Canal.

- **Policy CO-5.12** Support the integrated management of surface and groundwater, stormwater treatment and use, the development of highly treated wastewater, and desalinization where feasible.
- **Policy CO-5.13** Ensure that regional, State, and federal water projects protect local water rights and areas of origin.
- **Policy CO-5.14** Require that proposals to convert land to uses other than agriculture, open space, or habitat demonstrate that groundwater recharge will not be significantly diminished.
- **Policy CO-5.15** Encourage new development and redevelopment to use reclaimed wastewater, where feasible, to augment water supplies and to conserve potable water for domestic purposes. à
- **Policy CO-5.16** Require all development to have an adequate water supply. Require significant discretionary projects to demonstrate adequate long-term and sustainable water supplies by preparing a verified water supply assessment. The assessment shall demonstrate a long-term, reliable water supply satisfactory under normal and above normal rainfall conditions, as well as drought conditions. Satisfy the requirements of CEQA Guidelines Section 15155 to consult with water agencies regarding water supply assessments.
- **Policy CO-5.18** Encourage developers to build new homes to higher water-efficiency standards than already required.
- **Policy CO-5.19** Strive for "water-neutral" development with new water demand offset by efficiency improvements elsewhere in the system. Require all new developments to offset new water demands to the greatest extent feasible.
- **Policy CO-5.20** Encourage water purveyors to adopt conservation pricing strategies for existing and new development.
- **Policy CO-5.21** Encourage the use of water management strategies, biological remediation, and technology to address naturally occurring water quality problems such as boron, mercury, and arsenic.
- **Policy CO-5.23** Support efforts to meet applicable water quality standards for all surface and groundwater resources.

Yolo County Flood Control and Water Conservation District

The California Legislature created the Yolo County Flood Control and Water Conservation District (District) in 1951 as an independent Special District. The District covers 195,000 acres in Yolo County, including Woodland. The purpose of the District is to seek and manage new water sources. Currently, the District manages a small hydroelectric plant, two reservoirs, and three dams.

Water Resources Association of Yolo County

The Water Resources Association of Yolo County is a consortium of jurisdictions that helps coordinate and facilitate strategies to address water issues in Yolo County. Member agencies include the City of Woodland and the County of Yolo. The specific purposes of the Water Resources Association are to "[s]upport the efforts of its members to obtain, protect and maintain a high quality water supply adequate for the present and future needs of

Yolo County; educate its members, governmental authorities and the public regarding all aspects of water use and water rights; and provide a forum for the exchange of information among water purveyors" (Yolo County WRA 2016).

Integrated Regional Water Management

The Integrated Regional Water Management (IRWM) program is a local water resources management approach aimed at securing long-term water supply reliability within California by first recognizing the inter-connectivity of water supplies and the environment, and then pursuing projects yielding multiple benefits for water supplies, water quality, and natural resources. The Integrated Regional Water Management Planning Act of 2002 (SB 1672, Chapter 767, Statutes of 2002) authorized local public agencies to form Regional Water Management Groups (RWMG) and create regional plans. The Water Resources Association is a member of the Westside Sacramento RWMG, along with agencies in the counties of Colusa, Lake, Napa, and Solano. The Westside Sacramento RWMG plan aims to coordinate efforts across agencies to manage water resources efficiently and to pursue state and federal project funding.

Wastewater

Yolo County 2030 General Plan

The Public Facilities and Services Element of the Yolo County 2030 General Plan provides the following policies and actions that support the goal of providing efficient and sustainable solutions for wastewater collection, treatment, and disposal.

- **GOAL PF-1 Wastewater Management.** Provide efficient and sustainable solutions for wastewater collection, treatment, and disposal.
- **Policy PF-1.1** Require discretionary projects to demonstrate adequate long-term wastewater collection, treatment, and disposal capacity, including full funding for land acquisition, facility design and construction, and long-term operations and maintenance for needed wastewater treatment and disposal facilities. Where such funding is dependent upon a community vote, approval of the project by the County shall be contingent upon a successful voting outcome.
- **Policy PF-1.2** Promote innovative and efficient options for sewage and septic treatment that are appropriate for the type of development to be served, existing facilities available, and administrative alternatives.
- **Policy PF-1.3** Ensure that nitrates and other pollutants of concern entering the groundwater from septic disposal systems will not significantly impair groundwater quality.
- **Policy PF-1.4** Encourage the use of small package wastewater systems to facilitate clustering of homes and preservation of agricultural land.
- **Policy PF-1.5** Encourage the development or expansion of community wastewater treatment systems in areas with widespread septic system problems.
- **Policy PF-1.7** Require wastewater treatment facilities that remove or destroy pathogens while minimizing or eliminating contaminated discharge.

Stormwater

Yolo County 2030 General Plan

The Public Facilities and Services Element of the Yolo County 2030 General Plan provides the following policies and actions that support the goal of providing efficient and sustainable stormwater management to reduce local flooding in existing and planned land uses.

- **Goal PF-2 Stormwater Management.** Provide efficient and sustainable stormwater management to reduce local flooding in existing and planned land uses.
- **Policy PF-2.1** Improve stormwater runoff quality and reduce impacts to groundwater and surface water resources.
- **Policy PF-2.2** Construct on-site stormwater detention facilities that are designed so that runoff from the 100-year storm event does not: (1) result in an increase in peak release rate; (2) result in a time decrease associated with the time of concentration; (3) contribute to adjacent flood problems; and/or (4) significantly alter the direction of runoff.
- **Policy PF-2.3** Design new stormwater facilities to enhance recreational, habitat, and/or aesthetic benefits, as well as to integrate with existing parks and open space features.
- **Policy PF-2.4** Encourage sustainable practices for stormwater management that provide for groundwater recharge and/or improve the quality of runoff through biological filtering and environmental restoration.
- **Policy PF-2.5** Incorporate new ways to pave streets, parking lots, sidewalks, and trails with pervious surfaces that allow for water to penetrate the surface.

Solid Waste Collection and Disposal

Yolo County 2030 General Plan

The Public Facilities and Services Element of the Yolo County 2030 General Plan provides the following policies and actions that support the goal of providing safe, cost-efficient, and environmentally responsible solid waste management.

- **Goal PF-9 Solid Waste and Recycling.** Provide safe, cost-efficient, and environmentally responsible solid waste management.
- **Policy PF-9.1** Meet or exceed State waste diversion requirements.
- **Policy PF-9.2** Manage property to ensure adequate landfill space for existing and planned land uses.
- **Policy PF-9.3** Employ innovative strategies to ensure efficient and cost-effective solid waste and other discarded materials collection, disposal, transfer and processing.
- **Policy PF-9.5** Promote technologies, including biomass or biofuels, which allow the use of solid waste as an alternative energy source.

- **Policy PF-9.8** Require salvage, reuse or recycling of construction and demolition materials and debris at all construction sites.
- **Policy PF-9.9** Encourage use of salvaged and recycled materials in construction.
- **Policy PF-9.10** Work with private solid waste handlers to expand collection and recycling services within the unincorporated area.
- **Policy PF-9.11** Expand opportunities for energy and/or fuel production resulting from the solid waste disposal process.

Yolo County Solid Waste Local Enforcement Agency

The Yolo County Environmental Health Services Division is the solid waste Local Enforcement Agency (LEA) responsible for ensuring the proper operation and closure of solid waste facilities and disposal sites in Yolo County. The LEA also provides solid waste inspection and permitting services to the various jurisdictions within the county, including the regulation of storage and transportation of solid wastes.

Yolo County Integrated Waste Management Plan

The Yolo County 1995 CIWMP fulfills one of the requirements of the California Integrated Waste Management Act (AB 939). There are six jurisdictional areas included in the Yolo CIWMP: Davis, West Sacramento, Winters, Woodland, UC Davis, and unincorporated areas. The CIWMP consists of a Countywide Siting Element, which was amended in August 2012; a Countywide Summary Plan; and three elements from each jurisdiction: (1) a Source Reduction and Recycling Element, which analyzes the local waste stream to determine where to focus diversion efforts, and presents diversion programs and funding; (2) a Household Hazardous Waste Element (HHWE), which includes programs to encourage safe management of household toxics waste and provides a framework for recycling, treatment, and proper disposal; and (3) a Non-Disposal Facility Element (NDFE), which lists existing and planned facilities.

4.14.3.4 LOCAL

Water

City of Woodland 2002 General Plan

The Public Facilities and Services Element of the City of Woodland's 2002 General Plan addresses water supply and delivery. The following goals and policies establish the framework for the provision of a safe, reliable, and adequate water supply to meet the demand generated by existing and future development in Woodland. The policies also promote water conservation and reuse.

- **Goal 4.C.** To maintain a safe, reliable, and sufficient water supply that will meet the future needs of the city.
- **Policy 4.C.1.** The City shall protect the groundwater basin from overdraft due to City pumpage. The City shall study the groundwater basin and the feasibility of using surface water supplies (e.g., obtaining water rights, transfers, or exchanges) for domestic and/or agricultural use within the Woodland area. Water

management programs such as conjunctive use and recharge programs will also be considered. The City shall use this information to determine the most appropriate long-term water supply to serve Woodland.

- **Policy 4.C.2.** The City shall study groundwater basin quality and seek to maintain or enhance the quality of the basin supply or of delivered potable water or both.

- **Policy 4.C.3.** The City shall promote efficient water use by: a. Requiring water efficient building design and pumping devices in new construction that comply with State and Federal laws; b. Encouraging the use of water efficient landscaping; and c. Encouraging the retrofitting of existing development with water efficient plumbing devices. Other measures will be adopted, as appropriate, based on the findings of the studies in Policy 4.C.1.

- **Policy 4.C.4.** The City shall investigate the use of reclaimed wastewater to offset the demand for new water supplies.

- **Policy 4.C.5.** The City shall complete an assessment of its water source(s) (quality, well head protections, etc.) as required by current State law.

- **Policy 4.C.6.** The City shall work closely with Yolo County and other public agencies in countywide watershed management efforts. Based upon these efforts, the City will develop a water transfer policy. In the interim, the City will oppose long-term water transfers from Yolo County.

- **Policy 4.C.7.** The City shall work with other agencies to promote efficient water use countywide.

- **Policy 4.C.9.** The City shall approve new development only where an adequate City water supply can be delivered and an adequate funding source is in place to finance system development and maintenance.

City of Woodland 2011 Groundwater Management Plan

Woodland's Groundwater Management Plan was adopted in 2011 to be administered by the Director of Public Works with the guidance of the Water Resources Association County Technical Committee. The purpose of the Groundwater Management Plan is to (1) define the City's groundwater management goal; (2) set "Basin Management Objectives" relevant to the area within the City's jurisdiction; (3) systematically collect data on groundwater and aquifers; and 4) establish strategies and actions for improved management (City of Woodland 2011). A focus of the Groundwater Management Plan is to work collaboratively with other entities in the Yolo sub-basin of the Sacramento Valley Groundwater Basin.

City of Woodland 2015 Urban Water Management Plan

The City UWMP is updated every five years and describes the current and future water uses, sources of supply and its reliability, and existing and planned conservation measures. The 2015 UWMP was adopted by City Council in June 2016. The UWMP serves as the City's Water Supply Assessment for this General Plan Update, as required under SB 610.

City of Woodland Municipal Code Chapter 23C, Article VII

The City of Woodland's water system is regulated by Municipal Code Chapter 23C, Article VII, entitled Water Service. It requires all buildings to be connected to city water service, unless the Public Works Director has determined it is impractical to connect to the city's water system. It authorizes the City Council to establish the rates for use of the city water system and the cost of water taps, meters, and installation for water service to any building or construction project. Article VII also includes enforcement measures and general prohibitions.

City of Woodland Municipal Code Chapter 23C, Article VIII

The City of Woodland Municipal Code Chapter 23C, Article VIII concerns the construction, maintenance, and abandonment of wells. It regulates those activities not already regulated by the State Regional Water Quality Control Board, Yolo County Board of Supervisors, or other State or county entities, except where more stringent controls are required than provided by those agencies; it also establishes and maintains standards that will assure protection of the city's ground waters and maintain a safe potable water supply for the public.

City of Woodland Municipal Code Chapter 23C, Article IX

The City of Woodland Municipal Code Chapter 23C, Article IX establishes regulations concerning cross-connection control and backflow prevention to protect the public potable water supply.

City of Woodland Municipal Code Chapter 23C, Article X

The City of Woodland Municipal Code Chapter 23C, Article X establishes minimum requirements and standards for water meters in Woodland.

City of Woodland Municipal Code Chapter 23C, Article XI

The City of Woodland Municipal Code Chapter 23C, Article XI regulates water conservation and water shortages in Woodland, to ensure compliance with federal, State, and local requirements.

Wastewater

City of Woodland 2002 General Plan

The 2002 General Plan for the City of Woodland addresses wastewater collection, treatment, and disposal services in the Public Facilities and Services Element. The following goals and policies provide for expansion and extension of the wastewater system to serve new development. It encourages water conservation to reduce the amount of wastewater that must be treated, and it requires pretreatment of industrial wastewater to lessen the burden on the City's treatment plant.

- **Goal 4.D.** To ensure adequate wastewater collection and treatment and the safe disposal of wastes.
- **Policy 4.D.1.** The City shall promote reduced wastewater system demand through efficient water use by: a. Requiring water-conserving design and equipment in new construction; b. Encouraging retrofitting with water-conserving devices; and c. Designing, constructing, and repairing wastewater systems to minimize inflow and infiltration to the extent economically feasible.

- **Policy 4.D.2.** The City shall implement and maintain an industrial pretreatment program in accordance with state and federal requirements.

- **Policy 4.D.3.** The City shall require all sewage generators within its service area to connect to the City's system, except those areas where on-site treatment and disposal facilities are deemed appropriate.

- **Policy 4.D.4.** The City shall require that collection systems be designed on a gravity-flow basis except where a site-specific engineering analysis demonstrates the long-term cost-effectiveness of pumped facilities.

- **Policy 4.D.5.** The City shall review development proposals in the vicinity of the wastewater treatment plant site to ensure their safety and compatibility.

- **Policy 4.D.6.** The City shall investigate, plan, develop, and implement options for the reuse of treated wastewater.

- **Policy 4.D.7.** The City shall investigate potential hazards and nuisance potential associated with operations at the wastewater treatment plant and shall identify any necessary buffering requirements or operational changes at the plant that may be necessary.

City of Woodland Municipal Code Chapter 23, Article VI

The City of Woodland's public sewer system is regulated by Municipal Code Chapter 23C, Article VI, entitled Sewage Service. Article VI requires the use of public sewers for all buildings in the city, prohibits unsanitary deposits and sewer overflow, and includes general prohibitions.

City of Woodland Sanitary Sewer System Management Plan

In response to the SWRCB 2006 WDR Order, the City of Woodland prepared a Sanitary Sewer System Management Plan, which the City Council certified on June 16, 2009. The plan was subsequently submitted to the SWRCB, and the requirements of the report were implemented by staff. The Sanitary Sewer System Management Plan was re-certified in 2015.

Stormwater

City of Woodland 2002 General Plan

The Public Facilities and Services Element of the 2002 General Plan addresses collection, conveyance, detention, and pumping facilities in the City's storm drainage system. The following policies support the goal to collect and dispose of stormwater in a manner that minimizes inconvenience to the public, minimizes potential water-related damage, and enhances the environment and complies with State and federal laws.

- **Goal 4.E.** To collect and dispose of stormwater in a manner that minimizes inconvenience to the public, minimizes potential water-related damage, and enhances the environment and complies with state and federal laws.

- **Policy 4.E.1.** The City shall require development to provide for the overland flow of stormwaters exceeding the City's standard design capacity of the storm drainage system. These overland flow waters shall be

conveyed over public streets where possible and shall be at least one foot below building pad elevations and contains provisions for removal of silt and other contaminants.

- **Policy 4.E.2.** The City shall encourage project designs that minimize drainage concentrations and impervious coverage.
- **Policy 4.E.3.** The City shall prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of storm drainage facilities.
- **Policy 4.E.4.** The City shall require projects that have impacts on the quantity and quality of surface water runoff to incorporate mitigation measures for impacts related to urban runoff and/or pay fees in lieu of the support of City-sponsored projects for this purpose.
- **Policy 4.E.5.** Future drainage system requirements shall comply with applicable state and federal pollutant discharge requirements.
- **Policy 4.E.6.** The City shall seek to minimize operational complexities and maintenance requirements of the storm drainage system.
- **Policy 4.E.7.** The City shall allow stormwater detention facilities to mitigate drainage impacts and reduce storm drainage system costs. To the extent practical, stormwater detention facilities should be designed for multiple purposes, including recreational and/or stormwater quality improvement.
- **Policy 4.E.8.** The City shall use stormwater of adequate quality to replenish local groundwater basins, restore wetlands and riparian habitat, and irrigate agricultural lands to the maximum extent feasible in accordance with state and federal laws.

Storm Drainage Facilities Master Plan

Woodland's Storm Drainage Facilities Master Plan was adopted in December 1999 and updated in 2006. It prepares for implementation of the Woodland General Plan as of 2002, including the Woodland Park Specific Plan Area in the northeast portion of the Planning Area and the Spring Lake Specific Plan Area in the southern portion. An update to the Storm Drainage Facilities Master Plan is currently underway for the south portion of the Planning Area including Spring Lake Specific Plan Area and Master Plan Remainder Area.

Because they significantly affect the design, operation, and/or maintenance of storm drainage facilities, the Storm Drainage Facilities Master Plan gives special consideration to the Cache Creek Settling Basin, the Lower Cache Creek Overflow Barrier Project, the Reclamation District No. 2035 Highline Ditch, the Beamer/Kentucky Detention Ponds, the City-County Drainage Agreement, the Yolo Shortline Railroad Trestle, the East Main Pump Station (EMPS) and North Canal/South Canal Connections, and water quality.

The Storm Drainage Facilities Master Plan includes: a new standard for sizing retention storage; additional attention to overland runoff and street flooding; new standards for cast-in-place concrete pipe; new hydrologic and hydraulic modeling of runoff; and new evaluations of long-duration storm events. It also includes cost estimates for construction, land acquisition, and operations and maintenance, as well as an implementation program.

City of Woodland Municipal Code Chapter 23C, Article V

The City's Municipal Code Chapter 23C Article V, entitled Storm Drain Services, establishes development fees for the acquisition, construction, operation, maintenance, and repair of storm drainages.

City of Woodland Municipal Code Chapter 23D

Chapter 23D, entitled Urban Storm Water Quality Management and Discharge Control, ensures activities in the City are consistent with the State Phase II MS4 Permit, the Clean Water Act, and the Porter-Cologne Water Quality Control Act. It prohibits certain discharges and connections; requires best management practices; sets standards for construction, industrial, commercial, and development activities; and establishes the right to inspection and enforcement.

City of Woodland Post-Construction Standards Plan

The City of Woodland's Post-Construction Standards Plan, adopted in 2015, guides project proponents and municipal plan checkers through the various site design requirements of the Phase II Municipal Separate Storm Water Sewer System (MS4) Permit. It describes which types of projects apply, the submittal and review process, and requirements for small projects and for regulated projects. It also describes operation and maintenance of post-construction measures.

Solid Waste Collection and Disposal

City of Woodland 2002 General Plan

The Public Facilities and Services Element of the 2002 General Plan addresses solid waste disposal and collection services. The following goals and policies seek to reduce the amount of waste produced through source reduction, reuse, and recycling, and to ensure safe disposal of waste.

- **Goal 4.G.** To ensure the safe and efficient disposal or recycling of solid waste generated in Woodland.
- **4.G.1.** The City shall require waste collection in all new development.
- **4.G.2.** The City shall promote maximum use of solid waste source reduction, recycling, composting, and environmentally-safe transformation of wastes.
- **4.G.3.** The City shall require that all new development complies with applicable provisions of the City of Woodland Source Reduction and Recycling Element and the Yolo County Integrated Waste Management Plan.
- **4.G.4.** The City shall encourage the development of regional and community-based recycling facilities and secondary resource businesses in heavy commercial and industrial areas.
- **4.G.5.** The City shall encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.
- **4.G.6.** The City shall work with Yolo County to employ methods to lengthen the life of the County landfill.

City of Woodland Municipal Code Chapter 23C Articles IV

The City's Municipal Code Chapter 23C, Article IV, entitled Garbage and Yard Refuse Service, outlines policies and regulations regarding solid waste receptacles and disposal services.

City of Woodland Municipal Code Chapter 23C, Article XII

The City's Municipal Code Chapter 23C, Article XII, entitled Recyclable Materials, outlines policies and regulations regarding recyclable materials, to maintain State waste diversion requirements and goals. It requires all residents and commercial generators to make reasonable efforts to separate recyclable materials from other solid waste.

City of Woodland Municipal Code Chapter 23C, Article XIII

The City's Municipal Code Chapter 23C, Article XIII contains regulations related to construction and demolition debris recycling and diversion.

City of Woodland Zoning Ordinance

The City of Woodland Zoning Ordinance establishes the following performance standard for all zones: "Outdoor storage of solid wastes and containers for solid waste, containers, merchandise, or other items or goods awaiting pickup, sale, or other disposition shall be prohibited except where screened to the satisfaction of the Planning Commission or the Zoning Administrator."

City of Woodland Source Reduction and Recycling Element, 1992

The City of Woodland adopted its Source Reduction and Recycling Element in March 1992. It includes components on source reduction, recycling, composting, special waste, education and public information, facility capacity, funding, and integration. As of 2011, Woodland was achieving a rate of 62 percent diversion from the waste stream and working towards a goal of 75 percent by 2020. (City of Woodland 2013)

4.14.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.14.4.1 METHODOLOGY

The analysis for this section addresses impacts associated with public utilities and city infrastructure due to projected growth from implementation of the Proposed Project. Subsequent CEQA review at the project level may be required to determine whether significant environmental effects would result from the construction of water distribution lines, wastewater collection system components, storm drainage conveyance pipes, and any onsite storage or pumping facilities on development sites, or other utilities improvements. Project-level environmental review will occur when proposed development plans are prepared.

4.14.4.2 THRESHOLDS OF SIGNIFICANCE

Implementation of the Proposed Project could have a potentially significant adverse impact if it would:

- Exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board;

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Not have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed;
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Not be served by a landfill with a sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Violate federal, State, or local statutes and regulations related to solid waste.

4.14.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to utilities are discussed in detail below.

4.14.4.4 IMPACT ANALYSIS

IMPACT 4.14-1 Exceed Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board. *Implementation of the Proposed Project would not exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

The potential to exceed wastewater treatment requirements of the Central Valley Regional Water Quality Control Board is associated with potential increases in wastewater effluent and a decrease in quality of wastewater effluent.

Implementation of the Proposed Project would result in new residential, commercial, office, and industrial development in the Planning Area. This growth is likely to result in greater amounts of wastewater effluent. As discussed in Section 4.14.2, Environmental Settings, the projected future hydraulic capacity of the WPCF is about 9.2 mgd for average wastewater flows, which could serve up to 105,000 residents. To increase the biological solids capacity of the WPCF, the City is currently completing a construction project to convert three of the oxidation ditches at the WPCF to the Modified Ludzack-Ettinger (MLE) process, which enhances nitrogen removal in addition to solids capacity. This project, which is anticipated to be complete in fall 2016, will increase the biological solids capacity of the WPCF to serve a residential population of 70,000 (13,300 lb/day). With conversion of a fourth oxidation ditch to MLE, the WPCF can treat up to 19,900 lb/day, which could serve

approximately 105,000 residents. With additional upgrades and modifications to the plant, such as the addition of primary treatment and anaerobic digestion, the WPCF could reach its "practical" limit of 26,000 lb/day. Modifications and upgrades to the plant would be within existing WPCF footprint and will mainly consistent of maintenance of existing equipment and upgrades to meet future regulations and capacity needs. Policies in the 2035 General Plan along with existing local, State, and federal requirements would ensure that the wastewater treatment requirements of the Central Valley Regional Water Quality Board would be met for amount of wastewater effluent.

The quality of the wastewater effluent has historically been a concern due to high EC. The DWWSP is expected to improve the quality of effluent by providing water with low EC content (City of Woodland 2016).

In addition, the City will investigate potential mitigation strategies to the odor associated with WPCF. Additional discussion on odor issues can be found in Section 4.3 of this EIR, "Air Quality."

A detailed discussion of specific future impacts of new development on the wastewater treatment system is beyond the scope of this EIR. The placement of such infrastructure has been considered as a component of the Proposed Project in the other sections of this EIR, such as Section 4.3, "Air Quality" and Section 4.4, "Biological Resources," which analyze the potential for project construction and implementation. Where necessary, these sections include mitigation measures that would reduce or avoid the impacts of developing infrastructure on the physical environment. Impact 4.3-1 in Section 4.3 of this EIR, "Air Quality," addresses air quality impacts associated with construction emissions and proposes mitigation. Section 4.6 of this EIR, "Cultural Resources," addresses the potential for construction activities to result in the discovery of previously unknown cultural resources and proposes mitigation. Impacts 4.11-1 and 4.11-2 in Section 4.11 of this EIR, "Noise and Vibration," address noise impacts associated with construction equipment both on- and off-site.

a. East Alternative Impacts–The East Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

b. South Alternative Impacts–The South Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Detailed above in the Regulatory Framework, existing laws and regulations reduce the potential environmental impact, including at the federal level (Clean Water Act and NPDES permit system) and at the State level (SWRCB's Water Quality Order No. 2006-0003 for Statewide General Waste Discharge Requirements and the California Porter-Cologne Water Quality Control Act).

In addition to State and federal regulations, the Yolo County 2030 General Plan applies to the unincorporated portions of the Planning Area until they are annexed into the city limits. The Yolo County 2030 General Plan includes goals, policies, and implementation actions that reduce the potential environmental impact by ensuring efficient and sustainable solutions for wastewater collection, treatment, and disposal.

Locally, the City of Woodland Municipal Code reduces the potential environmental impact by regulating the sewer system. In response to the SWRCB 2006 WDR Order, the City of Woodland prepared a Sanitary Sewer System Management Plan, which the City Council certified on June 16, 2009. The plan was subsequently submitted to the SWRCB, and the requirements of the report were implemented by staff. The Sanitary Sewer System Management Plan was re-certified in 2015. Additionally, the 2002 General Plan currently includes goals and policies to ensure adequate wastewater collection, treatment, and disposal, which the 2035 General Plan would carry forward.

Proposed Project

The following 2035 General Plan goals and policies and 2035 CAP objectives and actions reduce any potential impacts associated with the Proposed Project.

2035 General Plan

- **Policy 4.C.10 Provide Infrastructure.** Strive to provide necessary major street infrastructure and utility capacities, including broadband internet service, for properly zoned land, consistent with the General Plan, so this land can be efficiently and effectively developed in a timely manner. Ensure the City's public works, public utilities, and capital improvement plans are aligned to support the economic development objectives in the General Plan.

- **Policy 5.F.1 New Development.** Ensure through the development review process that adequate public facilities and services are available to serve new development. Require that new development pay its fair share of the costs of constructing new public utilities; the costs of providing new public services; and the costs of upgrading of all existing facilities it uses, based on the demand for these facilities attributable to the new development. Exceptions may be made when new development generates significant public benefits (e.g., low-income housing, primary-wage-earner employment) and when alternative sources of funding can be obtained to offset foregone revenues.

- **Policy 5.F.2 Fiscal Impact Analysis.** Require preparation of a fiscal impact analysis for all specific plans or significant general plan land use amendments. The analysis should examine the fiscal impacts on the City and other service providers that result from large-scale development. The fiscal analysis should project a positive fiscal impact from new development or include mechanisms to fund projected fiscal deficits; exceptions may be made when new development generates significant public benefits (e.g., low-income housing, primary-wage-earner employment) and when alternative sources of funding can be obtained to offset foregone revenues.

- **Policy 5.F.3 Funding Sources.** Investigate available methods to provide funding for operations and maintenance of public facilities and services, including consideration of Mello-Roos community facilities districts.

- **Policy 5.F.4 Master Plans.** Require Master Plan proposals to include plans for development and financing of public facilities and services.

- **Policy 5.F.5 Major Projects Financing Plan.** Annually review the Major Projects Financing Plan (MPFP) and every five years update the MPFP to ensure the implementation and adequacy of the MPFP Plan.

- **Goal 5.H Wastewater Collection, Treatment, Disposal, and Reuse.** Ensure that adequate wastewater collection, treatment, recycling, and disposal facilities are provided in a timely fashion to serve existing and future needs.

- **Policy 5.H.1 Treatment Capacity and Cost Recovery.** Provide wastewater collection and treatment services to the existing Woodland community. Ensure that increased wastewater treatment facility capacity is available to serve planned urban development within the Planning Area consistent with this General Plan. Accommodate increase in flows and loadings from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law.

- **Policy 5.H.2 Sanitary Sewer Management Plan.** Maintain and periodically update the Sanitary Sewer Management Plan. Use available and "state of the practice" tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand by urban development, and to determine appropriate facility and system needs.

- **Policy 5.H.3 Consider Capacity in Plan Amendments.** Monitor wastewater treatment plant flows and loadings. Consider the effects on wastewater treatment capacity and availability of potable water when evaluating proposed General Plan amendment proposals, community plans, specific plans, and master plans.

- **Policy 5.H.4 Maintenance and Repairs.** Evaluate existing wastewater collection systems and treatment facilities and plan for, fund, and implement necessary repair or enhancement of damaged or antiquated facilities.

- **Policy 5.H.5 CIP Update.** Evaluate Capital Improvement Programs and update them, as appropriate, for the wastewater infrastructure and treatment facility needs to meet the demands of both existing and planned development.

- **Policy 5.H.6 Connection to Sewer System.** Require all sewage generators within its service area to connect to the City's system, except those areas where the City has determined a connection to the City's sewage collection system would be infeasible.

- **Policy 5.H.9 Reduce Demand.** Reduce wastewater system demand through efficient water use by requiring water-conserving design and equipment in new construction; encouraging retrofitting with water-conserving devices; and designing, constructing, and repairing wastewater systems to minimize inflow and infiltration to the extent economically feasible.

- **Policy 5.H.10 Industrial Pretreatment Program.** Continue the industrial pretreatment program in accordance with State and federal requirements.

2035 CAP

- **Municipal Operations Objective 2.** Reduce Emissions from Municipal Electricity Use by 80 percent or More.

- **Municipal Operations Objective 2, Strategy MO-3, Action.** Ensure maximum efficiency of equipment and processes used in water and wastewater systems.

- **Municipal Operations Objective 2, Strategy MO-3, Action.** Reduce reliance on potable water supply by expanding the distribution and use of recycled water (treated wastewater) to industrial uses and landscaped areas.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

In addition to existing regulations at the federal, State, and local levels that reduce the potential environmental impact, 2035 General Plan Goal 5.H ensures that wastewater treatment facilities are provided in a timely fashion to serve existing and future needs. 2035 General Plan Policy 5.H.6 requires all sewage generators within its service area to connect to the City's system, except those areas where the City has determined a connection to the City's sewage collection system would be infeasible. Woodland Municipal Code, Chapter 23C,Article VI requires all buildings to connect to the public sewer system, thus prohibiting the use of individual sewer systems, which are more likely to leak and contaminate water. However, in exceptional circumstances, the Municipal Code allows the City Council to permit continued use of or construction of a septic system, in accordance with the City engineer and county health officer. The Municipal Code also establishes design, construction, and maintenance standards of connections to the public sewer system. Additionally, the CAP supports increased efficiency in the wastewater system.

2035 General Plan Policies 5.F.1, 5.H.1 and 4.C.10 ensure that there would be sufficient public services, including wastewater treatment facility capacity, to serve existing and new development in Woodland. Policies 5.F.2, 5.F.3, 5.F.4, and 5.F.5 address fiscal and funding impacts of new development to ensure there is funding available to support public facilities and services. Policies 5.H.2, 5.H.3, 5.H.4, and 5.H.5 address the need to plan for wastewater needs by requiring updates to the Sanitary Sewer Management Plan, consideration of the wastewater needs in amendments to the adopted General Plan, active planning for maintenance and repairs, and evaluation and updates to the Capital Improvement Program. Policy 5.H.9 requires a reduction in wastewater system demand, and Police 5.H.10 requires continuation of the industrial pretreatment program.

With compliance with existing and future federal, State, and local regulations and implementation of the 2035 General Plan policies, the impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.14-2 **Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects.** *Implementation of the Proposed Project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

As discussed in Impact 4.14-1, implementation of the Proposed Project would result in future residential, commercial, and industrial land uses in the Planning Area, resulting in additional residents and workers. An increase in population and non-residential development would generate additional demand for water and wastewater treatment services over currently established levels. The Proposed Project also allows for a wide variety of uses, which could produce different kinds of wastewater needing different treatment. The exact amount and characteristics of the effluent is unknown. For example, it cannot be determined whether new development under the Proposed Project would require on-site treatment or industrial pre-treatment.

The City of Woodland Public Works Department currently provides municipal water to residents and businesses in the Planning Area. Treated Sacramento River water supplied by the Woodland-Davis Clean Water Agency's Regional Water Treatment Facility (RWTF) is the primary source of drinking water within the Planning Area. Woodland has a dedicated capacity of 18 mgd of supply from the water treatment plant and an additional 2,000,000 gallons of storage and a dedicated 4 mgd pump to supplement this supply at the RWTF. The City has an additional 3,500,000 gallons of storage and another 4 mgd of pumping capacity at the ground level tank. The City has planned for the use of ASR wells to store treated surface water from excess supply in winter months to supplement supply in peak demand summer months and to prepare for future drought conditions. One ASR well was completed in 2013 and two additional wells are planned to complete construction in early 2017. Ultimately, five ASR wells are planned for the system.

Groundwater is a backup to the surface water supply and will supplement surface water during times of high demand or reduced surface water availability.

The City of Woodland has supported efforts to reduce water demand through conservation and other measures, which will lessen the demand for new water treatment facilities.

Water supply and demand is discussed in Section 4.14.2, Environmental Settings. Based on the supply of surface water and groundwater, the City is expected to successfully meet water demand through 2035, as shown in the summary below in Table 4.14-3.

Table 4.14-3. City of Woodland Supply and Demand Comparison—Normal Year, af/yr					
Supply	**2015**	**2020**	**2025**	**2030**	**2035**
Supply Totals (from Table 4.14-1)	8,650	20,960	20,960	20,960	25,450
Demand Totals (from Table 4.14-2)	8,650	15,913	17,026	18,217	19,491
Difference	0	5,047	3,934	2,743	4,617

Notes:

[1] Supply totals for normal year projections reflect anticipated surface water and recycled water supply sources.

Source: City of Woodland 2016.

To increase capacity on existing transmission pipelines to accommodate infill development, the City plans to construct new transmission pipelines to convey surface water supply into Downtown (Development Scenarios Analysis Report 2015). Additional planned improvements include two additional ASR wells to be constructed after 2017; new wellhead treatment systems for any new native groundwater wells, to conform with the State's hexavalent chromium regulations; and replacement of aging water mains.

In terms of wastewater treatment, the hydraulic capacity of the City's WPCF is expected to exceed the city's projected needs through 2035. As discussed in Section 4.14.2, Environmental Setting, the wastewater treatment system's capacity in the sewer system in Downtown Woodland is constrained. The City is working to increase capacity, and policies in the Proposed Project minimize potential impact by requiring adequate public facilities and services for all new and existing development.

The construction and operation of new or expanded treatment facilities to serve new development under the Proposed Project could have the potential to cause secondary environmental effects to air quality, noise, cultural resources, biological resources, hydrology, and water quality or other environmental issues. A detailed discussion of specific future impacts of new development on the wastewater treatment system is beyond the scope of this EIR. The placement of such infrastructure has been considered as a component of the Proposed Project in the other sections of this EIR, such as Section 4.3, "Air Quality" and Section 4.4, "Biological Resources," which analyze the potential for project construction and implementation. Where necessary, these sections include mitigation measures that would reduce or avoid the impacts of developing infrastructure on the physical environment. Impact 4.3-1 in Section 4.3 of this EIR, "Air Quality," addresses air quality impacts associated with construction emissions and proposes mitigation. Section 4.6 of this EIR, "Cultural Resources," addresses the potential for construction activities to result in the discovery of previously unknown cultural resources and proposes mitigation. Impacts 4.11-1 and 4.11-2 in Section 4.11 of this EIR, "Noise and Vibration," address noise impacts associated with construction equipment both on- and off-site.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing laws and regulations reducing the potential environmental impact with respect to wastewater are given above for Impact 4.14-1.

Detailed above in the Regulatory Framework, existing laws and regulations reduce the potential environmental impact with respect to water, including at the federal level (Clean Water Act and NPDES permit system) and at the State level (DWR's California State Water Project and California Water Plan, the Porter-Cologne Water Quality Control Act, the Urban Water Management Planning Act, SB 610 and SB 221 codified in the Water Code, the Model Water Efficient Landscape Ordinance, the California Emergency Gray Water Regulations, SBx7-7, the Sustainable Groundwater Management Act, and the Division of Drinking Water's Drinking Water Program).

In addition to State and federal regulations, the Yolo County 2030 General Plan applies to the unincorporated portions of the Planning Area until they are annexed into the city limits. The Yolo County 2030 General Plan includes policies and actions that support the goal of ensuring an abundant, safe, and sustainable water supply to support the needs of existing and future generations. The Yolo County Flood Control and Water Conservation District seeks and manages new water sources. The Water Resources Association of Yolo County support the efforts of its members to obtain, protect, and maintain a high quality water supply adequate for the present and future needs of Yolo County; educate its members, governmental authorities and the public regarding all aspects of water use and water rights; and provide a forum for the exchange of information among water purveyors. Also detailed in the regulatory framework is the IRWM program.

Locally, the City of Woodland Municipal Code reduces the potential environmental impact by regulating the water service connection system; the construction, maintenance, and abandonment of wells; cross-connection control and backflow; water meters; and water conservation. The 2002 General Plan currently includes goals and policies to ensure adequate water supply management, which the 2035 General Plan would carry forward. Woodland's GMP and UWMP are also in place to reduce environmental impacts.

Proposed Project

The 2035 General Plan and the 2035 CAP include goals and policies to limit the potential environmental effects of new or expanded water or wastewater treatment facilities.

2035 General Plan

The 2035 General Plan includes a number of goals and policies related to wastewater treatment facilities, which are discussed in Impact 4.14-1. These policies, in addition to the goals, policies, and implementation programs listed below concerning potable water, limit the possible environmental effects of new or expanded water or wastewater treatment facilities.

- **Goal 5.G Safe, Reliable, and Sufficient Potable Water.** Maintain a safe, reliable, and sufficient potable water supply and delivery system that meets the needs of the city.

- **Policy 5.G.1 Potable Water Supply and Cost Recovery.** Provide potable water to the existing Woodland community. Ensure that potable water capacity (including surface water treatment capacity and Aquifer Storage and Recovery well capacity) is available to serve planned urban development within the planning area consistent with the General Plan. Accommodate increase in water demand from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law. Remain in compliance with existing and new water quality regulations.

- **Policy 5.G.2 Water Supply Assessment.** Require preparation of a Water Supply Assessment for significant projects consistent with State law.

- **Policy 5.G.3 Connection to Water System.** Require all potable water users within the City's service area to connect to the City's system, except those areas where the City has determined a connection to the City's potable water system would be infeasible.

- **Policy 5.G.4 Water Management Plans.** Maintain and every five years update the Urban Water Management Plan and the Groundwater Management Plan. Develop and maintain the Groundwater Sustainability Plan in conjunction with the Yolo Sustainable Groundwater Management Plan. Use available and "state of the practice" tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.

- **Policy 5.G.5 Recycled Water.** Expand the recycled water system as feasible and in accordance with a Recycled Water System Master Plan, which should provide an evaluation of potential recycled water uses, facilities planning, distribution service areas, recommended recycled water system, financial modeling, implementation strategies, and the feasibility of forming a recycled water utility.

- **Policy 5.G.6 Conditions of Approval.** Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy and that an adequate funding source is in place to finance system development and maintenance.

- **Policy 5.G.7 Maintenance and Repairs.** Evaluate existing water production and distribution systems on an ongoing basis and plan for, fund, and implement necessary repair or enhancement of damaged or antiquated facilities, including wells and storage tanks.

- **Policy 5.G.8 CIP Update.** Evaluate Capital Improvement Programs and update them, as appropriate, for the water infrastructure needs to meet the demands of both existing and planned development consistent with the General Plan.

- **Policy 5.G.9 Regional Partnerships.** Partner with Yolo County, WDCWA, the City of Davis, and other public agencies in countywide watershed management efforts and water efficiency and conservation programs and projects, such as the Integrated Regional Water Management Plan.

- **Implementation Program 5.6.** Update the Urban Water Management Plan and the Groundwater Management Plan every five years.

- **Implementation Program 5.8.** Update the Municipal Code and development procedures for development project approval as needed to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy and that an adequate funding source is in place to finance system development and maintenance.

- **Implementation Program 5.9.** Evaluate and update Capital Improvement Programs for the water and wastewater infrastructure needs to meet the demands of both existing and planned development consistent with the General Plan.

- **Policy 7.A.1 Surface Water Project.** Continue to cooperate with the City of Davis and UC Davis to operate the Surface Water Project in order to balance the groundwater supply and protect against aquifer overdrafts and water quality degradation.

- **Policy 7.A.5 Landscape Water Conservation Standards.** Review and update the City's landscaping regulations as needed to ensure they effectively address the efficient use of water in landscaping.

2035 CAP

In addition to Municipal Operations Objective 2, which is discussed under Impact 4.14-1, the CAP includes the following objectives and actions to promote water conservation.

- **Water and Solid Waste Objective 1:** Reduce Per Capita Water Demand.

- **Water and Solid Waste Objective 1, Strategy W/W-1, Action.** Continue to promote water conservation through targeted leak detection assistance, education on indoor water-conserving devices and practices, landscape water reduction guidance, web and printed materials, and workshops.

- **Water and Solid Waste Objective 1, Strategy W/W-1, Action.** Provide information on water use patterns and comparative water use in utility bills to help water users understand consumption patterns and adjust water use.

- **Water and Solid Waste Objective 1, Strategy W/W-1, Action.** Encourage the creation of voluntary programs through public-private partnerships in which trained personnel perform home visits and implement a checklist of free or low-cost energy efficiency measures, including installing low-flow showerheads and adjusting thermostats on hot water heaters, for low-income residents.

- **Water and Solid Waste Objective 1, Strategy W/W-1, Action.** Continue to provide rebates for low flow fixtures and other indoor and outdoor water-saving devices and to promote rebates and incentives provided by PG&E and others.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Policies listed under Impact 4.14-1 reduce demand for wastewater facilities and ensure adequate wastewater treatment facilities are in place before development occurs. Other 2035 General Plan goals and policies strive to reduce water use and ensure water system facilities are provided. Goal 5.G is to provide adequate potable water supply and delivery system to meet the needs of the city. 2035 General Plan Policy 5.G.1 directs the City to provide an adequate water supply, while Policy 5.G.3 requires connection to the City's water system, unless the City has determined a connection to the City's potable water system would be infeasible. Policy 5.G.2 requires preparation of a Water Supply Assessment for significant projects. Policy 5.G.4 requires periodic updates to the UWMP and the Groundwater Management Plan and is implemented by Implementation Program 5.6. Policy 5.G.6 requires that water production and supply facilities are in place as a condition of development approval, and is implemented by Implementation Program 5.8. Updates to the Capital Improvement Program to ensure delivery of necessary water infrastructure are supported by Policy 5.G.8 and Implementation Program 5.9. Policies 5.G.5, 5.G.7, 5.G.9, and 7.A.5 reduce the demand on potable water production and delivery systems by requiring the expansion of the recycled water system, maintenance of existing facilities, coordination with regional partners to improve water efficiency and conservation, and updated landscaping regulations. Policy 7.A.1 requires the City to continue to cooperate with partners on the Surface Water Project to maintain its surface water supply. Policy 7.A.5 encourages efficient use of water in landscaping. The CAP sets an Objective to support reduced water demand, which is supported by a number of Actions.

With compliance with existing and future local, State, and federal regulations and the Proposed Project goals and policies and the CAP objective, the potential impact will be reduced.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.14-3 Impacts Related to Construction or Expansion of Stormwater Facilities. *Implementation of the Proposed Project would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Certain locations in Woodland, including Browns Corner and West Street, have experienced street flooding, as described in the Environmental Setting section. New or expanded stormwater drainage infrastructure is needed in those locations.

In addition, as discussed in Impact 4.14-1, implementation of the 2035 General Plan would result in future residential, commercial, and industrial land uses in the Planning Area, resulting in additional population. Development under the Proposed Project would allow for the conversion of undeveloped land to new urban uses. In these new growth areas, new infrastructure would be needed to accommodate infiltration of stormwater or to convey stormwater to detention basins to prevent flooding. In addition, implementation of the Proposed Project would result in infill development in existing developed areas that would generate increased storm water volumes in portions of Woodland. Implementation of the Proposed Project would require construction and expansion of stormwater drainage facilities.

Construction of new stormwater infrastructure could have adverse effects on the physical environment; however, the required improvements would occur within rights-of-way and other already disturbed areas within the development footprint of the proposed 2035 General Plan, and would only occur in conjunction with construction of other infrastructure. A discussion of project-specific future impacts and associated mitigation measures for new storm water drainage facilities or expansion projects is beyond the scope of this EIR. Any future stormwater drainage projects in the city would be required to conduct environmental review pursuant to CEQA prior to approval.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Detailed above in the Regulatory Framework, existing laws and regulations reduce the potential environmental impact, including at the federal level (Nonpoint Source Pollution Control Program Plan and NPDES permit system) and at the State level (MS4 permit system for small municipal systems).

In addition to State and federal regulations, the Yolo County 2030 General Plan applies to the unincorporated portions of the Planning Area until they are annexed into the city limits. The Yolo County 2030 General Plan includes policies and actions that support the goal of providing efficient and sustainable stormwater management to reduce local flooding in existing and planned land uses.

Locally, the City of Woodland Municipal Code reduces the potential environmental impact by regulating storm drain services, discharges, and connections. Additionally, the 2002 General Plan currently includes goals and policies to ensure adequate stormwater management, which the 2035 General Plan would carry forward. Woodland also established its Storm Drainage Facilities Master Plan and Post-Construction Standards Plan to reduce potential environmental impact.

Proposed Project

2035 General Plan

The 2035 General Plan Goals and Policies discussed in Impact 4.14-1, in addition to the goals, policies, and implementation programs listed below, lessen any potential environmental effects of construction or expansion of stormwater drainage facilities.

- **Goal 5.I Stormwater Management.** Maintain the City's storm drainage system and promote best management practices to protect from flooding, enhance water quality, prevent infrastructure deterioration, and comply with State and federal laws.

- **Policy 5.I.1 Storm Drainage System and Cost Recovery.** Maintain and improve the storm drainage system for the existing Woodland community. Ensure that increased storm drainage system capacity is available to serve planned urban development within the Planning Area consistent with this General Plan. Accommodate increase in flows and loadings from the existing community with the capital costs and benefits allocated equitably and fairly between existing users and new users, as authorized by law.

- **Policy 5.I.2 Storm Drainage Facilities Master Plan.** Update the Storm Drainage Facilities Master Plan as needed to plan for and direct the collection, repurposing, and/or disposal of stormwater and to provide site-appropriate solutions that protect surface water quality in the Planning Area waterways.

- **Policy 5.I.3 Overland Flow Requirements in New Development.** Require development to provide for the overland flow of stormwater meeting or exceeding the City's standard design capacity of the storm drainage system. Overland flow waters should be conveyed over public streets where possible and should be at least one foot below building pad elevations and contain provisions for removal of silt and other contaminants.

- **Policy 5.I.4 Low Impact Development.** Require new development and redevelopment projects to incorporate site design and low impact development runoff requirements, in accordance with the Municipal Code. Such features may include, but are not limited to:

    - Canopy trees or shrubs to absorb rainwater;

    - Grading that lengthens flow paths over permeable surfaces and increases runoff travel time to reduce the peak hour flow rate;

    - Partially removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;

    - Use of permeable paving in parking lots and other areas characterized by significant impervious surfaces;

    - On-site stormwater detention, use of bioswales and bioretention basins to facilitate infiltration; and

    - Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

- **Policy 5.I.5 Prohibiting Grading Activities in Rainy Season.** Prohibit grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of storm drainage facilities.

- **Policy 5.I.6 Adequate Financing for Stormwater Management.** Adequately finance stormwater management while adhering to strict accountability, transparency, and ratepayer protections.

- **Policy 5.I.7 Stormwater Detention Facilities.** Use stormwater detention facilities to mitigate drainage impacts and reduce storm drainage system costs. To the extent practical, design stormwater detention facilities for multiple purposes, including recreational use in dry conditions and/or stormwater quality improvement.

- **Policy 5.I.8 Reuse of Stormwater.** Allow for the reuse of stormwater of adequate quality to the maximum extent feasible in accordance with State and federal laws.

- **Implementation Program 5.11.** Review and update the Storm Drainage Facilities Master Plan as needed to meet the demands of both existing and planned development consistent with the General Plan.

2035 CAP

Discussed under Impact 4.14-1, the CAP includes Objective 2 under Municipal Operations, which strives to reduce emissions from municipal electricity use by 80 percent or more. It includes the following actions to reduce the future need for increased stormwater pumping.

- **Municipal Operations Objective 2, Strategy MO/3, Action.** Reduce reliance on potable water supply by expanding the distribution and use of recycled water (treated wastewater) to industrial uses and landscaped areas.

- **Municipal Operations Objective 2, Strategy MO/3, Action.** Require development site designs that reduce stormwater runoff through the use of retention basins and LID practices, including tree planting, bioswales, and permeable pavement where appropriate, to reduce the future need for increased stormwater pumping.

- **Municipal Operations Objective 2, Strategy MO/3, Action.** Optimize efficiency of irrigation systems for parks and other public landscaped areas.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The 2035 General Plan includes policies to reduce the demand for stormwater facilities and requires mitigation of impacts from projects. Policy 5.I.4 in the 2035 General Plan reduces demand for new stormwater drain capacity by requiring new development to incorporate low impact development features such as canopy trees and permeable paving. In addition, Policies 5.I.1, 5.I.3, 5.I.5, 5.I.7, 5.I.8, and 5.I.9 set standards for new storm drainage, the use of stormwater, and stormwater detention facilities. Policy 5.I.6 requires adequate financing of

stormwater management. Supported by Implementation Program 5.11, Policy 5.I.2 ensures that Woodland's Storm Drainage Facilities Master Plan is updated as needed. The CAP also includes an action under Municipal Operations Objective 2 to reduce the need for increased stormwater pumping and reduce stormwater runoff.

With compliance with existing and future local, State, and federal regulations and implementation of the 2035 General Plan policies, the impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.14-4 Water Supply Impacts. *Implementation of the Proposed Project would not result in having insufficient water supplies available to serve the project from existing entitlements and resources, nor are new or expanded entitlements needed. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

As discussed in Impact 4.14-1, implementation of the Proposed Project would result in future residential, commercial, and industrial land uses in the Planning Area, resulting in additional population, jobs, and changes in land uses. The East and South Alternatives plan for accommodate approximately 19,300 new residents, 7,000 new housing units, and approximately 17 million new square feet of non-residential development by 2035.

In Section 4.14.2, Environmental Setting, Table 4.14-1 shows the actual and projected water supplies in Woodland from the City's 2015 Urban Water Management Plan. Groundwater provided the 2015 water supply, but by 2020, most water supply is projected to come from surface water, supplemented by recycled water, and groundwater will serve as supplemental for emergency conditions. The City's surface water availability is projected to grow to a water supply of approximately 24,650 af/yr by 2035.

Section 4.14.2, Environmental Setting, discusses water demand in Table 4.14-2. In 2015, the city's water demand was approximately 2.8 billion gallons per year (7.6 mgd), down from 4.5 billion gallons per year (12.4 mgd) in 2010. Future water demand in Woodland is expected to grow over the planning horizon, and the City's buildout water demand is projected to reach approximately 18,700 af/yr (16.7 mgd) in the year 2035. This water demand projection is based on the City's compliance with its 2009 Water Conservation Act (Senate Bill x7-7 or SBx7-7) per capita water use targets (interim target of 261 gpcd in 2015 and final target of 232 gpcd in 2020 and in subsequent years).

As shown in Table 4.14-3 in Impact 4.14-2, the City's normal year supply is expected to successfully meet water demand through 2035.

The demand and supply in a single dry year, meaning a year with the lowest supply available, is shown in Table 4.14-4. As shown in Table 4.14-5, Woodland's water supply is sufficient to meet demand over multiple dry years, as well. The RWTF is anticipated to be expanded to full capacity and additional ASR wells constructed once the RWTF is expanded in 2035, which increases the anticipated multiple dry year supply to 25,080 af/yr for 2035.

Table 4.14-4. City of Woodland Supply and Demand Comparison—Single Dry Year, af/yr

	2020	2025	2030	2035
Supply Totals	19,990	19,990	19,990	25,080
Demand Totals	15,913	17,026	18,217	19,491
Difference	4,077	2,964	1,773	5,589

Source: City of Woodland 2016.

Table 4.14-5. City of Woodland Supply and Demand Comparison—Multiple Dry Years, af/yr

Year		2020	2025	2030	2035
First Year	Supply Totals	21,360	21,360	21,360	25,080
	Demand Totals	15,913	17,026	18,217	19,491
	Difference	5,447	4,334	3,143	5,589
Second Year	Supply Totals	19,990	19,990	19,990	25,080
	Demand Totals	15,913	17,026	18,217	19,491
	Difference	4,077	2,964	1,773	5,589
Third Year	Supply Totals	20,120	20,120	20,120	25,080
	Demand Totals	15,913	17,026	18,217	19,491
	Difference	4,207	3,094	1,903	5,589

Source: City of Woodland 2016.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing laws and regulations reducing the potential environmental impact with respect to water supply are given above for Impact 4.14-2.

Proposed Project

In addition to policies related to potable water discussed in Impact 4.14-2, the 2035 General Plan includes the following policies and implementation program to further reduce the risk of having insufficient water supplies. The CAP includes Waste and Water Objective 1 towards water conservation, which is also discussed in more detail under Impact 4.14-2, as well as Municipal Operations Objective 2 to reduce reliance on potable water supply, which are discussed in detail under Impact 4.14-1.

- **Goal 7.A Protect Water Supply and Quality.** Protect and enhance the natural quantity and qualities of surface water and groundwater resources in the Woodland area.

- **Policy 7.A.2 Groundwater Management.** Support local efforts to establish a Groundwater Sustainability Agency and adopt a Groundwater Management Plan. Ensure that the City of Woodland and local watershed agencies retain local authority to regulate and manage groundwater.

- **Policy 7.A.3 Watershed Protection.** Support local and regional efforts to protect the Sacramento River, Cache Creek, Putah Creek, and Willow Slough watersheds.

- **Policy 7.A.4 Best Management Practices.** Continue to require the use of feasible and practical best management practices (BMPs) and promote Low Impact Development to protect receiving waters from the adverse effects of construction activities and urban and agricultural runoff.

- **Implementation Program 7.1.** Partner with the Yolo County Farm Bureau and the Water Resources Association of Yolo County to establish a Groundwater Sustainability Agency and adopt a Groundwater Management Plan.

2035 CAP

The 2035 CAP includes the following actions to enhance water conservation.

- **Water and Solid Waste Objective 2, Strategy W/W, Goals.** 15 percent reduction in energy use associated with water and wastewater production, delivery, and treatment by 2020 (200 MT CO_2e); 20 percent energy use reduction by 2035 (350 MT CO_2e)

- **Municipal Operations Objective 2, Strategy MO/3, Action.** Reduce reliance on potable water supply by expanding the distribution and use of recycled water (treated wastewater) to industrial uses and landscaped areas.

- **Municipal Operations Objective 2, Strategy MO/3, Action.** Optimize efficiency of irrigation systems for parks and other public landscaped areas.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

According to the Woodland 2015 Urban Water Management Plan, Woodland's surface water availability in 2035 is expected to meet the demand. It is expected that there will be sufficient water supplies available to serve the project from existing entitlements and resources. In addition, the CAP includes goals and actions to reduce reliance on potable water supply and promote water conservation. The 2035 General Plan includes goals and policies requiring the promotion of water conservation to reduce impacts and the protection of water quality. Goal 7.A protects the qualities and quantities of water resources. Policy 7.4.A supports watershed protection efforts. Policies 7.A.2 and 7.A.4 require strategic groundwater management and use of best management practices to protect water quality and are supported by Implementation Program 7.1.

In 2007, the Supreme Court issued a decision on the requirements for the water supply analysis in a land use plan EIR. The decision in the case, *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, states that CEQA requires an EIR to show "a likelihood water would be available" (*Vineyard Area Citizens* 2007) The court stated that the water supply does not have to be available during the adoption of the land use plan, but the water supply analysis must not rely on uncertain assumptions and must not ignore long-term demand. Based on the projections in the Woodland UWMP, there is likelihood that water will be available at least until 2035 to serve the demand from implementation of the Proposed Project.

With compliance with existing and future local, State, and federal regulations and implementation of the 2035 General Plan policies, the impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.14-5 Wastewater Treatment Capacity Impacts. *Implementation of the Proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

Implementation of the Proposed Project would result in new residential, commercial, office, and industrial development in the Planning Area. This growth is likely to result in greater amounts of wastewater demand. As discussed in the Environmental Settings, the projected future hydraulic capacity of the WPCF is about 9.2 mgd for

average wastewater flows, which could serve up to 105,000 residents; therefore, there is sufficient hydraulic capacity to serve accommodate projected growth under the Proposed Project.

As discussed in the Environmental Settings and Impact 4.14-1, the City is completing a construction project to increase the solids capacity of the WPCF to serve a residential population of 70,000 (13,300 lb./day). In addition to the current construction project, with future conversion of a fourth oxidation ditch to MLE, the WPCF can treat up to 19,900 lb./day, which could serve approximately 105,000 residents. With additional upgrades and modifications to the plant, such as the addition of primary treatment and anaerobic digestion, the WPCF could reach its "practical" limit of 26,000 lb./day. The City is also reviewing alternatives for biosolids disposal to reduce the cost and remove the accumulated biosolids from the sludge disposal ponds in the WPCF. The City will continue to make modifications and upgrades as needed to the WPCF to ensure that there is sufficient capacity to serve the Planning Area. Any future modifications and upgrades to the plant would be within existing WPCF footprint and will likely consistent of maintenance of existing equipment and upgrades to meet future regulations and capacity needs. Policies in the 2035 General Plan along with existing local, State, and federal requirements would ensure that there is sufficient capacity in the WPCF to serve the Planning Area's current and future wastewater demand.

While most of the City's wastewater treatment infrastructure can meet existing and future demand, the wastewater infrastructure in Downtown Woodland has limited capacity. Specifically, the Beamer Trunk Line, which serves the Downtown, is near capacity. As described above, the City is currently lining, and replacing, and adding to existing sewer lines, which will delay the need for increased capacity. When it is needed in the future, the City plans to add capacity to the sewer system Downtown by relieving the Beamer Trunk Line with a line to the Kentucky Trunk Line, which runs underneath Kentucky Avenue in the northern portion of the Planning Area and has additional capacity. The City will continue to make modifications and upgrades as needed to the wastewater infrastructure to ensure that there is sufficient capacity to serve the Planning Area, including the Downtown, consistent with requirements in the 2035 General Plan. Any future modifications and upgrades to the plant will likely consist of maintenance of existing infrastructure and upgrades to meet future regulations and capacity needs.

A detailed discussion of specific future impacts of new development on the wastewater treatment system is beyond the scope of this EIR. The placement of such infrastructure has been considered as a component of the Proposed Project in the other sections of this EIR, such as Section 4.3, "Air Quality" and Section 4.4, "Biological Resources," which analyze the potential for project construction and implementation. Where necessary, these sections include mitigation measures that would reduce or avoid the impacts of developing infrastructure on the physical environment. Impact 4.3-1 in Section 4.3 of this EIR, "Air Quality," addresses air quality impacts associated with construction emissions and proposes mitigation. Section 4.6 of this EIR, "Cultural Resources," addresses the potential for construction activities to result in the discovery of previously unknown cultural resources and proposes mitigation. Impacts 4.11-1 and 4.11-2 in Section 4.11 of this EIR, "Noise and Vibration," address noise impacts associated with construction equipment both on- and off-site.

a. East Alternative–The East Alternative anticipates 550 new residential units and about 266,000 square feet of non-residential development Downtown.

b. South Alternative–The South Alternative anticipates 1,001 new residential units and almost 485,000 square feet of non-residential development Downtown.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Existing laws and regulations reducing the potential environmental impact with respect to wastewater are given above for Impact 4.14-1.

Proposed Project

The 2035 General Plan includes policies that address wastewater treatment plant capacity to serve development planned for under the Proposed Project; see full discussion of 2035 General Plan policies that would reduce the potential environmental impact under Impact 4.14-1. Also discussed in Impact 4.14-1 is the 2035 CAP's Municipal Operations Objective 2, which strives to improve the efficiency of the wastewater system.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

The policies in the 2035 General Plan minimize potential impact by requiring adequate public facilities and services for all new and existing development in the Planning Area, including wastewater treatment facilities. The City will soon complete a WPCF construction project that will substantially increase biological solids capacity, enabling the WPCF to serve up to 70,000 residents. Another construction project at the WPCF can be completed in the future to increase capacity to approximately 105,000 residents. WPCF upgrades to accommodate additional future growth in the Planning Area will be made as needed by the City over the horizon of the Proposed Project. With compliance with the 2035 General Plan policies, the impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.14-6 Solid Waste Disposal Capacity Impacts. *Development under the Proposed Project would be served by a landfill with sufficient permitted capacity to serve the project's solid waste disposal needs. The impact is less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

As described in the Environmental Setting section above, solid waste in Woodland that is not diverted is hauled to the Yolo County Central Landfill. The Integrated Waste Management Act of 1989 (AB 939, Sher) requires each county to prepare an Integrated Waste Management Plan (IWMP) that quantifies and identifies a plan to maintain the remaining county-wide disposal capacity. According to the Countywide Siting Element of the Yolo County IWMP adopted in August 2012, the Yolo County Central Landfill had a remaining municipal solid waste disposal capacity of 39,493,850 cubic yards, as of July 2011. Based on historical rates of disposal and projected population, the Central Landfill is expected to reach capacity in the year 2090. The IWMP uses the Department of Finance population projections shown in Table 4.14-6.

Table 4.14-6. Yolo County Integrated Waste Management Plan Population Projections

Year	Population
2015	211,396
2035	264,852
2090	440,977

Source: Yolo County Planning & Public Works 2012.

In comparison, in July of 2015, the County population was 213,016. Therefore, the IWMP population projection for 2015 underestimated the true population by less than one percent.

There are both State and local measures to reduce the amount of solid waste disposal. In 2011, California enacted AB 341 setting a goal of 75 percent recycling, composting, or source reduction of solid waste by 2020. In addition, the University of California adopted the goal of zero waste by 2020 with reduction efforts to start in 2012 (UC Davis 2009). Therefore, the waste generated by University of California (UC) at Davis, which is disposed of in the Yolo County Central Landfill, is expected to decrease from historical levels. In 2012, UC Davis disposed of 6,278 tons of waste in the Yolo County Central Landfill (Yolo County Planning & Public Works 2012). The reduction in waste disposal from both AB 341 and the UC Davis zero waste goal is not incorporated into the projections of the Yolo County IWMP. Therefore, the IWMP projections are conservative, and it is reasonable to expect that the landfill will reach capacity after the year 2090.

a. East Alternative Impacts–The East Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

b. South Alternative Impacts–The South Alternative would result in no addition or different impact than that which is disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

Detailed above in the Regulatory Framework, existing laws and regulations reduce the potential environmental impact at the State level (AB 341's solid waste diversion requirements and AB 1826's mandatory commercial organics recycling requirements).

In addition to State regulations, the Yolo County 2030 General Plan applies to the unincorporated portions of the Planning Area until they are annexed into the city limits. The Yolo County 2030 General Plan includes policies and actions that support the goal of providing safe, cost-efficient, and environmentally responsible solid waste management. Yolo County also has its CIWMP.

Locally, the City of Woodland Municipal Code reduces the potential environmental impact by regulating solid waste receptacles and disposal services, recyclable materials, and construction and demolition debris. Woodland also adopted its Source Reduction and Recycling Element in March 1992 to keep on track with waste diversion goals. Additionally, the 2002 General Plan currently includes goals and policies to ensure adequate solid waste disposal, which the 2035 General Plan would carry forward.

Proposed Project

The existing landfills have sufficient capacity to accommodate the solid waste disposal needs from anticipated growth under the Proposed Project. In addition, the 2035 General Plan and the 2035 CAP include the following goals and policies to further reduce the need for solid waste disposal.

2035 General Plan

- **Goal 5.J Solid Waste Collection, Transfer, Recycling, and Disposal.** Provide adequate solid waste services for the collection, transfer, recycling, and disposal of refuse.
- **Policy 5.J.1 Waste Collection.** Provide adequate solid waste services, and promote maximum use of solid waste source reduction, recycling, composting, and environmentally safe transformation of wastes.
- **Policy 5.J.2 New Development.** Require waste collection in all new development and ensure that all new development complies with applicable provisions of the City of Woodland Source Reduction and Recycling Element and the Yolo County Integrated Waste Management Plan.
- **Policy 5.J.4 Compliance with State Law.** Pursue programs to maintain conformance with the Solid Waste Management Act of 1989 or as otherwise required by law and mandated diversion goals.
- **Policy 5.J.6 Recycling Facilities.** Allow and encourage the development of regional and community-based recycling facilities and secondary resource businesses in areas designated for Regional Commercial and Industrial uses on the General Plan Land Use Diagram.

- **Policy 5.J.7 Promote Waste Reduction.** Promote solid waste reduction, recycling, and composting to Woodland residents and business as an important way to conserve limited natural resources. Encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.

2035 CAP

- **Water and Solid Waste Objective 2.** Achieve 75 percent Landfill Waste Diversion.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Work with multifamily complex managers to educate tenants about recycling, significantly increase multifamily waste diversion, and reduce contamination of recyclables.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Continue to actively promote backyard composting.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Encourage consumers to consider product life cycles when purchasing goods and to select those that will not eventually contribute to landfill waste.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Encourage local retailers, manufacturers, and construction contractors to donate unused surplus materials and slightly damaged goods to charities that can reuse them, such as Habitat for Humanity ReStores.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Continue to promote a high level of recycling of construction and demolition debris.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Establish residential and commercial programs for the collection of food waste for large-scale processing as compost or into biofuels.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Support the expansion of practical "extended producer responsibility" programs, which would require manufacturers to be responsible for their products that have reached the end of their useful life or that are left unused (e.g., unused pharmaceutical products), removing responsibility from local governments.
- **Water and Solid Waste Objective 2, Strategy W/W 2, Action.** Support policies to require reductions in packaging materials used for consumer products.

    a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

    b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

With compliance with existing and future regulations and implementation of the 2035 General Plan policies, the impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

IMPACT 4.14-7 Compliance with Federal, State, and Local Statutes and Regulations Related to Solid Waste. *Implementation of the Proposed Project would be compliant with federal, State, and local statutes and regulations related to solid waste. The impact is considered less than significant.*

Potential Impacts Associated with Implementation of the Proposed Project

The 2035 CAP does not have elements that are distinct from the overall Proposed Project as it relates to this impact and is included in the analysis below.

As discussed in Impact 4.14-1, implementation of the Proposed Project would result in future residential, commercial, and industrial land uses in the Planning Area, resulting in an increased number of residents and workers. Development and growth would likely increase the amount of solid waste; however, the characteristics of the solid waste generated by new development are unknown. In addition, the Proposed Project allows for a wide variety of uses, including industrial and commercial.

a. East Alternative –The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

b. South Alternative –The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above.

Existing and Proposed Laws, Regulations, and Policies that Reduce the Potential Environmental Impact

Existing Laws and Regulations

See Impact 4.14-6 for a discussion of the existing regulations that reduce the potential environmental impact.

Proposed Project

See Impact 4.14-6 for a discussion of the 2035 General Plan goals and policies that reduce the potential environmental impact, including Policies 5.J.1, 5.J.2, and 5.J.4. As discussed in Impact 4.14-6, the CAP includes an objective and corresponding actions related to solid waste landfill diversion.

a. East Alternative–There are no additional policies that are specific to the East Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

b. South Alternative–There are no additional policies that are specific to the South Alternative that would reduce the potential environmental impact beyond the general analysis presented above.

Summary of Impact Analysis

Policies 5.J.1 and 5.J.2 require adequate solid waste services and compliance of solid waste collection in new development with local regulation, and Policy 5.J.4 requires compliance with State regulation. With compliance with existing regulations and implementation of the 2035 General Plan policies, impact is considered **less than significant**.

a. East Alternative–The East Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

b. South Alternative–The South Alternative would result in no additional or different impact than disclosed in the general analysis presented above. The impact is **less than significant.**

Mitigation Measures

No mitigation is required.

5 ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) mandates consideration and analysis of alternatives to the Proposed Project. According to CEQA Guidelines, the range of alternatives "shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts" (CEQA Guidelines Section 15126.6[c]).

Section 15126.6(a) of the State CEQA Guidelines requires EIRs to describe:

> "…a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

The State CEQA Guidelines further require that the alternatives be compared to the proposed project's environmental impacts and that the "no project" alternative be considered (CEQA Guidelines Section 15126.6[e]). In defining "feasibility," CEQA Guidelines Section 15126.6(f)(1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

The environmental impacts of alternatives are required to be compared to the proposed project's environmental impacts. This process helps decision makers to consider whether a different project design, location, or other variation on the proposed project would have environmentally superior results. The CEQA Guidelines provide guidance on defining and analyzing alternatives. Section 15126.6[b] states:

> "… the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

5.2 PROJECT OBJECTIVES

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the

development of alternatives that meet the criteria specified in CEQA Guidelines Section 15126.6(a). As noted elsewhere in this EIR, the "project" is the 2035 General Plan and the 2035 CAP. As noted in Section 3 of this EIR, "Project Description," the project objectives include the City's Vision Statement and Guiding Principles for the 2035 General Plan and the objectives for the 2035 CAP.

One early step in the General Plan process is the development of a vision for the future and guiding principles to inform the method to achieve that vision. The vision statement is an aspirational description of what the community would like to be in the future, in this case, looking forward to 2035, and represents a compilation of input from the community through the public process. Guiding principles are shared values that will be used to develop policies that would, once implemented, achieve the vision. The vision statement and guiding principles are outlined below.

5.2.1 GENERAL PLAN VISION STATEMENT

The 2035 General Plan Vision Statement is:

> In 2035, Woodland is a highly desirable community to live, learn, work and recreate. It has maintained its small-town feel while maturing into an attractive, vibrant, and sustainable city that celebrates its architectural heritage and cultural diversity. Woodland is a healthy community with livable neighborhoods, a thriving downtown, well maintained infrastructure, excellent schools and recreational amenities connected by a seamless network of trails and paths.
>
> The city is the region's center of agricultural technology and food production and is recognized globally as a leader in sustainable agriculture. The community is prosperous and fiscally sound, offering abundant employment opportunities to its diverse and creative workforce.
>
> Woodland has become a destination for visitors seeking to experience its unique agricultural, historical, recreational, cultural and entertainment amenities.

5.2.2 GENERAL PLAN'S GUIDING PRINCIPLES

The General Plan's Guiding Principles highlight the most critical shared values that were used in developing the policies and implementation measures in the 2035 General Plan. They include:

1. **Quality and Character:** Retain and enhance Woodland's quality of life, its distinctive identity and small-town characteristics.

    - Preserve Woodland's unique small town charm and quality of life by maintaining the city's distinct urban edge and surrounding agricultural open space, promoting the Downtown and historic resources, and developing a variety of recreational, community and cultural facilities. Preserve and enhance the best qualities of Woodland's existing neighborhoods and promote the development of new neighborhoods with similar qualities while fostering healthy and attractive commercial and employment centers.

    - Promote development that strengthens the physical form of the City, enhances livability, incorporates sustainable design practices and continues to enhance Woodland's unique sense of place. High quality

design and pleasing physical form promotes Woodland as offering a high quality of life and a desirable place to live, learn, work and recreate.

2. **Orderly Development**: Promote new growth while achieving an orderly pattern of community development, consistent with economic, social, fiscal and environmental needs.

    - Provide for urban development and expansion of associated services on a logical and incremental basis to accommodate projected population and employment growth. Growth will be managed to ensure adequate infrastructure, public services, and amenities that the City can sustain, provide and maintain. New growth areas will be carefully planned to enhance and not detract from existing neighborhoods and commercial centers. Infill and adaptive reuse of underutilized and vacant buildings is promoted.

3. **Historic Downtown:** Strengthen the historic downtown district as the City's center of shopping, dining, entertainment and employment.

    - Promote Downtown as the civic, cultural, and entertainment center of Woodland. The General Plan promotes a broad mix of uses, including increased dining, retail, and entertainment destinations with an array of urban housing and professional office/technology companies. Provide support to new business ventures and private reinvestment with policies and actions to assist revitalization and re-use of historically significant structures.

4. **Economic Development:** Foster economic growth and diversification with a range of employment opportunities for all residents.

    - The General Plan promotes a diversified economic base and seeks to capitalize on Woodland's location and assets—access to I-5, Sacramento International Airport, rail service, prime farmland, and U.C. Davis—by supporting and assisting business development and mitigating constraints to economic investment. The Plan provides sites in a variety of infill and new growth locations to attract hotel, office, industrial, and research and development uses, which in turn will provide jobs and help the City achieve fiscal sustainability. The General Plan seeks partnerships in higher education, seed research, agricultural technology, food production, and other locally appropriate sectors. It supports linkages with Woodland's strong historical and cultural resources and promotes tourism.

5. **Mobility Options:** Coordinate land use and transportation planning to provide a range of attractive and viable transportation options, such as bicycle, pedestrian, and transit.

    - Support development choices and transportation improvements that allow and encourage more residents, workers and visitors to walk, bike or use transit. Promote the development of "complete streets" to safely and effectively serve the needs of all modes of travel. Promote and seek opportunities to develop a seamless network of trails and paths to support a healthy and active lifestyle, livable neighborhoods and access to schools and amenities.

6. **Housing Choice:** Provide a variety of housing types to meet the needs for all generations and income levels.

    - Encourage and enable a mix of housing types and densities that will provide Woodland residents with access to a full range of housing opportunities, and enable the City to meet its fair share of the region's

housing need. Housing types facilitated by the General Plan range from larger lot to small-lot single-family homes, townhomes, apartment buildings and lofts in a variety of locations and settings. Infill development in the Downtown and along mixed-use corridors is encouraged. Promote design practices that support high quality design and neighborhood development.

7. **Agricultural Heritage:** Preserve and protect prime agricultural lands and their uses within and surrounding the community.

    - Woodland's surrounding agriculture is an important part of the community's heritage, plays a major role in the city's economy, and endows Woodland with a unique sense of place. To help maintain this important resource, the General Plan maintains the voter-approved Urban Limit Line within which urban development will be contained. Development will occur in an orderly, contiguous manner to preserve agricultural use of land as long as possible. Outside the current city limits, the City will encourage and support continued agricultural use of land.

8. **Safety:** Ensure that Woodland remains a safe place to live, protected from natural and manmade hazards.

    - Protect community livelihood and investment through requirements for structures to withstand seismic activity, provide fire protection and minimize flood risk. Ensure a sense of personal and public safety as essential in developing a high quality of life. The General Plan supports appropriate levels of prevention and response.

9. **Environmental Stewardship:** Foster a sustainable community for the next generation and protect and improve the quality of the natural environment.

    - Encourage the preservation of the area's natural resources and continue to support regional efforts. Promote land use patterns that improve air quality and reduce greenhouse gas emissions, minimize vehicle miles traveled, and encourage conservation. Support proactive solutions to protect areas at risk of flooding.

10. **Public Services:** Provide realistic, supportable and appropriate levels of public service that are sustainable and fiscally sound.

    - Balance the fiscal realities of providing sustainable public services with community desires for high quality amenities and facilities to ensure that meeting today's needs does not compromise the community's fiscal future. Require new development to pay for itself, including new facilities and on-going operations. Support the continuing maintenance and expansion of existing public facilities as the most efficient and effective means of living within the community's means. The City will continue to strive to improve the efficiency and quality of its public facilities and services.

11. **Health and Recreation:** Provide all residents with opportunities to live an active, healthy, and green lifestyle.

    - Promote healthy lifestyles by enhancing opportunities for physical activity, healthy eating and sustainable living. The General Plan ensures that adequate parks and recreational amenities are well integrated in new neighborhoods. The Plan promotes creation of a recreational greenbelt and expansion of walking and

biking paths to enable residents to use active transportation options to connect to work, schools, grocery stores, and variety of open spaces.

12. **Quality Education:** Foster quality educational and enrichment opportunities.

    - The General Plan underscores the importance of high quality educational opportunities—including K-12 education, higher education, workforce training, and general community enrichment—to Woodland's quality of life. The City recognizes the link between education, safety, and opportunities for economic advancement in the community for youth, their families, and all Woodland residents. To this end, the Plan supports continued partnership with the Woodland Joint Unified School District, the County Office of Education, and Woodland Community College in planning, facility sharing, extracurricular activities and recreation, and promoting academic achievement, as well as linkages between Woodland's growing cluster of agricultural technology and research establishments and higher education.

5.2.3 CAP OBJECTIVES

The 2035 CAP presents a series of strategies designed to guide the City, its residents, and businesses in reducing the City's contributions to Greenhouse Gas (GHG) emissions consistent with state goals. The strategies are aimed at reducing community-wide GHG emissions to a level 15 percent below Woodland's 2005 GHG levels by 2020. The CAP's 2035 target establishes a per service population (residents and employees) emissions efficiency threshold of 2.25 MT CO_2e per service population per year. These targets were selected to establish local emissions reductions on a long-term trajectory consistent with the State's GHG emissions reduction goal for 2050 (80 percent below 1990 levels).

The 2035 CAP is designed to:

- Translate high-level objectives and quantified goals into a realistic, understandable set of implementation actions
- Demonstrate that significant reductions in GHG emissions are attainable through local actions
- Inspire community members to work collectively to achieve these reductions
- Dovetail with updated community General Plan policies that are required to address climate change impacts and adaptation, including those for land use, transportation, building design, and infrastructure; and
- Provide for a predictable approach to mitigation strategies for the compliance of future development projects with the California Environmental Quality Act (CEQA)

5.3 ALTERNATIVES CONSIDERED BUT THEN REJECTED FROM DETAILED ANALYSIS IN THIS EIR

The Project Alternatives considered in this EIR were modified from a set of initial development scenarios presented in the Development Scenarios Analysis report (April 2015), as part of the General Plan Update process. Each of the scenarios represented various options available to the City to address long-term physical growth and other related community issues and priorities. The growth scenarios were formulated based on the results of an

existing conditions analysis and input from City staff, the General Plan Steering Committee, the Planning Commission, the City Council, and members of the public.

The Development Scenarios Analysis presented four development scenarios, which are described below. As explained below, Scenarios 1 and 3 were rejected as possible development scenarios, and Scenarios 2 and 4 were retained and modified into the two Alternatives presented in the 2035 General Plan (East and South Alternatives respectively) and analyzed in this EIR.

5.3.1 General Plan Scenario 1: High Infill; No New Greenfield Development

Scenario 1 considered development on infill sites only, primarily in the Downtown area, along major existing transportation corridors, and in the Spring Lake Specific Plan Area. This scenario would have provided for approximately 4,000 new housing units and 8,600 new jobs by 2035.

5.3.2 General Plan Scenario 2: Moderate Infill; New Greenfield Growth in South and East.

Scenario 2 considered a moderate amount of infill development and new development in SP-1A, in the southern portion of the Planning Area, and SP-2, in the eastern portion of the Planning Area. This scenario would have provided for approximately 7,800 new housing units and 10,800 new jobs by 2035.

5.3.3 General Plan Scenario 3: Moderate Infill; New Greenfield Growth in the South and North.

Scenario 3 considered a moderate amount of infill development, along with new development in SP-1A, in the southern portion of the Planning Area, and SP-3, in the northern portion of the Planning Area. This scenario would have provided for approximately 7,700 new housing units and 11,000 new jobs by 2035.

5.3.4 General Plan Scenario 4: Moderate Infill; New Greenfield Growth in the South.

Scenario 4 considered a moderate amount of infill development, along with new development in SP-1A, SP-1B, and SP-1C, in the southern portion of the Planning Area. This scenario would have provided for approximately 8,700 new housing units and 10,600 new jobs by 2035.

5.3.5 General Plan Scenario Evaluation

The City evaluated each of the above described scenarios for its impacts related to transportation, utility capacity, exposure to odors, and fiscal repercussions for the City. Upon completion of the analysis, the scenarios and report findings were shared at a public workshop, three General Plan Steering Committee meetings, two Planning Commission meetings, and one City Council hearing. The planning team used input received to help answer specific questions about scenario preferences and the complex trade-offs between sometimes-competing objectives.

The City Council outlined its objectives for the City's future growth and development. Ultimately, Scenarios 1 and 3 were rejected for further consideration as alternatives because they did not align with the City Council's growth objectives. Scenario 1 was rejected because it did not align with Council direction regarding the amount of growth to be planned through 2035. In addition, the Development Scenarios Analysis showed that this scenario would have resulted in the highest VMT per capita. Scenario 3 was rejected because it was determined that a portion of land in the northern Planning Area would need to be reserved for a potential future flood solution, thus reducing the size of SP-3 to an area too small to provide for the amount of development anticipated. The Development Scenarios Analysis also showed that this scenario would have required the relocation of an existing fire station and converted the most Prime Farmland to urban uses.

Scenarios 2 and 4 were retained, but modified to include some potential for new development in the northern portion of the Planning Area, in the vicinity of SP-3, where feasible. Scenario 2 was then renamed the East Alternative, and Scenario 4 was renamed the South Alternative. Development capacity assumptions for the two remaining Alternatives were adjusted so that each one would provide the same number of new dwelling units and approximately the same amount of nonresidential square footage. The East Alternative and South Alternative are discussed in detail below.

Along with the East and South Alternatives, Scenarios 1 and 3 from the Development Scenarios Analysis were also considered as possible alternatives to be analyzed in this EIR. However, as described above, given that they were incompatible with City Council objectives for the future growth and development of the Planning Area and would not have reduced environmental impacts in key areas, they were not further analyzed in this chapter as CEQA alternatives.

5.4 GENERAL PLAN EIR ALTERNATIVES

The proposed Project is either the East or the South Alternative of the 2035 General Plan and the Draft Climate Action Plan. Chapter 4 of this EIR evaluates the environmental impacts of the East and the South Alternative and evaluates whether different locations, amounts, or design of development differ between the East and the South Alternative.

The Land Use Diagram of the 2035 General Plan assigns a land use to every parcel within the Planning Area and the City's Urban Limit Line (ULL). However, various policies in the Plan control the timing, location, and sequence under which the Planning Area could build out through the planning horizon year (2035), specifically with regard to development in new Specific Plan Areas. Each of the two Project Alternatives concentrates growth in different areas through 2035, either primarily in the East or primarily in the South.

The 2035 General Plan includes two different versions of applicable growth management policies —one set for each Alternative. The East Alternative envisions growth occurring in the areas labeled SP-1A, SP-2, and SP-3 by 2035. The South Alternative, on the other hand, envisions growth occurring in the areas labeled SP-1A, SP-1B, SP-1C, and SP-3 by 2035. Chapter 4 of this EIR analyzes the East and the South Alternatives at an equal level of detail. This Chapter 5 incorporates some of the differences between the Alternatives relative to their potential environmental effects, but Chapter 4 has a full assessment of environmental impacts. The focus of this Chapter 5 is a comparison of impacts under the No Project Alternative (with the Preliminary 2020 Climate Action Plan), East Alternative (with 2035 CAP), and South Alternative (with 2035 CAP).

Please see Exhibit 5-1, which is the 2035 General Plan Land Use Diagram. This map shows the areas labeled SP-1A, SP-1B, SP-1C, SP-2, SP-3A, and SP-3B, which are the areas with the most contrast between the East Alternative and the South Alternative. Please refer to Table 5-1, below, which summarizes development potential and approximate acreage potentially subject to development under each Alternative. The amount of total development – the number of housing units added, the new residential population, the amount of non-residential square footage, the number of new jobs, and the amount of land area potentially affected by development is related to potential environmental effects. As described throughout this Chapter, the different potential impacts associated with each Alternative are related to the amount of development planned under each Alternative.

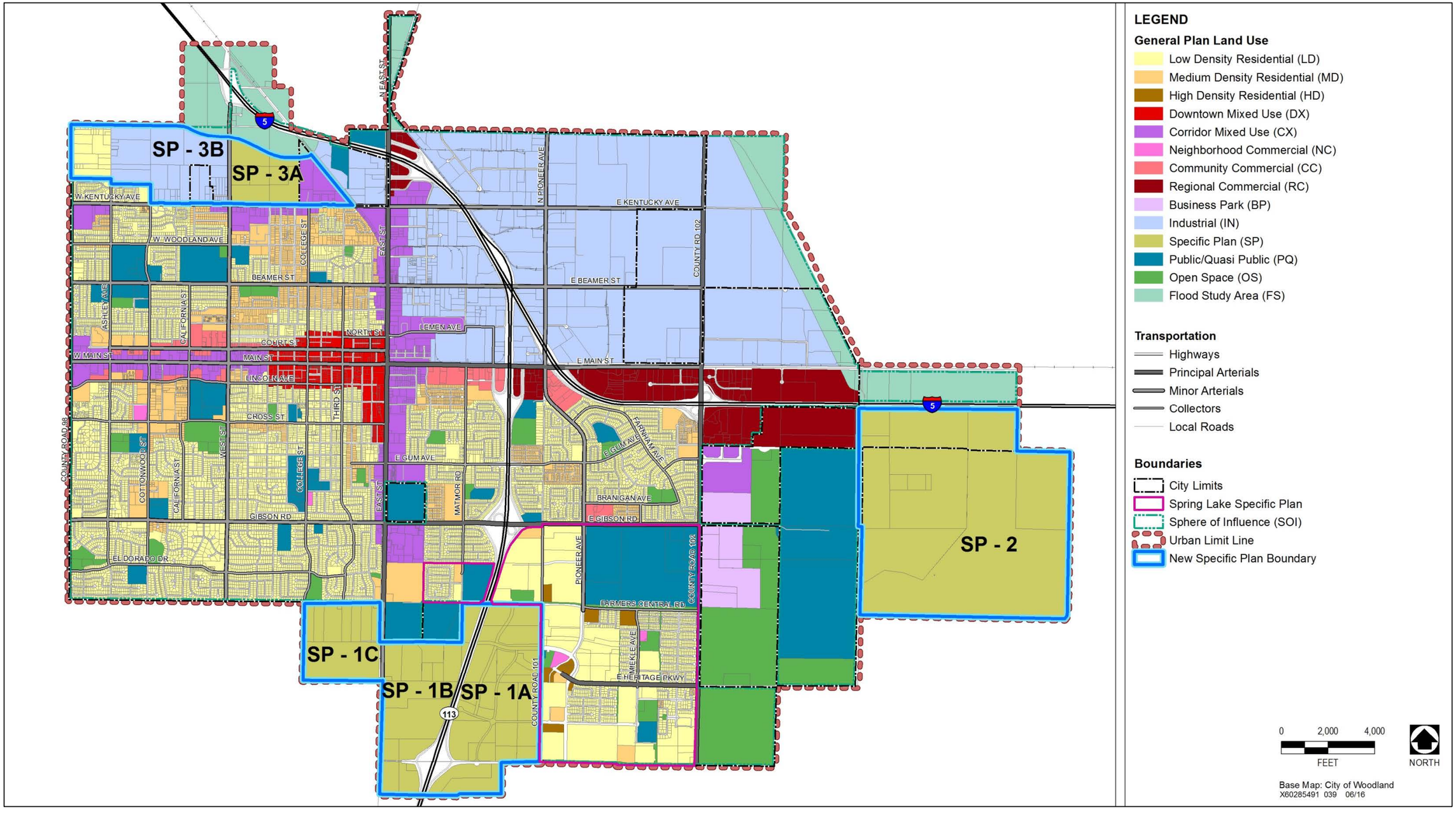
Table 5-1. Population and Jobs Added per Alternative

Alternative	Population Added	Housing Units Added	Jobs Added	Acreage Potentially Disturbed
No Project Alternative, Existing General Plan	14,930	5,420	8,170	3,080
The East Alternative	19,300	7,000	19,340	3,640
The South Alternative	19,300	7,000	18,210	3,030

CEQA Guidelines Section 15126.6(e)(2) states that a discussion of the "No Project" Alternative must consider "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans." The City has a General Plan, which was last comprehensively updated in 2002, and subsequently amended from time to time since then, and which has been used to guide development and conservation efforts since that time. The City also has a Climate Action Plan (the Preliminary 2020 Climate Action Plan), adopted by the City Council in July 2014. If the 2035 General Plan and 2035 CAP are not adopted, the City would continue to use the 2002 General Plan and Preliminary 2020 Climate Action Plan, which are the basis for the No Project Alternative. Please see Exhibit 5-2 for a spatial depiction of the General Plan under the No Project Alternative and Table 5-1 for a summary of the development potential under the No Project Alternative.

The location of residential units and non-residential development for each Alternative is shown in Tables 5-2 and 5-3, respectively. For each Alternative, the percentage of expected housing units and non-residential development within each of Woodland's main development areas is listed in Table 5-4. The alternatives analysis of the No Project Alternative, East Alternative, and South Alternative is based on the data below, as applicable.

Table 5-2. Locations of Residential Units by Alternative			
Development Area	No Project Alternative	East Alternative	South Alternative
Infill			
Downtown	100	550	1,000
Corridors/Other Infill	530	440	950
Spring Lake Specific Plan	2,600	2,600	2,600
Industrial Area	0	0	0
Infill Total	**3,230**	**3,590**	**4,550**
New Growth Areas			
SP-1	2,180	1,600	2,200
SP-1A	1,190	1,600	1,600
SP-1B	380	0	520
SP-1C	610	0	80
SP-2	0	1,600	0
SP-3	10	210	250
SP-3A	0	200	200
SP-3B	10	10	50
New Growth Areas Total	**2,190**	**3,410**	**2,450**
TOTAL	**5,420**	**7,000**	**7,000**
Source: Dyett & Bhatia 2016			



Source: Dyett and Bhatia 2016, Adapted by AECOM 2016

Exhibit 5-1. **Draft 2035 Land Use Diagram**

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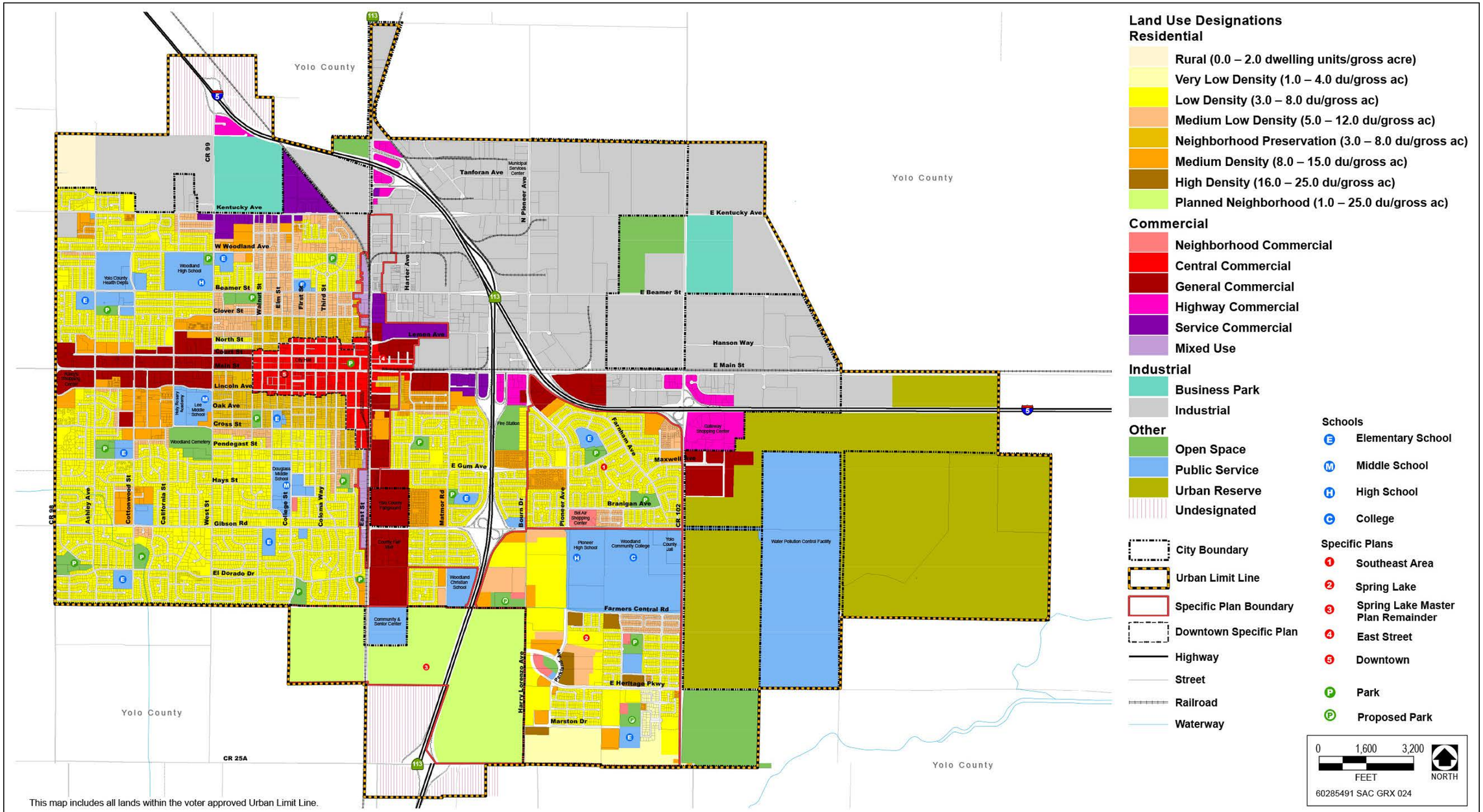

Source: City of Woodland 2002

Exhibit 5-2. **No Project Alternative (2002 General Plan)**

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Table 5-3. Locations of Non-Residential Square Footage by Alternative			
Development Area	No Project Alternative	East Alternative	South Alternative
Infill			
Downtown	163,000	266,000	484,000
Corridors/Other Infill	722,000	3,878,000	3,700,000
Spring Lake Specific Plan	530,000	530,000	530,000
Industrial Area	2,589,000	8,552,000	8,552,000
Infill Total	**4,004,000**	**13,226,000**	**13,266,000**
New Growth Areas			
SP-1	439,000	2,358,000	2,376,000
SP-1A	240,000	2,160,000	2,160,000
SP-1B	77,000	198,000	216,000
SP-1C	122,000	0	0
SP-2	0	865,000	0
SP-3	1,102,000	937,000	1,043,000
SP-3A	534,000	114,000	220,000
SP-3B	568,000	823,000	823,000
New Growth Areas Total	**1,541,000**	**4,160,000**	**3,419,000**
TOTAL	**5,545,000**	**17,386,000**	**16,685,000**
Source: Dyett & Bhatia 2016			

Table 5-4. Percentage of Anticipated Growth by Development Area for Each Alternative						
	No Project Alternative		East Alternative		South Alternative	
Development Area	Planned Housing Units	Planned Non-Residential Square Footage	New Housing Units	New Non-Residential Square Footage	New Housing Units	New Non-Residential Square Footage
Infill						
Downtown	3.1%	4.1%	7.9%	1.5%	14.3%	2.9%
Corridors/Other Infill	16.4%	18.0%	6.3%	22.3%	13.6%	22.2%
Spring Lake Specific Plan	80.5%	13.2%	37.1%	3.0%	37.1%	3.2%
Industrial Area	0.0%	64.7%	0.0%	49.2%	0.0%	51.3%
Infill Total	**59.6%**	**72.2%**	**51.3%**	**76.1%**	**65.0%**	**79.5%**
New Growth Areas						
SP-1	99.5%	28.4%	22.9%	13.6%	31.4%	14.2%
SP-1A	54.4%	15.6%	22.9%	12.4%	22.9%	12.9%
SP-1B	17.3%	4.9%	0.0%	1.1%	7.4%	1.3%
SP-1C	27.8%	7.9%	0.0%	0.0%	1.1%	0.0%
SP-2	0.0%	0.0%	22.9%	5.0%	0.0%	0.0%
SP-3	0.5%	71.5%	3.0%	5.4%	3.6%	6.3%
SP-3A	0.0%	34.7%	2.9%	0.7%	2.9%	1.3%
SP-3B	0.5%	36.8%	0.1%	4.7%	0.7%	4.9%
New Growth Areas Total	**40.4%**	**27.8%**	**48.7%**	**23.9%**	**35.0%**	**20.5%**
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Source: Dyett & Bhatia 2016						

5.4.1 NO PROJECT ALTERNATIVE: BUILDOUT OF THE 2002 GENERAL PLAN AND IMPLEMENTATION OF THE PRELIMINARY 2020 CLIMATE ACTION PLAN

The No Project Alternative assumes that the 2035 General Plan and 2035 CAP would not be implemented and instead the City would build out as provided under the 2002 General Plan (as amended) and implement the Preliminary 2020 Climate Action Plan. The No Project Alternative plans for approximately 14,930 new residents, 5,420 new housing units, 5,545,000 new square feet of non-residential building space, and 8,170 new jobs (Table 5-1).

The No Project Alternative identifies planned development in the northeastern portion of the Planning Area that, like the other Alternatives, is anticipated to be largely for industrial use. The eastern portion of the Planning Area is in Urban Reserve.

The No Project Alternative includes planned development also in the areas west of Interstate 5 (I-5) and north of Kentucky Avenue – including Rural Residential development in the western portion of the Planning Area, and Industrial, Business park, and Industrial development closer to I-5, as well as a small area identified for Highway Commercial development. Areas north of this planned development to the City's northern ULL are identified as Undesignated on the 2002 General Plan land use diagram. The No Project Alternative identifies a Planned Neighborhood in the areas west of CR 101 and south of the existing city limits. The Planned Neighborhood designation in the 2002 General Plan provides for detached and attached single-family units, multi-family units, commercial uses, parks, open space, public and quasi-public uses under a future specific plan with an average density for residential areas not to exceed seven units per acre. The areas south of the Planned Neighborhood area to the City's southern ULL are Undesignated.

Of the non-residential square footage anticipated to develop under the No Project Alternative, 72 percent is anticipated to occur in infill locations (compared to 76 percent for the East Alternative and 80 percent for the South Alternative) (Table 5-4). For residential development, the No Project Alternative anticipates that 60 percent of the new dwelling units would occur in infill settings (compared to 51 percent for the East Alternative and 65 percent for the South Alternative) (Table 5-4). The No Project Alternative includes the same amount of non-residential and residential development in the Spring Lake Specific Plan Area as the East Alternative and South Alternative.

The 2002 Woodland General Plan addresses the following eight subject areas:

- Chapter 1: Land Use, Community Design, Economic Development
- Chapter 2: Housing
- Chapter 3: Transportation and Circulation
- Chapter 4: Public Facilities and Services
- Chapter 5: Recreational, Educational, and Community Services
- Chapter 6: Historic Preservation
- Chapter 7: Environmental Resources

- Chapter 8: Health and Safety

The 2002 General Plan includes more land use designations than the 2035 General Plan and also has somewhat lower allowed density and development intensity compared to the 2035 General Plan. See Chapter 3, "Project Description," for detail on the Proposed Project and a contrast with the 2002 General Plan.

- Residential
  - Rural Residential, 2.0 dwelling units per acre (du/ac), 0.4 floor area ratio (FAR)
  - Very Low Density Residential, 1.0–4.0 du/ac, 0.3 FAR
  - Low Density Residential, 3.0–8.0 du/ac, 0.4 FAR
  - Medium-Low Density Residential, 5.0–12.0 du/ac, 0.5 FAR
  - Neighborhood Preservation, 3.0–8.0 du/ac, 0.5 FAR
  - Medium Density Residential, 8.0–16.0 du/ac, 0.50 FAR
  - Planned Neighborhood, 7. du/ac
  - High Density Residential, 16.0–25.0 du/ac, 0.5 FAR
- Commercial
  - Commercial/Residential Mixed Use, up to 25.0 du/ac, 0.6–1.5 FAR
  - Neighborhood Commercial, 0.5 FAR
  - Central Commercial, 5.0–12.0 du/ac, 4.0 FAR
  - General Commercial, 0.8 FAR
  - Service Commercial, 0.8 FAR
  - Highway Commercial, 0.5 FAR
- Industrial
  - Industrial, 0.6 FAR
  - Business Park, 0.5 FAR
- Other
  - Public Service, 0.5 FAR
  - Open Space, 0.1 FAR

    - Agriculture, 0.4 FAR

- Urban Reserve

The Transportation and Circulation Element of the 2002 General Plan addresses the following topics:

- Street and Roadway System
- Residential Streets
- Automobile Parking
- Transit Facilities and Services
- Non-motorized Transportation
- Goods Movement
- Air Transportation

The 2002 General Plan was intended to create a transportation system that provides for the safe and efficient movement of people and goods. One of the major differences in policies between the 2002 General Plan and the 2035 General Plan is related to the Level of Service (LOS) policy. The 2002 General Plan requires maintenance of a LOS "C" or better in most places, while the 2035 General Plan requires the maintenance of LOS "D" or better in most places. Unlike the 2035 General Plan, the 2002 General Plan does not include a policy on vehicle miles traveled (VMT), a requirement to develop a transportation demand management ordinance, policies on Complete Streets, or a policy to reduce of the amount of land devoted to parking.

The Economic Development Element of the 2002 General Plan addresses the following topics:

- Business Retention and Expansion
- Business Attraction and Formation
- Downtown Economic Development
- Tourism

The 2035 General Plan and the 2002 General Plan have many similar goals and policies related to economic development. One of the differences is that the 2002 General Plan includes a set of policies focused on economic development in the Downtown to promote residential, office, and commercial growth in the area. In the 2035 General Plan, most goals and policies regarding development and economic growth in the Downtown are located in the Land Use, Community Design, and Historic Preservation Element. However, policies in the Economic Development Element do require that the City provide incentives for infill and to support Downtown businesses. The 2035 General Plan includes new policies that address fiscal sustainability, strong partnerships with entities such as University of California at Davis, and the provision of infrastructure to support new growth.

The Public Facilities and Services Element of the 2002 General Plan addresses the following topics:

- General Public Facilities and Services
- Public Facilities and Services Funding
- Water Supply and Delivery
- Wastewater Collection, Treatment, Disposal, and Reuse
- Stormwater Drainage
- Solid Waste Collection and Disposal

- Law Enforcement
- Fire Protection
- Public Utilities
- Information Technology

The 2002 General Plan and 2035 General Plan have similar goals and policies related to public facilities and services. The 2002 General Plan and 2035 General Plans strive to maintain the same law enforcement response times and the same fire protection rating. The 2002 General Plan has a policy of six acres of parks per 1,000 residents (in the Recreational, Educational, and Community Services Element as discussed below), whereas the 2035 General Plan establishes the goal of five acres of parkland per 1,000 residents. Compared to the 2002 General Plan parkland standard, the 2035 General Plan includes a lower park acreage standard due to increased park construction costs and the City's ability to adequately operate and maintain these facilities over time.

As mentioned above, the 2002 General Plan does not include a Healthy Community Element, but similar topics are addressed in the Recreational, Educational, and Community Services Element, which is organized into the following topics:

- Parks and Recreation Development Framework
- Diversity in Recreation
- Community/Senior Centers
- Education
- School Siting and Financing
- Child Care Supply and Quality
- Child Care Referral
- Elder Care; Libraries
- Arts and Culture
- Community Involvement and Participation
- Community Diversity
- Family and Youth

The Environmental Resources Element of the 2002 General Plan addresses the following topics:

- Water Resources
- Fish and Wildlife Habitat
- Vegetation
- Open Space for the Preservation of Natural Resources
- Air Quality-General
- Air Quality-Transportation

The 2002 General Plan and 2035 General Plan have similar goals and policies related to environmental resources, although the 2035 General Plan adds new policies that are more specific to certain resources and environmental concerns. Both the 2002 General Plan and the 2035 General Plan include policies to protect fish and wildlife habitat. Both include policies to encourage the protection of open space, and the 2035 General Plan includes policies specific to the protection of agricultural land and mineral and cultural resources. The 2035 General Plan includes a policy on the Surface Water Project, which was developed since the adoption of the 2002 General Plan.

The 2002 General Plan includes policies on air quality, but did not specifically address greenhouse gas emissions, which is addressed in the 2035 General Plan.

The Health and Safety Element of the 2002 General Plan addresses the following topics:

- Seismic and Geologic Hazards
- Flood Hazards and Protection
- Fire Hazards
- Aircraft Crash Hazards
- Hazardous Materials
- Emergency Response
- Noise

The 2002 General Plan and 2035 General Plan have similar goals and policies related to safety. The 2035 General Plan includes more detail than that in the 2002 General Plan related to development in flood hazard zones. In order to better balance between environmental noise and other planning objectives, including economic development and infill development in particular, noise policies have been revised under the 2035 General Plan. The 2002 General Plan was more stringent on noise policies compared to the 2035 General Plan for noise-sensitive uses.

The No Project Alternative also includes implementation of the Preliminary 2020 Climate Action Plan. The Preliminary 2020 Climate Action Plan is set to achieve emissions 15 percent below 2005 levels. This target is intended to approximate a return to 1990 emissions levels, consistent with the statewide target adopted in Assembly Bill 32. The Preliminary 2020 Climate Action Plan presents a set of community-generated strategies to guide the City of Woodland (City), its residents, and local businesses in reducing greenhouse gas (GHG) emissions consistent with state goals for 2020 addressing California's contributions to climate change. The Preliminary 2020 Climate Action Plan approach to GHG reductions was developed using input from community workshops and stakeholder meetings. The approach is organized into six focus areas:

- Energy
- Transportation and Land Use
- Urban Forest and Open Space
- Water and Solid Waste
- Public Involvement
- Municipal Operations

Most progress in reducing GHGs is expected to come from lowering energy use, using renewable energy, and reducing gas and diesel vehicle use. However, efforts in all areas are important to CAP implementation success.

As noted, the No Project Alternative is the 2002 General Plan, plus amendments that occurred prior to the initiation of the General Plan Update, and the Preliminary 2020 Climate Action Plan. The City Council approved one amendment, to the Housing Element, after initiation of the General Plan Update process. The City Council

amended the 2002 General Plan in 2009 to incorporate the 2008 Housing Element, and the City Council subsequently approved an updated Housing Element in 2013. The City submitted the 2013 Housing Element to the State Department of Housing and Community Development and received a letter dated August 8th, 2013 informing the City that the Housing Element met the statutory requirements of State housing element law. The City Council adopted the 2013 Housing Element on October 15, 2013. The 2013 Housing Element is included as a part of the No Project Alternative, and it uses as its base the 2002 General Plan land use designations (as amended) and the City's existing zoning.

The 2035 General Plan includes an updated Housing Element that provides an update on the City's progress toward meeting housing goals included in the 2013 Housing Element. Since adoption of the 2013 Housing Element, the City has re-zoned and re-designated land available for housing, approved affordable housing rehabilitation projects, amended some of the residential designations within the Spring Lake Specific Plan Area, facilitated two multi-family rehabilitation projects with affordability covenants, and issued building permits for other housing projects. However, the Housing Element's policies and programs have not been changed, except as necessary to reflect progress made on providing affordable housing and housing sites since adoption of the 2013 Housing Element.

5.4.2 THE PROPOSED PROJECT

5.4.2.1 THE EAST ALTERNATIVE

As explained in the preceding chapters, the East Alternative envisions growth occurring in the areas labeled SP-1A, SP-2, and SP-3 by 2035. SP-2 is a new development area in the eastern portion of the Planning Area that was designated Urban Reserve in the 2002 General Plan and that is not anticipated for development under the South Alternative. While the East Alternative expects that the entire acreage of SP-1A and SP-3 would develop, it assumes 25 percent of land designated as SP-2 would develop by 2035.

For the East Alternative, the General Plan envisions SP-1A to develop as mixed-use neighborhoods anchored by a research and technology business park located near the intersection of County Road 25 and State Route 113. The southern portion of SP-1B adjacent to the interchange at County Road 25A, is also expected to develop to complement the business park and commercial development in SP-1A. Residential development in SP-1B and SP-1C is not assumed as a part of the East Alternative.

SP-2 is located in the eastern portion of the Planning Area, south of Interstate 5, and east of the City's Water Pollution Control Facility (wastewater treatment plant). Development of SP-2 is only included as a part of the East Alternative. This is one of the primary differentiating features of these two Alternatives. Due to the distance from the Downtown area, SP-2 is envisioned to function as a sustainable "complete neighborhood" so that all daily needs (schools, parks, grocery stores, public facilities, etc.) are located within the Specific Plan Area. In addition, the 2035 General Plan includes policies related to the use of renewable energy and water conservation for SP-2, with the goal of achieving zero net energy at the building and neighborhood level. Policy 2.L.5 establishes the City's policy for development of SP-2 as it relates to land use mix, energy generation, and water conservation:

- **Policy 2.L.5 Specific Plan-2.** Encourage SP-2 to develop as a sustainable "complete neighborhood" with a town center so that most daily needs can be met within the Specific Plan Area. Promote the use of renewable energy sources and water conservation tools to achieve zero net energy buildings. Secure an alternate site for

processing waste from the Pacific Coast Producers tomato processing plant prior to adoption of a Specific Plan for SP-2. If development occurs within the boundary of the odor buffer depicted in Figure 7-6, the developer must bear all costs associated with odor mitigation. A Specific Plan for SP-2 may not be approved until a comprehensive flood solution and supporting funding have been secured. No permits, entitlements, or subdivision maps may be approved until adequate progress has been made on the construction of a flood protection system that will provide an urban level of flood protection according to applicable State and Federal flood protection criteria. Through 2035, development shall be limited to a maximum of 25 percent (265 acres) of the total Specific Plan Area, located in the northwest portion of SP-2 and adequately buffered from the Water Pollution Control Facility.

SP-3 would develop in the same manner under the East Alternative as described for the South Alternative.

The East Alternative would also include significant infill development, particularly in the Downtown area and along major transportation corridors, as well as development within the existing Spring Lake Specific Plan Area.

The East Alternative anticipates approximately 19,300 new residents, 7,000 new housing units, 17,386,000 new square feet of non-residential building space, and 19,340 new jobs (Table 5-1). Of the non-residential square footage, 76 percent is anticipated to occur in infill locations under the East Alternative, particularly in the Downtown area (compared to 72 percent for the No Project Alternative and 80 percent for the South Alternative) (Table 5-4). For residential development, the East Alternative anticipates that 51 percent of the new dwelling units would occur in infill locations within existing city limits but not including the Spring Lake Specific Plan Area (compared to 60 percent for the No Project Alternative and 65 percent for the South Alternative) (Table 5-4). The East Alternative includes the same amount of non-residential and residential development in the Spring Lake Specific Plan Area as the No Project Alternative and South Alternative.

5.4.2.2 THE SOUTH ALTERNATIVE

As explained in the preceding chapters, the South Alternative envisions growth occurring in the areas labeled SP-1A, SP-1B, SP-1C, and SP-3 by 2035. The South Alternative would have the City grow primarily in the southern area, in those areas labeled SP-1A, 1B, and 1C, as well as in the north in the area labeled SP-3 (Exhibit 5-1). These areas are primarily used for agricultural purposes, consisting of large, rural, open, and minimally developed parcels and agricultural fields, and would be developed with mixed-uses, consisting of research and technology business parks, various residential and commercial property types, and public facilities (schools, libraries, etc.).

For the South Alternative, the General Plan envisions SP-1A and SP-1B developing as mixed-use neighborhoods anchored by a research and technology business park located near the intersection of County Road (CR) 25 and State Route (SR) 113. The remainder of these sub-areas will have residential development interspersed with some open space and recreation areas. SP-1C is anticipated to be entirely residential, with a lower density of homes on larger lots.

SP-2 is located in the eastern portion of the Planning Area, south of Interstate 5, and east of the City's Water Pollution Control Facility (wastewater treatment plant). No development would occur in SP-2 under the South Alternative.

SP-3 is located generally north of Kentucky Avenue, south of Interstate 5, between CR 98 and the Northern Pacific railroad tracks. It is separated into two distinct sub areas, with SP-3A encompassing the eastern half of the

Specific Plan Area and SP-3B occupying the western half. The 2035 General Plan envisions that SP-3A will contain a mix of residential, commercial, office, and light industrial uses. Development of this area will provide amenities that serve not only new residents but also existing residents in nearby neighborhoods that lack convenient access to grocery options and community services. SP-3B will continue to be largely industrial with some low-density residential uses along CR 98. Additionally, transition areas will minimize compatibility concerns between residential, commercial and industrial uses. The boundaries of SP-3 contain developed residential areas that are currently in unincorporated portions of the County. The 2035 General Plan anticipates that these areas would be planned for annexation to the City.

The South Alternative would also include significant infill development, particularly in the Downtown area and along major transportation corridors, as well as development within the existing Spring Lake Specific Plan Area.

The South Alternative plans for approximately 19,300 new residents, 7,000 new housing units, 16,685,000 new square feet of non-residential building space, and 18,210 new jobs (Table 5-1). Of the non-residential square footage, 80 percent is anticipated to occur in infill locations, with the majority occurring in the Downtown area and Corridors, under the South Alternative (compared to 72 percent for the No Project Alternative and 76 percent for the East Alternative) (Table 5-4). For residential development, the South Alternative anticipates that 51 percent of the new dwelling units would occur in infill settings, particularly in the Downtown area and Corridors,(compared to 65 percent for the No Project Alternative and 40 percent for the East Alternative) (Table 5-4). The South Alternative includes same amount of non-residential and residential development in the Spring Lake Specific Plan Area as the No Project Alternative and East Alternative.

5.4.2.3 2035 CLIMATE ACTION PLAN

As detailed in Chapter 3 of this EIR, "Project Description," both the East and South Alternatives include implementation of the 2035 Climate Action Plan (2035 CAP).

The 2035 CAP builds on the foundation provided by the Preliminary 2020 Climate Action Plan. The 2035 CAP provides revised analysis of future community-wide emissions consistent with the General Plan's 2035 horizon year and demographic and land use assumptions associated with the 2035 General Plan. The previously calculated 2005 base year inventory and 2020 GHG emissions forecasts were updated to include community-wide solid waste emissions, which were previously unquantified in the Preliminary 2020 Climate Action Plan. Where feasible, the underlying assumptions used to develop the 2020 emissions forecasts and reduction strategy estimates were also used to develop the additional 2035 estimates, to maintain consistency in approach throughout the document. The 2035 CAP also includes several new longer-term strategies described in Chapter 4G (Additional Actions). One the most significant changes in the 2035 CAP compared to the Preliminary 2020 Climate Action Plan is the development of a longer-term reduction target and updated analysis and monitoring requirements to ensure that the City achieves this longer-term reduction target (for 2035). While the Preliminary 2020 Climate Action Plan includes a reduction target that is consistent with the State's own target for 2020, the 2035 CAP includes a 2035 reduction target that is consistent with the State's own targets for both 2030 and 2050. Upon adoption, the proposed Draft 2035 CAP will replace the Preliminary 2020 CAP.

5.5 EVALUATION OF ALTERNATIVES

Pursuant to Section 15126.6, the alternatives analysis provides a comparative analysis of the No Project Alternative to the project analysis presented throughout Chapter 4 of this EIR, "Environmental Impact Analysis."

As stated previously, this Chapter highlights some of the differences between the East Alternative and South Alternative relative to their potential environmental effects, but the reader is directed to Chapter 4 of this EIR, "Environmental Impact Analysis," for a full assessment of environmental impacts. The focus of this chapter is the impacts of the No Project Alternative as compared to the East Alternative and South Alternative for each resource area included in Chapter 4 of this EIR.

5.5.1 AESTHETICS AND VISUAL RESOURCES

Farmland provides scenic views in Woodland, and historic sites provide scenic resources. Each of the Alternatives anticipates development in areas that are currently farmland or vacant land. The farmland in the Planning Area and surrounding the Planning Area provides scenic views when viewed from certain vantage points. As a result of new development, some of the properties that had been adjacent to farmland will be adjacent to new development instead. Based on where the South Alternative anticipates new growth, the South Alternative would have the most impact on views in the southern portion of the Planning Area, and the East Alternative would have the most impact on views in the east. All three Alternatives would have similar impacts on views in the west and north.

Woodland's historical scenic resources are usually one to three stories high and not visible from a distance. Development under each of the Alternatives would likely not have an adverse effect on scenic resources, unless new development replaced or directly modified the resources. Each of the Alternatives include policies to protect historical resources, therefore the Alternatives are expected to have similar impacts on historical scenic resources.

There are no state scenic highways in the Planning Area, therefore none of the Alternatives would impact scenic resources within a state scenic highway.

In general, either Alternative of the Proposed Project would provide for more residential and non-residential development than the No Project Alternative, therefore both the East and South Alternatives of the Proposed Project would likely change the visual character of Woodland more than the No Project Alternative. Table 5-5 shows the expected new development under each Alternative in different areas of Woodland.

Table 5-5. Expected New Development in Each Alternative[1,2]

	Units			Non-Residential Square Feet		
Area	No Project	East	South	No Project	East	South
Downtown	100	550	1,000	163,000	266,000	484,000
Corridors & Other Infill	528	440	950	722,000	3,878,000	3,700,000
Spring Lake	2,595	2,600	2,600	530,000	530,000	530,000
Industrial Only	0	0	0	2,589,000	8,552,000	8,552,000
SP-1	2,182	1,600	2,200	439,000	2,358,000	2,376,000
SP-2[3]	0	1,600	0	0	865,000	0
SP-3	13	210	250	1,102,000	937,000	1,043,000
TOTAL	**5,418**	**7,000**	**7,000**	**5,545,000**	**17,386,000**	**16,685,000**

Notes:
[1] To calculate development yields for the 2035 General Plan Alternatives, a mid-range density/intensity was generally assumed for each land use designation. For the Downtown Mixed Use designation (DX), which has no specified residential density limit and an estimated maximum achievable density of 40 dwelling units per acre, a mid-range density of 30.0 dwelling units per acre was assumed. For the Corridor Mixed Use designation (CX) which allows densities from 20.0 to 40.0 dwelling units per acre, a residential density of 14.0 dwelling units per acre was assumed to account for instances when lower-density development may be allowed due to proximity to low density residential development. For Specific Plan Areas, a residential density of 8.0 dwelling units per acre was assumed, except in SP-1C, where a lower density of 3.0 dwelling acres per unit was assumed.
[2] Assumptions were made regarding the percentage of vacant and underutilized land that is expected to develop for each land use designation under the 2035 General Plan. These percentages were based on characteristics of available sites as well as City and industry development trends.
[3] The East Alternative assumes only 25 percent of land designated as SP-2 will develop by 2035.
Source: Dyett and Bhatia 2016

In addition, all three Alternatives plan for greenfield development, which affects the visual character of Woodland. Table 5-6 shows the amount of farmland that would be converted in new growth areas under each Alternative. The No Project Alternative would convert the least amount of farmland in new growth areas (1,020 acres), and the East and South Alternatives would both convert similar amounts. The East Alternative would convert 1,253 acres, and the South Alternative would convert 1,219 acres. The different areas of the Planning Area affected by growth are explained below.

- Southern area of ULL: A significant portion of the growth expected under each Alternative is in the southern area of the ULL. The East Alternative anticipates growth in SP-1A and portions of SP-1B, the South Alternative anticipates growth in all of SP-1C, and the No Project Alternative anticipates growth in the northern portion of this area. Therefore, the South Alternative plans for the most greenfield development in this area, and the East Alternative plans for the least.

- Eastern area of ULL: The No Project Alternative designates this area Urban Reserve. Both the East and South Alternatives plan for greenfield development along County Route 102 and I-5, and the Eastern Alternative plans for greenfield development in SP-2. Therefore, the East Alternative plans for the most greenfield development in this area, and the No Project plans for the least amount.

- Northern area of ULL: The No Project Alternative land use diagram leaves Undesignated most of the land that the East and South Alternatives designate FSA. All three Alternatives plan for growth in the areas labeled SP-3A and SP-3B. Therefore, all three Alternatives have similar impacts in the northern portion of the ULL.

Table 5-6. Acres of Prime, Statewide, Unique Farmland Converted in New Growth Areas in Each Alternative

	No Project Alternative	East Alternative	South Alternative
SP-1	618.2	516.6	816.4
SP-2	0.0	334.6	0.0
SP-3	402.1	402.1	402.1
Total	**1,020.3**	**1,253.3**	**1,218.5**

Source: Farmland Mapping and Monitoring Project 2012; City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013; Dyett & Bhatia 2016.

The East and South Alternatives plan for more infill development than the No Project Alternative in Downtown, along major corridors and other infill areas, the Spring Lake Specific Plan Area, and the northeast industrial portion of the Planning Area. While the 2035 General Plan makes assumptions about the amount and type of infill development that may occur through the planning horizon year (2035), the precise quantity and location is not known. The focus on infill development could result in a greater degree of visual change compared to existing conditions. However, these changes are not necessarily representative of an adverse physical environmental effect. New investment in urban infill areas typically improves visual quality by developing vacant or underutilized properties and improving maintenance of existing structures and yards. In addition, new policies in the Land Use, Community Design, and Historic Preservation Element in the East and South Alternatives ensure that new development would be consistent with existing neighborhoods and reviewed for design and that historical resources would be protected. The East and South Alternatives have greater impacts on visual character than the No Project Alternative.

The Alternatives will likely result in additional light and glare during the construction and operations of new development. The East and South Alternatives anticipate more development than the No Project Alternative, therefore they are expected to have a greater impact on light and glare. Mitigation Measure 4.1-4 adds new policies to the East and South Alternatives that reduce spill-over lighting and glare, but they will still result in an increase in light and glare. The No Project Alternative plans for less growth, but it does not include a mitigation measure. Therefore, each of the Alternatives would have a **significant** impact related to light and glare.

5.5.2 AGRICULTURE

Development of any of the Alternatives would result in a **significant** and unavoidable impact on agricultural resources, as all would require some conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to urban uses. Both the East and South Alternatives would result in more residential and non-residential development on farmland than the No Project Alternative. However, the location of growth is the greatest determinant for farmland conversion for all three Alternatives. The No Project Alternative is expected to convert all farmland in the Planning Area except for land designated in the current General Plan as Urban Reserve and Undesignated. The East Alternative is expected to convert all farmland except for farmland in portions of SP-1B (north of the highway interchange), SP-1C, and portions of SP-2 (approximately 75 percent). The South Alternative is expected to convert all farmland except for land in SP-2. Exhibit 5-3 shows the type of farmland in the Planning Area, including in the new growth areas.

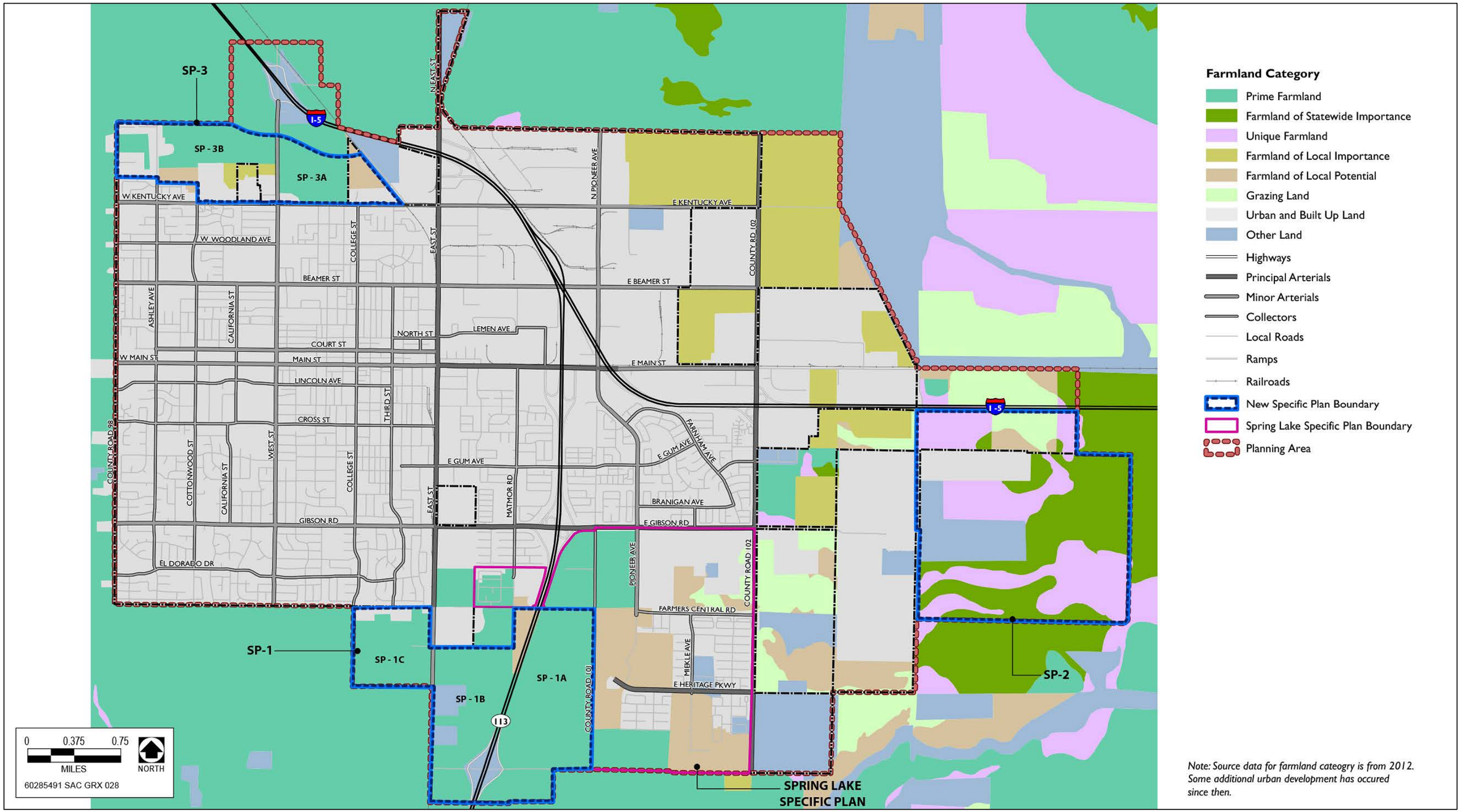
Table 5-7 shows the approximate amount of farmland expected to be converted under each Alternative. These values are estimates—the exact footprint of future development and the amount of farmland converted is not known. This assumes that for each Alternative, farmland that is in an area anticipated for development will be converted, even if the farmland is in a Flood Study Area. Assuming that all of the Flood Study Area farmland is ultimately converted represents a conservative approach, because it is not known how much of the land in the Flood Study Area may ultimately be required for flood-related infrastructure; portions of it may well remain as farmland in perpetuity. The No Project Alternative is expected to result in the conversion of the least amount of farmland (1,262 acres). The East Alternative is expected to result in the conversion of approximately 1,561 acres of farmland, and the South Alternative is expected to result in the conversion of approximately 1,612 acres of farmland. Therefore, the East Alternative is expected to result in the conversion of 50 fewer acres than the South Alternative.

The 2035 General Plan includes an agricultural mitigation program requiring one acre of farmland to be permanently conserved for every acre converted. Mitigation Measure 4.2-1 modifies the policy by requiring the conserved farmland to be of the same or better type of farmland than the farmland that is being converted. The No Project Alternative does not include this policy. However, all Alternatives would result in the conversion of farmland, including Prime Farmland, having a **significant** and unavoidable impact.

Table 5-7. Acres of Farmland Converted in Each Alternative

	No Project Alternative	East Alternative	South Alternative
Prime Farmland	1,232	1,339	1,545
Farmland of Statewide Importance	3	38	26
Unique Farmland	27	184	41
Total Prime, Statewide, Unique Farmland	1,262	1,561	1,612

Source: Farmland Mapping and Monitoring Project 2012; City of Woodland 2013; Yolo County 2013; SACOG Mapping Center 2013; Dyett & Bhatia 2016.



Source: FMMP 2012; City of Woodland 2013; Yolo County2013; SACOG Mapping Center 2013; Dyett & Bhatia 2013

Exhibit 5-3. **Prime Farmland**

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None of the Alternatives would result in the conversion of farmland under Williamson Act contracts or conflict with existing zoning. Both the East and South Alternatives include land use designations for land currently within the unincorporated area of the county that differ with the land use designations in the Yolo County 2030 General Plan. However, the City's proposed land use changes would have no effect unless annexation occurred, in which case the City would then have jurisdiction. Each Alternative has a **less-than-significant** impact on existing zoning and Williamson Act contracts.

All of the Alternatives support the protection of farmland and the agricultural industry. However, each Alternative would result in farmland conversion. Therefore, each has a **significant** impact related to changes that could result in conversion of farmland.

5.5.3 AIR QUALITY

5.5.3.1 SHORT-TERM CONSTRUCTION-RELATED EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS

Emissions of criteria air pollutants and precursors (ROG [reactive organic gases], NO_X [oxides of nitrogen], PM_{10} [respirable particulate matter], and $PM_{2.5}$ [fine particulate matter]) resulting from construction activities under the No Project Alternative, the East Alternative, and the South Alternative could violate an ambient air quality standard or contribute substantially to an existing or predicted air quality violation.

The No Project Alternative would include less development than the East and South Alternatives in terms of number of dwelling units, added population, amount of new non-residential square footage, and number of employees. Since less building activity occurs under the No Project Alternative, short-term emissions during the building phase of construction would be lower. However, the acreage of land disturbed during construction also factors into the level of short-term air pollutant emissions. The actual number of acres subject to development or installation of infrastructure improvement would depend on many factors, including those outside the City's control. However, the following estimates are presented for the purposes of this Alternatives comparison.

- **No Project Alternative**: approximately 3,080 acres potentially subject to development, 18 percent less than the East Alternative and 2 percent more than the South Alternative.
- **East Alternative**: approximately 3,640 acres potentially subject to development, 18 percent more than the No Project Alternative and 20 percent more than the South Alternative.
- **South Alternative**: approximately 3,030 acres potentially subject to development, 2 percent less than the No Project Alternative and 17 percent less than the East Alternative.

Construction-related activities, such as site preparation (e.g., excavation, grading, and clearing), demolition and renovation, building construction, and grading among others would require the use of off-road equipment, material delivery trucks, and construction worker vehicles that would result in temporary exhaust emissions. This includes construction emissions associated with development in addition to short-term emissions associated with equipment upgrades, renewable energy facility installations, energy efficiency building upgrades, tree planting, and other measures included in the City's 2035 CAP. Ozone precursors are primarily with exhaust from construction equipment and off-gassing from architectural coatings for buildings and asphalt used for asphalt paving. Fugitive dust emissions are associated primarily with site preparation and vary as a function of soil silt

content, soil moisture, wind speed, acreage of disturbance, and vehicle trips. Most fugitive dust is generated during the grading phase.

All of the Alternatives would be expected to result in criteria air pollutant emissions that exceed Yolo-Solano Air Quality Management District (YSAQMD) thresholds. Since the South Alternative would involve a reduced amount of area of land disturbance, the emissions during trenching, grading, and site preparation would be slightly less than the No Project Alternative and East Alternative. Since the No Project Alternative would have less building construction compared to the East Alternative and South Alternative, emissions during building construction and architectural coatings would be reduced compared to the other Alternatives.

Tables 5-8 and 5-9 summarize the modeled emissions of ROG, NO_X, PM_{10} and $PM_{2.5}$ associated with construction under the East Alternative and South Alternative, respectively. Both construction of the East Alternative and South Alternative would result in emissions of criteria air pollutants and precursors that exceed YSAQMD thresholds. The No Project Alternative would also be expected to exceed these thresholds.

Table 5-8. Criteria Air Pollutant and Precursor Construction Emissions, East Alternative

	Emissions (tons/year)[1]		Emissions (lbs/day)[2]	
Source	ROG	NO_X	PM_{10}	$PM_{2.5}$
Year 2017 [3]	54.15	16.62	645.42	80.09
YSAQMD Threshold of Significance	10	10	80	–
Exceeds Threshold?	Yes	Yes	Yes	–

Notes: lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; YSAQMD = Yolo-Solano Air Quality Management District
[1] YSAQMD's ROG and NO_X thresholds of significance are in units of tons per year.
[2] YSAQMD's PM_{10} threshold of significance is in units of pounds per day.
[3] Construction emissions assume that 25 percent of all East Alternative land uses are developed in the earliest possible construction year (2017).
Source: AECOM 2016; See Appendix C for detailed construction assumptions and modeling outputs.

YSAQMD recommends that lead agencies incorporate construction mitigation measures, and the Proposed Project has policies that would reduce this impact. However, given the scale of the East Alternative and South Alternative, it is not possible to determine with accuracy whether potential construction impacts would be below relevant significance thresholds throughout the planning horizon. The impact is considered **significant and unavoidable** for the East Alternative and South Alternative, as well as the No Project Alternative.

Table 5-9. Criteria Air Pollutant and Precursor Construction Emissions, South Alternative

	Emissions (tons/year)[1]		Emissions (lbs./day)[2]	
Source	ROG	NO_X	PM_{10}	$PM_{2.5}$
Year 2017 [3]	52.92	16.41	626.50	78.14
YSAQMD Threshold of Significance	10	10	80	–
Exceeds Threshold?	Yes	Yes	Yes	–

Notes: ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; YSAQMD = Yolo-Solano Air Quality Management District
[1] YSAQMD's ROG and NO_X thresholds of significance are in units of tons per year.
[2] YSAQMD's PM_{10} threshold of significance is in units of pounds per day.
[3] Construction emissions assume that 25 percent of all South Alternative land uses are developed in the earliest possible construction year (2017).
Source: AECOM 2016; See Appendix C for detailed construction assumptions and modeling outputs.

5.5.3.2 LONG-TERM OPERATIONAL EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS

Long-term operational emissions would be generated from day-to-day activities associated with residential and non-residential land uses under the No Project Alternative, East Alternative, and South Alternative. Operation of the East Alternative and South Alternative would result in emissions of criteria air pollutants and precursors that exceed YSAQMD thresholds. The No Project Alternative would include less residential and non-residential development than the East Alternative and South Alternative, but it could still result in criteria air pollutant emissions that exceed YSAQMD thresholds.

Proposed 2035 General Plan policies would reduce potentially significant impacts, but not to a level that would be below relevant thresholds. The No Project Alternative includes similar policies. The No Project, East, and South Alternatives would all result in **significant** operational air quality impacts; however, the Proposed Project would support a greater number of residents and businesses than the No Project Alternative. The impact is **significant and unavoidable** for the Proposed Project. Given the level of development anticipated under the No Project Alternative, this impact would be **significant and unavoidable**, as well.

The Preliminary 2020 Climate Action Plan (under the No Project Alternative) and the 2035 CAP (under the East and South Alternative) would each have co-benefits related to air pollutant emissions reductions. The level of reduction attributable would be similar in proportion to the criteria air pollutant emissions and impacts would remain **significant** even with implementation of either version of the CAP.

Tables 5-10 and 5-11 present the long-term operational emissions under the East Alternative and South Alternative, respectively. The East Alternative includes the most amount of development in terms of total dwelling units, non-residential square footage, and jobs added, as compared to the South Alternative and would generate more emissions than the South Alternative. The South Alternative includes the same amount of residential development, but not as much non-residential development, and therefore would have fewer emissions as compared to the East Alternative. It is anticipated based on the reduced number of dwelling units and non-residential square footage associated with the No Project Alternative, its annual and daily operational emissions would be less than those shown below for the East Alternative and South Alternative, but would also exceed YSAQMD thresholds of significance.

Table 5-10. Long-Term Operational Emissions, East Alternative

Emissions Source	Annual Emissions (tons/year)		Daily Emissions (lbs/day)	
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	793.13	9.46	2,758.42	2,758.36
Energy	2.04	18.24	7.57	7.57
Mobile	5.64	37.03	2.03	1.90
Total Operational Emissions [1]	800.80	64.72	2,768.02	2,767.83
YSAQMD Thresholds of Significance	10	10	80	–
Exceeds Thresholds?	Yes	Yes	Yes	–

Notes: lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; YSAQMD = Yolo-Solano Air Quality Management District
See Appendix C for detailed modeling assumptions, outputs, and results.
[1] Operational emissions were modeled for year 2035 when the Proposed Project is anticipated to be built out.
Source: AECOM 2016

Table 5-11. Long-Term Operational Emissions, South Alternative				
Emissions Source	Annual Emissions (tons/year)		Daily Emissions (lbs/day)	
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area	790.78	9.47	2,758.42	2,758.36
Energy	2.0	17.91	7.57	7.57
Mobile	5.47	35.99	1.97	1.84
Total Operational Emissions [1]	798.25	63.37	2,767.96	2,767.77
YSAQMD Thresholds of Significance	10	10	80	–
Exceeds Thresholds?	Yes	Yes	Yes	–

Notes: lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; YSAQMD = Yolo-Solano Air Quality Management District
See Appendix C for detailed modeling assumptions, outputs, and results.
[1] Operational emissions were modeled for year 2035 when the Proposed Project is anticipated to be built out.
Source: AECOM 2016

5.5.3.3 EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS

The No Project Alternative would include less residential and non-residential development and fewer acres of land that would be disturbed by construction activities compared to the East Alternative and South Alternative. Therefore, the No Project Alternative would result in fewer construction emissions than the East Alternative and South Alternative. Accordingly, it is anticipated that the No Project Alternative would generally create fewer construction-related TAC emissions compared to the East Alternative and South Alternative.

Project-related vehicle trips under each of the Alternatives would contribute vehicles to local intersections, but not at volumes that could cause a carbon monoxide hotspot. During construction and operation of each of the Alternatives, localized air quality emissions would be generated that could affect existing and proposed sensitive receptors. Construction activities would generate diesel particulate matter (diesel PM) emissions that could affect existing and proposed sensitive receptors. Operation of new land uses may result in new stationary sources of toxic air contaminants. In addition, development would contribute vehicle traffic on these roadways, which could increase the potential health risk for sensitive receptors that are located immediately adjacent to high-volume roadways. Existing regulations and proposed policies and implementation programs would reduce potential exposure to substantial pollutant concentrations. The impact is **less than significant** for the East and South Alternatives and the same is anticipated for the No Project Alternative.

Implementation of the No Project Alternative, East Alternative, and South Alternative would result in exposure of existing and proposed sensitive receptors to pollutants from construction activities, roadways, and stationary sources. As shown in Table 5-2, the No Project Alternative assumes 100 new housing units in the Downtown Area, compared to 550 under the East Alternative and 1,000 under the South Alternative. The increased amount of Downtown infill development under the South Alternative as compared with the other Alternatives could mean potentially increased exposure to pollutant concentrations – both for newly developed residential development in the Downtown area and also for existing residential development that is located in or directly adjacent to the Downtown area. However, Downtown infill development is also intended to reduce mobile-source emissions by locating residents in proximity of jobs, amenities, and entertainment. However, because the use of off-road heavy-duty diesel equipment would be temporary and intermittent, and because of the highly dispersive properties of diesel PM (Zhu et al. 2002), construction-related TAC emissions associated with typical construction activities would not expose sensitive receptors to substantial concentrations of TACs. In addition, it is important to note that emissions from construction equipment would be reduced between present and 2035. In January 2001, EPA

promulgated a final rule to reduce emissions standards for heavy-duty diesel engines in 2007 and subsequent model years. These emissions standards represented a 90 percent reduction in particulate matter emissions in comparison to the emissions standards for the 2004 model year. In December 2004, the California Air Resources Board adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by the U.S. Environmental Protection Agency on May 11, 2004. As construction equipment continues to turnover and/or be retrofitted over time, diesel PM emissions associated with construction will continue to decrease.

For major corridors and other residential infill areas in the existing developed portion of the City, the No Project Alternative provides for approximately 530 housing units, while the East Alternative anticipates 440 units, and the South Alternative anticipates 950 units. Similar to the Downtown area, the increased focus on infill development under the South Alternative may mean that, compared with the No Project Alternative and the East Alternative, exposure to construction and operational pollutant concentrations could be somewhat higher for the South Alternative. In addition to residential receptors, other existing and proposed sensitive land uses such as schools, assisted living facilities, and hospitals (among others) could be exposed to higher levels of pollutants under the East Alternative and South Alternative compared to the less dense land use plans under the No Project Alternative. As noted, because the use of off-road heavy-duty diesel equipment would be temporary and intermittent, and because of the highly dispersive properties of diesel PM (Zhu et al. 2002), construction-related TAC emissions associated with typical construction activities would not expose sensitive receptors to substantial concentrations of TACs. Due to existing regulations, as construction equipment continues to turnover and/or be retrofitted over time, diesel PM emissions associated with construction will continue to decrease. However, this would be a **significant impact for all Alternatives**. There would be no differences in findings among the Alternatives for exposure to substantial pollutant concentrations.

5.5.4 BIOLOGICAL RESOURCES

Under the No Project Alternative, the City would be built out based on the 2002 General Plan, as amended (Exhibit 5-2). The City's 2002 General Plan land use diagram shows the areas identified in the 2035 General Plan as SP-1 and SP-3 as being developed. Most of the 2035 General Plan's SP-1B, SP-1A, and all of SP-1C are identified in the 2002 General Plan as a Planned Neighborhood and as the Spring Lake Specific Plan Area in the 2002 General Plan. The southernmost portion of SP-1B and SP-1C is identified as Undesignated. SP-3 is designated Industrial, Business Park, and Service Commercial in the City's 2002 General Plan. In effect, under the No Project Alternative, approximately 200 fewer acres and 112 fewer acres that are in agriculture and open space today would be converted to developed uses as under the East Alternative and the South Alternative, respectively. The East Alternative and the South Alternative include a new "Flood Study Area" in the northeastern portion of the Planning Area near the Cache Creek Settling Basin, whereas the No Project Alternative identifies this area as Undesignated. The No Project Alternative does not anticipate development of the SP-2 area and instead designates this area as Urban Reserve.

Under the East Alternative, a greater amount of habitat loss would occur than the No Project Alternative because greater acreage of planned growth would occur in areas that are currently undeveloped. This additional planned growth would occur in the SP-2 area east of the current city boundary on parcels designated as Urban Reserve under the No Project Alternative. Implementing the East Alternative would therefore result in conversion of 2,009 acres of currently undeveloped land to developed land uses compared to 1,897 acres that would be developed under the No Project Alternative; a difference of 112 acres.

The primary differences between the No Project Alternative and the South Alternative, relative to biological resources, are that implementing the South Alternative would result in greater habitat losses than implementing the No Project Alternative because it would result in greater acreage of planned growth in areas that are currently undeveloped. This increased planned growth under the South Alternative is designated south and west of the Spring Lake Specific Plan Area (parts of SP-1A and SP-1B) in areas that are undesignated under the No Project Alternative. Implementing the No Project Alternative would result in conversion of 1,897 acres of currently undeveloped land to developed land uses compared to 2,097 acres that would be developed under the South Alternative; a difference of approximately 200 acres. Under the East Alternative, the residential portion of SP-1B and SP-1C would not be developed and would continue to be used for agriculture. Under the South Alternative, the SP-2 area would not be developed and would continue to be used for the cultivation of rice and other agricultural crops. With the exception of the SP-1B, SP-1C, and SP-2 areas, all other land use changes resulting from General Plan implementation would be the same under the Proposed Project through the year 2035. Implementing the East Alternative would result in conversion of 2,009 acres of currently undeveloped land to developed land uses compared to 2,097 acres that would be developed under the South Alternative – a difference of 88 acres.

The Proposed Project designates 617 acres of Open Space that currently consist of annual grasslands, alkali prairie, freshwater wetlands, open water, and existing parks and habitat preserves. Existing habitats would be retained in the designated Open Space areas and some of these lands (i.e., Woodland Regional Park) would be placed under permanent conservation easements. Under the No Project Alternative, the Woodland Regional Park is also designated as Open Space, but parcels to the north that also contain sensitive alkali prairie and freshwater wetlands and other natural habitats are designated as Urban Reserve. While these lands would not be designated as Open Space under the No Project Alternative, it is assumed that they would not be developed within the 2035 planning horizon and would continue to provide similar habitat functions as under the existing condition. In addition some of these areas are already protected habitat preserves (i.e., the City of Woodland Preserve and the Spring Lake Alkali Sink preserve).

5.5.4.1 PLANT SPECIES

Because the majority of previously documented special-status plant occurrences and suitable habitat for special-status plants are located within the Woodland Regional Park and adjacent parcels to the north that are designated as Open Space or Urban Reserve under the No Project Alternative, these areas are not planned for new growth under the No Project Alternative and there is no difference in the magnitude of potential effects to special-status species under the No Project Alternative compared to the East and South Alternatives, which would have **a less-than-significant** impact**.**

5.5.4.2 SPECIAL-STATUS WILDLIFE

Implementing the No Project Alternative, the East Alternative, and the South Alternative could result in direct removal or degradation of potentially suitable habitat for 20 special-status wildlife species. Implementation of the No Project Alternative would result in conversion of approximately 868 fewer acres than implementing the East Alternative and approximately 200 fewer acres of known and potential habitat for special-status wildlife species than implementing the South Alternative. Special-status wildlife species that could be adversely affected by buildout of the No Project Alternative are the same as those that could be affected by implementation of the East Alternative and South Alternative and the impact would be **less than significant under each Alternative** with

the incorporation of existing regulations and policies from each respective Alternative; however, the magnitude of potential effects are different for some species. This is especially true for giant garter snake and Swainson's hawk because additional acres of agricultural habitat that may be used by these species would be converted under the East Alternative and the South Alternative to developed land uses.

Because the majority of potential habitat for vernal pool species (i.e., vernal pool branchiopods and California tiger salamander) is located within the Woodland Regional Park and adjacent parcels to the north that are designated as Open Space or Urban Reserve under the No Project Alternative, these areas are not planned for new growth under the No Project Alternative, and there is no difference in the magnitude of potential effects to vernal pool species under the No Project Alternative compared to the East Alternative and South Alternative. Likewise, lands planned for new growth under the No Project Alternative have no greater or lesser potential to support valley elderberry longhorn beetle, western pond turtle, pallid bat, tricolored blackbird, grasshopper sparrow, western snowy plover, or purple martin.

Implementing the No Project Alternative would result in fewer acres of loss of agricultural habitat that could potentially support burrowing owl and northern harrier; however, nesting by these species would be restricted to margins of agricultural fields and rice fields do not provide suitable habitat for these species so the differences in magnitude of potential effect are relatively minor. Because the number of trees present within areas planned for development under the No Project Alternative is not substantially different than the number of trees present within the planned growth areas under the East Alternative or South Alternative, the potential effects to tree nesting birds is not substantially different either.

Species that may be subject to a lower magnitude of adverse effects as a result of implementing the No Project Alternative compared to the East Alternative or the South Alternative are discussed in further detail in the following sections.

Giant Garter Snake

Giant garter snake is known to occur in the vicinity of the Planning Area and has been documented in drainages that are connected to the Planning Area, particularly in the Yolo Bypass and Willow Slough near SP-2. Implementing the No Project Alternative would allow development in areas containing agricultural ditches and other waterways that provide dispersal habitat and possibly resident habitat for giant garter snake. Implementing the No Project Alternative would not result in loss of cultivated rice fields that provide suitable habitat for giant garter snake. Conversely, implementing the East Alternative would allow conversion of approximately 472 acres of cultivated rice fields that provide suitable habitat for giant garter snake in SP-2. Loss of rice fields would not happen with implementation of either the No Project Alternative or the South Alternative. All three Alternatives would allow development in areas containing agricultural ditches and other waterways that provide dispersal habitat and possibly resident habitat for giant garter snake. Therefore, based on this analysis, the No Project Alternative would have a substantially lower level of potential impact to giant garter snake than the East Alternative or the South Alternative.

Swainson's Hawk and Other Raptors

Implementing the No Project Alternative would result in conversion of additional acres approximately 868 fewer acres and 200 fewer acres of agricultural crops that provide foraging habitat for Swainson's hawk and other raptors than the East Alternative and the South Alternative, respectively. There is no suitable nesting habitat for

these species in SP-2, so potential effects to nesting habitat are the same under the No Project Alternative as under the East Alternative and the South Alternative. Removal of acreage of foraging habitat could reduce the small mammal prey base for Swainson's hawks and other raptors, including northern harrier and white-tailed kite. Large raptors generally require large areas of suitable foraging habitat, and a reduced prey base could eventually lead to displacement of some nesting Swainson's hawks if sufficient foraging habitat is no longer available. Therefore, implementing the No Project Alternative would have a lower level of potential impact to Swainson's hawk and other raptors than the East Alternative or the South Alternative.

Mountain Plover

Implementing the No Project Alternative would result in conversion of fewer acres of agricultural crops that provide potential wintering habitat for mountain plover compared to the East Alternative and South Alternative. Therefore, the No Project Alternative would have a lower level of potential impact to mountain plover than the East Alternative or the South Alternative.

Riparian habitat and other Sensitive Natural Communities, Federally Protected Wetlands, Wildlife Movement, Conflicts with City Ordinances

The No Project Alternative would have a similar level of potential effects on riparian habitat, wetlands, and other sensitive natural communities as the East and South Alternatives with the majority of these habitat types being located in areas designated as Open Space or Urban Reserve under each Alternative and therefore not planned for development within the 2035 planning horizon. The No Project Alternative has the same potential to interfere with wildlife movement corridors and nursery sites as the East Alternative and South Alternative, and a similar level of potential to affect trees protected under City ordinance.

5.5.5 CLIMATE CHANGE, GREENHOUSE GAS EMISSIONS, AND ENERGY

5.5.5.1 GENERATION OF GREENHOUSE GAS EMISSIONS

The No Project Alternative assumes less development, in terms of new dwelling units and new non-residential building square footage, than the East Alternative and the South Alternative. Therefore, the No Project Alternative would result in fewer greenhouse gas (GHG) emissions as compared to the East Alternative and South Alternative. The 2035 CAP, which applies to the East and South Alternatives, would ensure that GHG emission rates within Woodland are consistent with those necessary statewide to the State's own goals (see Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy" for details on the State's goals).

Each of the Alternatives would generate short-term construction-related GHG emissions. Construction-related activities, such as site preparation (e.g., excavation, grading, and clearing), demolition and renovation, building construction, and grading among others would require the use of off-road equipment, material delivery trucks, and construction worker vehicles that would result in temporary exhaust emissions. This includes construction emissions associated with development in addition to short-term emissions associated with equipment upgrades, renewable energy facility installations, energy efficiency building upgrades, tree planting, and other measures included in the City's 2035 CAP. Since the No Project Alternative would include less development than the East and South Alternatives in terms of number of dwelling units, added population, amount of new non-residential square footage, and number of employees. Since the amount of building activity under the No Project Alternative is lower than the East and South Alternatives, during this phase of construction, short-term GHG emissions would

be lower. However, the acreage of land disturbed during construction also factors into the level of short-term air pollutant emissions – if an alternative has a greater land area subject to development, this would require more grading and site preparation, and the amount of total GHG emissions associated with this phase of construction activity would be higher.

As shown in Table 5-1, the No Project Alternative would include less development than the East and South Alternatives in terms of number of dwelling units, added population, amount of new non-residential square footage, and number of employees. Since the amount of building activity under the No Project Alternative is lower than the East and South Alternatives, during this phase of construction, short-term emissions would be lower. Since the South Alternative has a smaller land area subject to construction than the No Project Alternative, GHG emissions during the site preparation and grading phases could be somewhat lower. Since both of these Alternatives have smaller potential development footprints compared to the East Alternative, GHG emissions during the site preparation and grading phases could be relatively lower. Construction emissions, however, are a very minor portion of the overall GHG emissions for the Alternatives.

Following buildout, long-term operational emissions would be generated from day-to-day activities associated with residential and non-residential land uses. The operational emissions relate to the amount of development planned under each Alternative. Transportation is the top source of GHG emissions both in the state of California and Woodland. Differences in vehicular travel demand are important to understand when considering the contrast among the Alternatives in total GHG emissions. The No Project's total *new* transportation-related emissions would be approximately 27 percent lower than the East Alternative and 25 percent lower than the South Alternative. The other main source of GHG emissions – energy demand – is related to the total amount of development planned. The No Project Alternative would add approximately 14,930 new residents and 8,170 local jobs to the Planning Area. This is approximately 40 percent less development than the East Alternative and 38 percent less than the South Alternative. The total new energy-related GHG emissions attributable to the No Project Alternative would be less than the other Alternatives by approximately these same proportions.

With policies in the 2035 General Plan and reduction strategies included in the 2035 CAP, the East and South Alternatives would be efficient enough to provide Woodland's fair share of the State's overall GHG emission reduction goals. The State of California has approved GHG emission reduction targets that apply to the State government (including AB 32, Executive Order B-30-15, and Executive Order S-3-05), and Woodland's 2035 CAP demonstrates that the rate of GHG emissions with implementation of the 2035 General Plan and 2035 CAP would be consistent with the State's targets. The contribution to the significant cumulative impact of climate change is **less than cumulatively considerable** for both the East and South Alternatives. The majority of emission reductions presented in the 2035 CAP (approximately 67 percent) are attributable to statewide GHG reduction measures, such as the Low Carbon Fuel Standard and the Renewable Energy Portfolio Standard. Statewide measures would apply to the No Project Alternative, as well as to the East and South Alternative. However, the local reduction measures included in the 2035 CAP would not apply to the No Project Alternative. Instead, the Preliminary 2020 CAP would apply to the No Project Alternative, and while this would demonstrate consistency with State emission reduction legislation for 2020, this would not allow the City to demonstrate consistency with the longer-term State goals for 2030 and 2050.

Table 5-12 presents the South Alternative's maximum annual GHG emissions, 2,538 MT CO_2e, and total construction-related emissions (10,154 MT CO_2e). Table 5-13 presents the annual operational emissions associated with the South Alternative and compares the GHG efficiency with the year 2035 statewide efficiency

threshold (2.25 MT CO_2e per service population per year). With consideration of the 2035 CAP, the City will achieve this target.

Table 5-12. Annual and Total Construction-Related GHG Emissions, South Alternative

Construction Phase/Category	Emissions (MT CO_2e/yr)[1]
Trenching	85
Grading	177
Site Preparation	113
Building Construction	2,032
Asphalt Paving	105
Architectural Coatings	25
Total Annual Construction Emissions	**2,538**
Total Proposed Project Construction Emissions (total MT CO_2e) [2]	10,154
Amortized Construction Emissions	338

Note: Totals may not add due to rounding.
[1] Emissions are shown in units of metric tons of carbon dioxide equivalent unless noted otherwise.
[2] Total construction emissions are estimated by multiplying the annual worst-case constructions, which represents construction emissions associated with development of 25 percent of the total proposed land uses, by four.
[3] Construction emissions are amortized over 30 years, which is the assumed lifetime of the Proposed Project.
Source: AECOM in 2016

The South Alternative includes more development in terms of new housing and new non-residential square footage, than the No Project Alternative and less development than the East Alternative. Therefore, the South Alternative's total GHG emissions would be greater than the No Project Alternative and slightly less than the East Alternative (see Table 5-13 below).

Table 5-13. Annual Operational GHG Emissions, South Alternative

Emissions Source	Emissions (MT CO_2e/yr)
Transportation	245,270
Energy	205,171
Wastewater Reuse	4,880
Municipal Energy Use	1,562
Municipal Transportation	1,643
Water and Wastewater	2,469
Solid Waste	25,616
Annual Operational Emissions	**486,611**
Annual Operational Emissions + Amortized Construction Emissions	**486,949**
Service Population (population + employment)	119,220
GHG Efficiency (MT CO_2e/SP/yr)	**4.08**
Emissions with 2035 CAP	268,200
State 2035 GHG Efficiency Threshold (MT CO_2e/SP/yr)	2.25

Note: MT CO_2e/yr = metric tons of carbon dioxide equivalent per year; SP = service population
Totals may not add due to rounding.
Source: AECOM in 2016

Table 5-14 presents the East Alternative's maximum annual construction-related emissions, 2,593 MT CO_2e, and total construction-related emissions, 10,371 MT CO_2e.

Table 5-14. Annual and Total Construction-Related GHG Emissions, East Alternative	
Construction Phase/Category	Emissions (MT CO_2e/yr)[1]
Trenching	85
Grading	177
Site Preparation	113
Building Construction	2,087
Asphalt Paving	105
Architectural Coatings	25
Total Annual Construction Emissions	2,593
Total Proposed Project Construction Emissions (total MT CO_2e) [2]	10,371
Amortized Construction Emissions[3]	346

Note: Totals may not add due to rounding.
[1] Emissions are shown in units of metric tons of carbon dioxide equivalent unless noted otherwise.
[2] Total construction emissions are estimated by multiplying the annual worst-case constructions, which represents construction emissions associated with development of 25 percent of the total proposed land uses, by four.
[3] Construction emissions are amortized over 30 years, which is the assumed lifetime of the Proposed Project.
Source: AECOM in 2016

Table 5-15 presents the annual operational emissions associated with the East Alternative and compares the Proposed Project's GHG efficiency with the year 2035 statewide efficiency threshold (2.25 MT CO_2e per service population per year). The East Alternative includes more development than the No Project Alternative and the South Alternative. Therefore, there would be more construction and more land use change that could result in more GHG emissions as compared to the No Project Alternative. The East Alternative would plan for slightly more development (new dwelling units and non-residential square footage) when compared to the South Alternative and emissions would be relatively higher as a result.

Table 5-15. Annual Operational GHG Emissions, East Alternative	
Emissions Source	Emissions (MT CO_2e/yr)
Transportation	247,390
Energy	206,353
Wastewater Reuse	4,880
Municipal Energy Use	1,562
Municipal Transportation	1,643
Water and Wastewater	2,469
Solid Waste	25,858
Annual Operational Emissions	490,155
Annual Operational Emissions + Amortized Construction Emissions	490,501
Service Population (population + employment)	120,330
GHG Efficiency (MT CO_2e/SP/yr)	4.08
Emissions with 2035 CAP	270,743
State 2035 GHG Efficiency Threshold (MT CO_2e/SP/yr)	2.25

Note: MT CO_2e/yr = metric tons of carbon dioxide equivalent per year; SP = service population. Totals may not add due to rounding.
Source: AECOM in 2016

With policies in the 2035 General Plan and reduction strategies included in the 2035 CAP, the East Alternative would be efficient enough to provide Woodland's fair share of the State's overall GHG emission reduction goals.

The State of California has approved GHG emission reduction targets. Implementation of both the 2035 General Plan and 2035 CAP would result in GHG emissions consistent with the State's targets. The majority of emission reductions presented in the 2035 CAP (approximately 67 percent) are attributable to statewide GHG reduction measures, such as the Low Carbon Fuel Standard and the Renewable Energy Portfolio Standard. Statewide measures would apply to the No Project Alternative, as well as to the Proposed Project. However, the local reduction measures included in the 2035 CAP would not apply to the No Project Alternative, since the 2035 CAP is being amended as a part of the Proposed Project. Instead, the Preliminary 2020 CAP would apply to the No Project Alternative, and while this would demonstrate consistency with State emission reduction legislation for 2020, this would not allow the City to demonstrate consistency with the longer-term State goals for 2030 and 2050. For 2035, the impact would be **less than cumulatively considerable under the East and South Alternatives** but **cumulatively considerable for the No Project Alternative**.

5.5.5.2 ENERGY CONSUMPTION

During construction and following buildout of the No Project Alternative, East Alternative, and South Alternative, energy would be consumed in the forms of fossil fuels and electricity. It is not anticipated that construction of the No Project Alternative, East Alternative, or South Alternative would use any atypical construction methods that would result in wasteful, inefficient, or unnecessary energy consumption. In addition, all land uses developed under the No Project Alternative, East Alternative, and South Alternative would be built to meet the current energy efficiency standards at the time of construction. Under all of the Alternatives, transportation would be the top user of energy overall.

However, the East and South Alternatives incorporate more policies that promote additional energy conservation and savings and renewable energy, when compared with the No Project Alternative. The Proposed Project's policies such as Policies 2.C.2, 2.C.3, 2.M.5, 2.M.6, 9.D.3, 9.D.4, and 9.D.5 would promote and encourage additional energy conservation and savings and renewable energy under the East Alternative and South Alternative, compared to the No Project Alternative with fewer energy-related policies. The South Alternative includes more of a focus on development in infill locations, such as areas with the Downtown Mixed Use and Corridor Mixed Use designations as compared to the No Project Alternative and East Alternative.

But, the intent of both the East and South Alternatives is to develop land uses in a pattern that will allow multi-modal access to new and existing land uses. Land uses developed in infill, mixed-use, and/or transit accessible areas would reduce vehicle miles traveled by allowing residents to use alternatives to vehicular travel, or reducing trip distances to access destinations and amenities. Even in new growth areas, policies in the East and South Alternatives call for "complete" communities where daily needs are located in proximity to residences, allowing access by pedestrian and cyclists and reducing trip distances and corresponding transportation energy use. Implementation of "complete communities" would reduce travel demand and promote more efficient use of energy. Conversely, with the less dense development under the No Project Alternative, it is anticipated that trip distances and corresponding average transportation energy use would be less efficient than the Proposed Project.

The use of energy can be an indirect indicator of potential physical adverse environmental effects (air quality, climate change, etc.), which are evaluated throughout this Chapter and the balance of this EIR. Applying the extensive body of regulatory requirements i.e., state and federal rules and regulations) would increase energy efficiency, reduce peak energy demand, and therefore reduce actual environmental effects associated with energy use for all of the Alternatives. As detailed in Section 4.5 of this EIR, "Climate Change, Greenhouse Gases, and

Energy," several existing regulations would apply to projects planned under the East and Alternative and South Alternative that would increase energy efficiency, reduce peak energy demand, and also address the actual physical adverse environmental effects associated with the use of energy.

Proposed policies that are intended to reduce travel demand and increase energy efficiency for the East and South Alternatives would reduce energy demand. The East and South Alternative both increase allowable density and development intensity compared to the No Project Alternative and also enhance the City's focus on promoting infill development. Of the non-residential square footage anticipated to develop under the No Project Alternative, 72 percent is anticipated to occur in infill locations (compared to 76 percent for the East Alternative and 80 percent for the South Alternative). For residential development, the No Project Alternative assumes approximately 630 new housing units Downtown and along major corridors and other infill locations (not including the Spring Lake Specific Plan Area) compared to 990 new dwelling units in these locations under the East Alternative and 1,950 dwelling units under the South Alternative. Policies 2.A.5, 2.A.6, 2.C.1, 2.C.3, 2.D.1, 2.I.2, 2.M.1, 2.M.2, 2.M.4, 3.E.2, 3.E.3, 3.E.4, 3.E.5, 3.F.1, 3.F.2, 3.F.3, 3.F.4, 3.F.6, 3.F.8, 3.K.3, 3.G.5, 3.K.4, 3.G.8, 7.F.8 either address the City's intent to reduce vehicular transportation demand and expand other mobility options or indirectly promote these goals by promoting more compact and mixed-use development that allows more trips by bicycle, on foot, or using transit, or by reducing the average distance of vehicular trips. The 2035 CAP includes reduction strategies T/LU-1, T/LU-2, and T/LU-3, which describe the City's Complete Streets Program, summarize the City's policy and regulatory approach to promote infill development, higher-density development, mixing residential and commercial uses, place services near homes, and transit-oriented and pedestrian- and bicycle-friendly development. In addition, 2035 CAP Strategy T/LU-4 focuses on reducing passenger and delivery vehicular trips; Strategy T/LU-5 promotes transit, walking, and bicycling; and Strategy T/LU-7 promotes alternative fuel vehicles.

The focus on compact development, infill development, mixed-use development, and non-vehicular modes of transportation would help to reduce demand for transportation energy per unit (e.g., dwelling unit or square foot of non-residential space) compared to the No Project Alternative. Policies to increase energy efficiency under the Proposed Project (i.e., Policies 2.C.2, 2.C.3, 2.M.5, 2.M.6, 9.D.3, and 9.D.4) are not included as a part of the No Project Alternative. In addition, the 2035 CAP includes GHG reduction strategies whose co-benefits include improving energy efficiency, including strategies E-1, E-2, E-3, E-4, E-5, and E-6, which are not a part of the No Project Alternative. While energy efficiency would be higher under the East and South Alternatives compared to the No Project Alternative, the impact would be **less than significant** under each Alternative.

5.5.5.3 CONSTRUCTION OF NEW ENERGY PRODUCTION OR TRANSMISSION FACILITIES

The No Project Alternative assumes less development than the East Alternative and the South Alternative. However, it is likely that development would require construction of new transmission facilities and infrastructure. Similar to the East Alternative and South Alternative, it cannot be accurately determined to what extent additional energy transmission facilities and infrastructure would be required to serve the proposed land uses. Construction of energy production and/or transmission facilities required to serve the No Project Alternative's proposed land uses could potentially result in **significant** environmental impacts. Because there is less development under the No Project Alternative, there would be less new energy production and/or transmission facilities that could potentially result in **significant** environmental impacts.

It is anticipated that during buildout of the East Alternative and South Alternative, construction of new transmission facilities and infrastructure may be required. At the time of this analysis, it cannot be accurately determined to what extent additional energy transmission facilities and infrastructure would be required to serve the proposed land uses. Therefore, without knowing the details of these energy production and supply projects, it is conservatively assumed that construction of new energy production and/or transmission facilities and infrastructure could potentially result in **significant** environmental impacts. It is unknown if construction of new energy production and transmission facilities would cause other significant environmental impacts or if mitigation would reduce impacts to a less-than-significant level.

The South Alternative includes more development than the No Project Alternative and less development than the East Alternative. Therefore, there would be slightly more need for new energy production and/or transmission facilities as compared to the No Project Alternative and less need for new energy production and/or transmission facilities as compared to the East Alternative. Any potentially significant environmental impacts resulting from construction of energy production and/or transmission facilities under the South Alternative would be greater than the No Project Alternative and less than the East Alternative.

The East Alternative includes more residential and non-residential development than the No Project Alternative and the same amount of new residential development, but more non-residential development than the South Alternative (see Table 5-1). Therefore, there would be more need for new energy production and/or transmission facilities as compared to the No Project Alternative and South Alternative. Any potentially significant environmental impacts resulting from construction of energy production and/or transmission facilities under the East Alternative would be greater than the No Project Alternative and South Alternative. All Alternatives' impacts, however, are associated with the environmental impact specific subsections of this Chapter (air quality, biological resources, etc.) and there is no additional significant effect beyond those already disclosed here. The impact is **less than significant** under all Alternatives.

5.5.6 CULTURAL RESOURCES

Each of the Alternatives would involve ground-disturbing construction in areas where the City anticipates infill development will happen during the planning horizon, as well as in the Specific Plan Areas. Development and infrastructure improvements within the developed portion of the city would involve grading, trenching, excavation, soil stockpiling, and other earthmoving activities that could impact previously unknown archaeological resources. Specific Plan Areas are primarily used for agricultural purposes, consisting of relatively large, rural, open, and minimally developed parcels and agricultural fields. All three Alternatives have the potential to affect unidentified cultural resources, like barns and residences located on rural properties that may presently or in the future have cultural significance, as well as prehistoric habitation sites, temporary camps, or milling stations, through demolition of existing properties and ground-disturbing activities.

The No Project Alternative, like the East Alternative and South Alternative, anticipates development in SP-1 and SP-3. The eastern portion of the Planning Area is in Urban Reserve, and therefore, impacts here would be the same between the No Project Alternative and the South Alternative, but less than for the East Alternative, which anticipates development of 25 percent of the SP-2 area. Development assumptions in the Spring Lake Specific Plan Area are the same among the Alternatives, and therefore, impacts would be the same. Overall, the South Alternative would have the least land area potentially subject to disturbance, relative to the No Project Alternative and the East Alternative (Table 5-1). Thus, there is less potential to encounter archaeological and historic

architectural resources that could be damaged or destroyed. However, the **potential for an impact is significant** under the No Project, as well as for the East Alternative and the South Alternative.

5.5.7 GEOLOGY, SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES

5.5.7.1 SEISMIC HAZARDS

Implementation of all three Alternatives could subject people and structures to hazards associated with strong seismic ground shaking and liquefaction. Because there would be less residential and non-residential development under the No Project Alternative, there would be fewer structures and less people that could be subject to hazards associated with strong seismic ground shaking and liquefaction as compared to the East Alternative and South Alternative.

However, the level of risk for each of the Alternatives is similar, since they are all in the same regional location and subject to the same overall level of seismic risk. In addition, both the 2002 General Plan and the 2035 General Plan have policies that, when combined with compliance with relevant laws and ordinances, would reduce the potential for loss or damage from seismic hazards. Therefore, the No Project Alternative and the Proposed Project would have similar impacts associated with seismic hazards. This impact is considered **less than significant** for the East Alternative and South Alternative, and the same conclusion would apply to the No Project Alternative.

5.5.7.2 SOIL EROSION

In general, soils throughout the Planning Area are rated with a low wind erosion hazard and a slight to moderate water erosion hazard. Thus, in general, alternatives involving different locations for development would still involve the same basic potential for erosion.

Buildout of planned land uses under the No Project Alternative as well as the Proposed Project would result in grading, excavation, and movement of earth associated with site preparation activities. These activities would increase soil erosion, especially from wind and water, and there is potential for siltation of local drainages. Both the 2002 General Plan and the 2035 General Plan have policies that, when combined with relevant laws and ordinances, would reduce the potential for soil erosion. Overall, the South Alternative would have the least land area potentially subject to disturbance, relative to the No Project Alternative and the East Alternative (Table 5-1). Therefore, the South Alternative would have less earth-moving activity that could cause soil erosion as compared to the No Project Alternative and the East Alternative. However, under any of the Alternatives, compliance with existing land use, stormwater, grading, and erosion control regulations are specifically designed to minimize soil erosion to the maximum extent feasible and with application of existing regulations, the potential impacts under each Alternative would be similar – **less than significant**.

5.5.7.3 GEOLOGIC HAZARDS RELATED TO UNSTABLE SOILS AND EXPANSIVE SOILS

The No Project Alternative would result in less development than the Proposed Project. Therefore, the No Project Alternative would have fewer buildings in areas of unstable soils or soils with high a shrink-swell potential.

Land use changes under the Proposed Project would result in the placement of buildings and infrastructure in areas of unstable soils or soils with a high shrink-swell potential. Based on a review of soil survey data, most of the soil types in the Planning Area have a moderate to very high shrink-swell potential, indicating that the soils are expansive. Because there would be less residential and non-residential development under the No Project

Alternative, there would be fewer structures that could be subject to hazards associated with unstable soils or soils with high a shrink-swell potential as compared to the East Alternative and South Alternative. However, the level of risk for each of the Alternatives is similar, since they are all in the same regional location and subject to the same overall level of risk. In addition, both the 2002 General Plan and the 2035 General Plan have policies that, when combined with relevant ordinances, would reduce impacts associated with unstable soils with a high shrink-shell potential. Therefore, the No Project Alternative and the East and South Alternatives would have similar impacts associated with geologic hazards – **less than significant**.

5.5.7.4 PALEONTOLOGICAL RESOURCES

Paleontological resources could occur in Pleistocene-age sediments that underlie portions of the Planning Area. These formations exist in the northern portion of the Planning Area, including in the SP-1A and SP-1B areas, in SP-2, in SP-3, and in the light industrial overlay area east of Interstate 5. Construction activities in these areas could result in damage to, or destruction of unknown subsurface paleontological resources.

The No Project Alternative, like the East Alternative and South Alternative, anticipates development in SP-1 and SP-3. The eastern portion of the Planning Area is in Urban Reserve, and therefore, impacts here would be the same between the No Project Alternative and the South Alternative, but less than for the East Alternative, which anticipates development of 25 percent of the SP-2 area. Development assumptions in the Spring Lake Specific Plan Area are the same among the Alternatives, and therefore, impacts would be the same. Overall, the South Alternative would have the least land area potentially subject to disturbance, relative to the No Project Alternative and the East Alternative (Table 5-1). Thus, there is less potential to damage to, or destruction of unknown subsurface paleontological resources under the South Alternative, when compared to the No Project Alternative and East Alternative, but the impact under each would be **significant**.

5.5.8 HAZARDOUS MATERIALS AND TOXICS

Impacts of hazardous materials would be similar under the each of the Alternatives. Implementation of existing federal and State regulations would reduce the potential impacts related to the routine transport, use, or disposal of hazardous materials; accidental release of hazardous materials; hazardous emissions near schools; existing hazardous materials sites; airport hazards; impaired implementation of emergency plans; and wildfires.

The East and South Alternatives would result in more residential and non-residential growth than the No Project Alternative. The increased amount of development would increase the frequency and amount of transport, use, and disposal of hazardous materials as well as the number of residents and workers at risk of impact from hazardous materials.

There are no known hazardous sites in any areas with planned development under any of the Alternatives. The South Alternative would result in the most infill, and the No Project Alternative would result in the least, among the Alternatives. The East and South Alternative both increase allowable density and development intensity compared to the No Project and also enhance the City's focus on promoting infill development. Of the non-residential square footage anticipated to develop under the No Project Alternative, 72 percent is anticipated to occur in infill locations (compared to 76 percent for the East Alternative and 80 percent for the South Alternative). For residential development, the No Project Alternative assumes approximately 630 new housing units Downtown and along major corridors and other infill locations (not including the Spring Lake Specific Plan Area) compared to 990 new dwelling units in these locations under the East Alternative and 1,950 dwelling units

under the South Alternative. For sites that may be identified as development as containing hazardous conditions in areas anticipated for infill development, proper cleanup and remedial action is required in accordance with Yolo County and State and federal regulations, which would result in **less-than-significant** impacts. Siting standards established by the California Department of Education and the Public Resources Code address hazardous materials within one-quarter mile of a school, whether in infill or greenfield settings.

The East Alternative anticipates growth in SP-2, a small portion of which is within the Secondary Approach Area of the ALUC policy boundaries. In this area, overflight notification is required for residential development, but there are **no significant impacts from airport hazards**. The other Alternatives do not contemplate development in the Secondary Approach Area.

Most of the Planning Area is non-wildland/non-urban area that is not at risk for wildland fires. The No Project Alternative and the Proposed Project would result in growth in SP-1A, which is adjacent to a Moderate Fire Hazard Severity Zone. Woodland's Municipal Code includes policies to reduce the risk of fire.

Due to the policies and land use diagrams of the East and South Alternatives and the 2002 General Plan, as well as existing federal and State regulations, impacts of hazardous materials would be **less than significant** under all Alternatives.

5.5.9 HYDROLOGY, FLOODING, AND WATER QUALITY

5.5.9.1 VIOLATION OF WATER QUALITY STANDARDS

The No Project Alternative and Proposed Project would result in impacts to long-term water quality caused by increased impervious surfaces and urban stormwater runoff. Both the No Project Alternative and the Proposed Project would include intensification of development on existing sites, demolition of existing structures with replacement land uses, and changes from undeveloped agricultural and open spaces lands to developed uses. Each type of land use change has the potential to alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Changes in land use to a more developed state, if not properly managed, can adversely affect water quality. Both the 2002 General Plan and the 2035 General Plan have policies, when combined with relevant regulations and ordinances, would reduce the potential impacts on water quality and therefore the impact among the three Alternatives would be similar **– less than significant**.

5.5.9.2 CONSTRUCTION-RELATED WATER QUALITY IMPACTS

The No Project Alternative and Proposed Project would result in impacts related to construction water quality. Many construction-related wastes have the potential to degrade existing water quality and beneficial uses by altering the dissolved oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment. Development would include substantial earth-disturbing activities (e.g., cut and fill, vegetation removal, grading, trenching, movement of soil) that could expose disturbed areas and stockpiled soils to winter rainfall and stormwater runoff. Although these construction activities would occur in soils that have a low erosion hazard due to the relatively flat topography and high soil clay content, areas of exposed or stockpiled soils could be subject to wind or water erosion, allowing temporary discharges of sediment into the storm drain system, and ultimately to the Yolo Bypass, Tule Canal, and Sacramento River.

Both the 2002 General Plan and the 2035 General Plan have policies, when combined with relevant regulations (such as the National Pollutant Discharge Elimination System permit program) and ordinances, would reduce the potential impacts on water quality and the impact among the three Alternatives would be similar – **significant.**

5.5.9.3 ON-SITE AND DOWNSTREAM EROSION AND SEDIMENTATION AND ALTERATION OF DRAINAGE PATTERNS

The addition of impervious surfaces and drainage infrastructure from urbanization results in increased runoff volumes and dry weather flows, increased frequency and number of runoff events, increased long-term cumulative duration of flows, as well as increased peak flows. New residential and non-residential development would primarily occur on existing vacant and agricultural lands that are primarily pervious. Infill residential development, as opposed to new growth, would result in less potential for increased stormwater runoff and associated water quality impacts than new growth on currently pervious, undeveloped land. However, the scale of both new growth and infill development would nonetheless have the potential to cause or contribute to an increase in long-term discharges of urban contaminants into the stormwater drainage system and ultimate receiving waters compared to existing conditions. The No Project Alternative and the Proposed Project would have similar impacts on drainage. This would be true after application of current grading, erosion, and flood control regulations and therefore the impact among the three Alternatives would be similar - **significant**.

5.5.9.4 GROUNDWATER RECHARGE

The dominant soil types in the Planning Area include Pescadera silty clay and Willows Clay. Loams with fine sediment typically have low infiltration rates. In addition, the Planning Area is not identified as a major groundwater recharge area. A minor source of groundwater recharge is rainfall infiltrating through the soil to the aquifer. If urban infrastructure (e.g., buildings, roads, parking areas) is built on top of soil with a high infiltration rate, it can result in a reduction in groundwater recharge.

Implementation of the No Project Alternative and the Proposed Project would result in additional impervious surfaces, which could reduce the amount of groundwater recharge and in turn, affect the yield of hydrologically connected wells. However, a substantial reduction in groundwater recharge is not anticipated. An increase in water demands and associated depletion of groundwater supplies could also result from the land use changes under the No Project Alternative and the Proposed Project; however, access to new surface water supplies and opportunities for conjunctive use through aquifer storage and recovery would result in a reduced reliance on groundwater supplies. Both the 2002 General Plan and the 2035 General Plan have policies, when combined with relevant regulations and ordinances, would reduce the potential impacts on groundwater recharge, and therefore the impact among the three Alternatives would be similar – **less than significant**.

5.5.9.5 FLOODING

State law requires development to mitigate risk in flood hazard areas. Table 5-16 shows an estimate of the amount of new residential and non-residential development anticipated in new growth and infill areas that are mostly or entirely located in the 200-year flood hazard area for the East Alternative, the South Alternative and the No Project Alternative. Beyond what is shown in Table 5-16, there are existing neighborhoods southwest of the intersection of East Street and West Kentucky Avenue that are planned for residential infill development in the flood hazard area.

The current approach to infill development in the flood hazard area would continue until a comprehensive flood solution is implemented. Individual projects would be permitted to proceed provided that they mitigate risk from flooding to an urban level of flood protection, consistent with FEMA and State requirements. Policies in the 2035 General Plan would additionally limit the risk of impacts from new residential and non-residential development in infill and new growth areas redirecting flood flows onto adjacent properties.

Planned development under both the East Alternative and the South Alternative would result in new residential development in SP-3A, most of which is in the flood hazard area. In addition, the East Alternative plans for residential development in SP-2, which is completely in the flood hazard area. However, Policy 2.B.2 of the 2035 General Plan prohibits development in SP-2 and SP-3A unless a comprehensive flood solution that reduces risk from flooding to an urban level of flood protection, consistent with State law, has been identified with funding secured. Therefore, residential and non-residential development in the flood hazard area in the new growth areas of SP-2 and SP-3A would not be at risk of flooding. In addition, all future development in flood hazard areas under each of the Alternatives must comply with State law in mitigating risk from flooding.

The No Project Alternative does not permit residential development in the flood hazard area. In conclusion, while the Proposed Project places some future development within flood hazard areas, State law and policies in the 2035 General Plan prohibit development from actually occurring in these areas until the flood risk is mitigated. Therefore, the impact of placing housing within a 200-year flood hazard area for each Alternative is **less than significant**.

The impacts are similar for structures that would impede flood flows in 200-year flood hazard areas. However, although the No Project Alternative does not permit residential development in the flood hazard area, it does allow non-residential development in the area designated for Industrial uses. Through compliance with existing regulations and implementation of the 2035 General Plan policies, impacts for both the East and South Alternatives would be **less than significant**.

Implementation of the East Alternative, the South Alternative, and the No Project Alternative could expose people or structures to **significant** risks due to flooding, including flooding as a result of the failure of a levee or dam. The lower Cache Creek levee system does not provide adequate protection from storm events greater than approximately the 30-year storm. The levee inundation area includes the northeast portion of the Planning Area for all Alternatives, as well as all of SP-2 under the East Alternative. However, under Policy 8.B.11 in the 2035 General Plan, development in levee inundation areas is required to conduct risk analyses of levee failure. The No Project Alternative includes a similar policy that reduces the risk of levee failure.

Table 5-16. Anticipated Development in Each Alternative Potentially in Flood Hazard Area						
	Residential Units			Non-Residential Square Feet		
Area	No Project	East	South	No Project	East	South
SP-2	0	1,605	0	0	864,695	0
SP-3A	0	198	198	572,939	114,246	220,272
Industrial (Northeastern portion of Planning Area)	0	0	0	2,588,553	8,552,316	8,552,316
TOTAL	**0**	**1,803**	**198**	**3,131,491**	**9,531,257**	**8,772,589**

Note: The Draft General Project prohibits development in SP-2 and SP-3A unless a comprehensive flood solution that reduces risk from flooding to an urban level of flood protection, consistent with State law, has been identified with funding secured. In addition, infill development in the flood hazard area is permitted to proceed provided that it mitigates risk from flooding to an urban flood level of protection, consistent with FEMA and State requirements, and does not create flood impacts on other properties. All development in flood hazard areas must comply with State requirements to mitigate flood risk.

Source: Dyett and Bhatia 2016; FEMA 2013.

Indian Valley Dam is located on the North Fork of Cache Creek, outside of the jurisdiction of the City of Woodland and located outside of the Planning Area. However, in the event of dam failure, portions of Woodland are at risk of flooding. The event of dam failure is unlikely, and currently, people and structures in western, northern, and eastern areas of Woodland are already exposed to the risk. 2035 General Plan Policy 8.A.4 requires the City to work with the Yolo County Flood Control and Water Conservation District to ensure the continued maintenance of the Indian Valley Dam in order to protect against potential dam failure. Policy 8.B.10 of the 2002 General Plan similarly requires the City to encourage the Yolo County Flood Control and Water Conservation District to maintain the Indian Valley Dam to protect against potential dam failure. The impact for each Alternative regarding levee and dam failure is **less than significant**.

Due to the Planning Area's location and topography, none of the Alternatives would expose people to the risks of a seiche, tsunami, or mudflow. The impact for each Alternative is **less than significant**.

5.5.10 LAND USE PLANNING, POPULATION, AND HOUSING

5.5.10.1 LAND USE PLANNING

None of the Alternatives would physically divide an established community. None propose a major linear infrastructure facility with the potential to divide a community. The East Alternative anticipates growth in SP-2, which will be separated by open space, public/quasi-public, and commercial uses from existing residential neighborhoods. However, SP-2 is in close proximity to regional commercial uses and jobs in the industrial area in the northeast portion of the Planning Area. In addition, the 2035 General Plan includes policies that reduce the potential for impact, by requiring the City to use corridors to connect neighborhoods, discourage wide highways, and locate truck routes outside of the city. Therefore, all three Alternatives have **less-than-significant impacts** on physically dividing a community.

Some of the land use designations of the No Project Alternative, East Alternative, and South Alternative differ with the Yolo County 2030 General Plan land use designations of unincorporated land in the Planning Area. Yolo County designates most land outside of the Woodland city limits for Agriculture, whereas none of the Alternatives include an Agriculture land use designation. Under each Alternative, annexation of this land to the City would resolve the conflict, therefore the impact is **less than significant**.

5.5.10.2 POPULATION AND HOUSING

The purpose of both the 2002 General Plan and the 2035 General Plan is to provide a framework for the orderly and efficient long-term growth within the City of Woodland and to avoid unplanned population and employment growth. Table 5-17 shows the new and overall development expected by 2035 for each Alternative. SACOG projects the City's population to increase to 66,041 people in 2035, and the number of housing units is expected to increase to 24,452. The Sacramento Area Council of Governments (SACOG) expects employment in the City to increase to 33,368 jobs. As shown in Table 5-17, the No Project Alternative and the Proposed Project exceed SACOG projections for population, housing, and employment.

As described in several subsections above, the No Project Alternative could add approximately 14,930 people, 5,420 dwelling units, 8,170 local jobs, and 5.5 million square feet of nonresidential development by 2035. As shown in Table 5-17, the No Project Alternative would result in a total of approximately 70,620 people, 25,400 dwelling units, 34,170 local jobs, and 25.4 million square feet of nonresidential development by 2035. The No Project Alternative would generate less population, housing, and employment than the East and South Alternatives (Table 5-17). Although non-residential development intensity (building square footage per acre) under the No Project Alternative is less than the East Alternative and South Alternative, the location of new non-residential development occurs in similar locations. Similar to the East Alternative and South Alternatives, most non-residential development would occur in the infill areas, with the majority occurring in the Industrial Area. The No Project Alternative would result in essentially the same amount of residential growth in SP-1 as under the South Alternative and approximately 36 percent more than under the East Alternative (Table 5-4). The amount of new residential growth in the Spring Lake Specific Plan Area would be the same under the No Project Alternative and the East and South Alternatives (Table 5-2).

Each of the two Project Alternatives focuses on growth being concentrated in different areas through 2035, either primarily in the South or primarily in the East. The South Alternative envisions growth occurring in the areas labeled SP-1A, SP-1B, SP-1C, and SP-3 by 2035. The South Alternative would have the City grow primarily in the southern area, in those areas labeled Specific Plan 1A, 1B, and 1C, as well as in the north, in the area labeled SP-3. The East Alternative, on the other hand, envisions growth occurring in the areas labeled SP-1A, SP-2, and SP-3 by 2035.

The East Alternative assumes a total population of approximately 19,300 people, 7,000 dwelling units, 19,340 local jobs, and 17.4 million square feet of nonresidential development. Therefore, the East Alternative is projected to generate the same population and housing growth but more employment than the South Alternative and more population and employment growth than the No Project Alternative (Table 5-17). The increase in non-residential development as compared to the South Alternative is a result of additional non-residential development in SP-3 (Table 5-3).

The South Alternative assumes a total population of approximately 19,300 people, 7,000 dwelling units, 18,210 local jobs, and 16.7 million square feet of nonresidential development. Therefore, the South Alternative is projected to generate less employment than the East Alternative, the same population growth as the East Alternative, and more population and employment growth than the No Project Alternative (Table 5-17). Compared to the East Alternative, more non-residential development would occur within the Downtown area, and no non-residential development would occur in SP-3 (Table 5-3).

Table 5-17. Summary of Anticipated Growth through General Plan Horizon (2035)							
		No Project Alternative		East Alternative		South Alternative	
Existing Conditions (2013)		New Growth	Total (2035)	New Growth	Total (2035)	New Growth	Total (2035)
Population	55,690	14,930	70,620	19,300	74,990	19,300	74,990
Housing Units	19,980	5,420	25,400	7,000	26,980	7,000	26,980
Non-Residential Square Footage	19,824,000	5,545,000	25,369,000	17,386,000	37,210,000	16,685,000	36,509,000
Jobs	26,000	8,170	34,170	19,340	45,340	18,210	44,210
Jobs/Housing Ratio	1.30	1.51	1.35	2.76	1.68	2.60	1.64
Source: Dyett & Bhatia 2016							

SACOG has developed population and employment projections that inform land use and transportation planning throughout the region. According to these projections, the number of housing units is expected to increase to 24,181 (SACOG 2016, Appendix E-3, page 165). SACOG expects employment in the city to increase to 33,027. Population, housing, and employment projections under the East and South Alternatives would be substantially higher than the SACOG projections for 2036. The employment and housing unit totals under the No Project Alternative, 34,170 and 25,400, are still higher than the SACOG forecast, but are very similar. The methodology and purpose of the City's estimate of development capacity under the Proposed Project is different from the methodology and purpose of SACOG's forecast for the purposes of the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). For example, SACOG collects general plan information from all the jurisdictions within its planning area and prepares estimates of what portion of each jurisdictions' general plan may be anticipated to develop by some certain year (such as 2036 for the most recent MTP/SCS). Woodland was in the process of updating the General Plan during the period when SACOG was last updating the MTP/SCS, so SACOG would not have had information about the 2035 General Plan to use in its forecasts.

As noted, the increase in housing and employment growth related to the East and South Alternatives exceeds the forecast included in SACOG's current MTP/SCS. This could be considered a growth-inducing impact if the City is successful in attracting more development than forecast by SACOG and if this, in turn, results in less overall development locating in other parts of the region. This may produce positive or negative environmental results. In addition, if growth in Woodland does exceed the forecasts in the SACOG MTP/SCS, but the total amount of development included in the MTP/SCS are correct for the region as a whole, this could make locations near Woodland relatively more attractive to development. Since the No Project Alternative would involve a similar level of new development as forecast by SACOG, these potential repercussions would not be anticipated for this Alternatives, in contrast to the East and South Alternatives. **The impact is significant for the East and South Alternatives and less than significant for the No Project Alternative.**

5.5.11 NOISE AND VIBRATION

5.5.11.1 SHORT-TERM NOISE GENERATION AND EXPOSURE

Implementation of each of the Alternatives would result in exposure of existing and proposed noise-sensitive land uses to noticeable increases in noise levels from construction activities. If construction activities were to occur during more noise-sensitive hours, construction source noise levels could also result in annoyance and/or sleep disruption to occupants of existing and proposed noise-sensitive land uses, and could create a substantial temporary increase in ambient noise levels. The East and South Alternatives include policies, and this EIR

proposes an implementation program to reduce exposure of noise-sensitive uses to construction noise. This implementation program would reduce temporary construction noise impacts but cannot avoid the impact.

As shown in Table 5-2, the No Project Alternative would permit 100 new housing units in the Downtown Area, compared to 550 under the East Alternative and 1,000 under the South Alternative. The No Project includes the least non-residential development activity in the Downtown area, also, compared to the East and South Alternative. The No Project Alternative anticipates 163,000 square feet of non-residential development compared to 266,000 under the East Alternative and 484,000 under the South Alternative. With the relatively lower level of development, the No Project Alternative would reduce both exposure of newly developed residential uses to sources of noise Downtown as well as existing residential uses in the area to new construction Downtown.

For major corridors and other residential infill areas in the existing developed portion of the City, the No Project Alternative would permit approximately 530 housing units, while the East Alternative would permit 440 units, and the South Alternative plans for 950 units. Similar to the situation for the Downtown area, the No Project Alternative, when compared to the Proposed Project, would result in less temporary noise levels for newly developed noise-sensitive land uses and existing adjacent noise-sensitive land uses that may be exposed to construction noise associated with residential and non-residential development under the East and South Alternatives. However, impacts related to sensitive receptors from short-term noise generating uses under the East and South Alternatives are considered **significant and unavoidable** and since there would be development activity potentially in areas near existing noise sensitive receptors, the impact under the No Project Alternative is also considered **significant and unavoidable**.

5.5.11.2 LONG-TERM NOISE GENERATION AND EXPOSURE

Development under each of the Alternatives would generate and attract vehicular traffic, which would increase traffic noise levels along existing and future roadways, as well as increase noise related to landscape and building maintenance activities (e.g., hand tools, power tools, lawn and garden equipment); voices; whistles, amplified voices, and other sounds associated with sporting or other organized activities; amplified music; mechanical equipment (e.g., pumps, generators heating, ventilation, and cooling systems); loading dock activities; parking lots; safety and warning devices; garbage collection; and other noise sources. Each of the Alternatives would allow the development of noise-sensitive uses that could potentially locate in areas exposed to existing or future sources of noise and each Alternative would have **significant operational noise impacts**.

The No Project Alternative assumes less development overall and fewer new dwelling units compared to the East and South Alternatives. The No Project Alternative also has lower density and development intensity compared to the East and South Alternatives. Therefore, the No Project Alternative would expose fewer sensitive receptors to long-term noise generating uses compared to the East Alternative the South Alternative and would involve lower overall generation of operational noise compared to the other Alternatives. The No Project Alternative would include fewer housing units Downtown, less non-residential development Downtown, and fewer new housing units along major corridors and in other infill areas relative to the East Alternative and South Alternative. With the relatively lower level of development, the No Project Alternative would reduce both exposure of newly developed residential uses to existing and future traffic and other sources of noise in the existing developed portions of the city.

With less overall residential and non-residential development overall under the No Project Alternative compared to the other Alternatives, traffic noise generation would be lower, when compared with the Proposed Project. The

level of traffic noise generation between the East and South Alternatives is similar. For most roadways in the Planning Area, the traffic noise levels that result from implementation of either of these Alternatives would be indistinguishable – less than a 3-decibel difference. The primary differences would occur in the eastern portions of the Planning Area, where the East Alternative would involve higher traffic noise levels along County Road 24, Bronze Star Drive, County Road 103, and the southern portion of the Planning Area. Impacts of the No Project Alternative would be much lower in these portions of the Planning Area since the No Project Alternative, like the South Alternative, does not anticipate development in the east area. The South Alternative would generate higher traffic noise levels along roadways such as Matmor Avenue and Sports Park Drive in the southern portion of the Planning Area. Here, the impact of the No Project Alternative would be similar, but somewhat reduced compared to the South Alternative, since the No Project envisions development of some, but not all of the areas subject to development under the South Alternative, and since the No Project in general involves less density and development intensity relative to the East and South Alternatives. While increases in traffic noise levels in the southern portion of the Planning Area could affect existing noise-sensitive land uses, the increases in the eastern portion of the Planning Area would generally not affect existing noise-sensitive land uses since development areas in the east under the East Alternative are not as close to existing development. See Section 4.11 of this EIR, "Noise and Vibration," which presents quantified traffic noise estimates for the East and South Alternatives.

The No Project Alternative and Proposed Project could involve development of new noise-sensitive uses in areas affected by existing and future railroad noise from the California Northern Railway freight line and the Sacramento River Train operated by the Sierra Northern Railroad Company. With less infill development, including housing, under the No Project Alternative, as compared with the Proposed Project, there would be a decrease in the number of noise-sensitive uses that are affected by railroad noise.

Section 4.11 of this EIR, "Noise and Vibration," identifies types of stationary noise, along with existing noise-sensitive uses. The Proposed Project would involve development of new noise sensitive land uses. The East Alternative plans for the development of SP-1A, SP-2, and SP-3 (once a comprehensive flood solution is identified for SP-2 and SP-3). Under the South Alternative, there would be infill development, along with development in SP-1A, 1B, 1C, and SP-3 (once a comprehensive flood solution is identified for SP-3). There are several sources of existing stationary noise in the vicinity of SP-3, which would affect both Alternatives in the same way, and where 2035 General Plan policies related to compatibility concerns between residential, commercial and industrial uses would apply. The No Project Alternative envisions residential development in the extreme northwestern portion of SP-3 in the same location as under the East and South Alternatives, but included "Business Park" in the SP-3A area instead of the potential for residential development, and therefore would avoid adverse effects related to existing and future sources of noise in this location. There are no known stationary sources that would have substantially different impacts related to the differences between the East Alternative and South Alternative in SP-1 or SP-2.

All of the Alternatives include policies to reduce the potential for noise levels to exceed established standards and reduce potential noise level increases above existing ambient levels. However, the City cannot conclude that these policies would avoid an adverse impact for all noise-sensitive uses in the Planning Area. Noise impacts would be **significant and unavoidable** under each of the Alternatives. However, the East and South Alternatives include a change in allowable noise exposure for sensitive uses compared to the No Project Alternative. The 2002 General Plan daytime hourly noise standard for non-transportation sources is 50 dB, but the 2035 General Plan proposes to change this standard to 60 dB. The maximum daytime noise level for non-transportation noise sources in the 2002 General Plan is 70 dB, and the 2035 General Plan proposes to increase this to 75 dB. For transportation noise, the

maximum 24-hour averaged noise standard for outdoor activity areas has been revised from 60 dB in the 2002 General Plan to 70 dB in the 2035 General Plan for residential development, lodging, health care facilities, and places of worship. The 2002 General Plan would allow for less overall development in the future and sets lower standards for noise. The 2035 General Plan would result in a greater development in the future (both geographically and in terms of density/intensity), and would allow higher ambient noise levels for noise-sensitive uses under the 2035 General Plan policies. This reflects a conscious change of the City to support greater density, intensity, and infill development. Since the City's noise policies are proposed to be revised to allow higher levels of ambient noise under the 2035 General Plan compared to the 2002 General Plan, the level of impact under the Proposed Project could be considered to be reduced compared to the No Project Alternative. However, this is only a matter of how noise impacts are measured and assessed, and this policy change itself is not an adverse physical environmental effect.

5.5.11.3 VIBRATION

Construction and demolition activities associated with future projects implemented under any of the Alternatives have the potential to result in varying degrees of temporary groundborne vibration depending on the nature of construction and demolition activities, the distance of nearby vibration-sensitive land uses, and the building materials used in the vibration-sensitive land uses. Similarly, depending on the nature and location of future projects, new vibration-sensitive receptors under any of the Alternatives could be located near an existing or future vibration-generating land use (e.g., railroad line, industrial facility).

The No Project Alternative and the South Alternative would result in less non-residential building square footage and fewer residential units, as compared with the East Alternative. Therefore, construction activity of this type would be slightly reduced. The South Alternative includes about twice as many residential units in infill locations, such as in the Downtown area and along major corridors, when compared with the No Project Alternative and the East Alternative. The South Alternative includes approximately 1,950 dwelling units Downtown, along major corridors, and nearby infill locations. The East Alternative includes 990 dwelling units in these same infill locations, and the No Project Alternative includes 630 residential units in these same infill locations. Therefore, under the South Alternative, the City anticipates that there could be a greater number of vibration-sensitive uses that are in locations that could experience both construction-related and long-term vibration. With less infill development, including housing, under the No Project Alternative, as compared with the East and South Alternatives, there would be fewer vibration-sensitive uses.

A new implementation program proposed as mitigation in this EIR requires use of project-specific vibration mitigation measures (preparation of vibration analysis and implementation of vibration abatement measures, as necessary and to the greatest extent feasible) to mitigate vibration impacts to sensitive land uses. However, the impact is still **significant and unavoidable** for the East and South Alternatives. Vibration is not addressed in the 2002 General Plan. While the reduced overall amount of development and reduced level of development in infill areas may reduce vibration exposure for vibration-sensitive uses, there is no mechanism in the 2002 General Plan to reduce vibration exposure in consideration of future site-specific conditions. The impact would be **significan**t under the No Project Alternative, East Alternative, and South Alternative. The impact would be somewhat reduced under the No Project Alternative compared to the East and South Alternatives, however.

5.5.11.4 AIRPORT NOISE

The closest airport to the Planning Area is the Watts Woodland Airport, which is located 3.7 miles from the western city limits. The Sacramento International Airport is located approximately five miles northeast and Yolo County Airport approximately five miles southwest of the city limits. Areas within the City's Urban Limit Line are located outside of the 60 dB CNEL contours. This **less-than-significant impact** would be the same for the No Project Alternative and the East and South Alternatives.

5.5.12 PUBLIC SERVICES AND RECREATION

5.5.12.1 FIRE PROTECTION

The City's Fire Department operates three fire stations, with an engine company at each one: 101 Court Street (Station #1), 1619 West Street (Station #2), and 1550 Springlake Court (Station #3). The City's Fire Department has identified that additional fire stations may be needed in order to maintain adequate response times under existing conditions in the City. A fourth fire station is planned to serve the Spring Lake Specific Plan Area; alternatively, fire services could be provided by relocating an existing station to serve the Spring Lake Specific Plan Area, instead of constructing a new station in the area. A new or relocated fire station in this area would also be sufficient to serve new growth in the Planned Neighborhood area in the southern portion of the No Project Alternative as well as the corresponding area in the East and South Alternatives, SP-1. In addition, growth in the northwestern portion of the Planning Area under the 2035 General Plan, including SP-3, will likely result in demand for relocation of a station to better serve this area. Lastly, the East Alternative would require an additional station to serve the SP-2 area.

Compared to the East Alternative and the South Alternative, the No Project Alternative would require fewer new or relocated stations, because new or relocated stations would not be needed for SP-3 or SP-2. All three Alternatives would need an additional station or a relocated station to serve the southern portion of the Planning Area. The East Alternative would also need a new fire station to serve the SP-2 area. However, any new or relocated fire stations would be located within the built footprint analyzed in this EIR and subject to applicable development regulations, resulting in minimal environmental impacts. Therefore, these **less-than-significant** impacts would be similar for all three Alternatives.

5.5.12.2 POLICE PROTECTION

The Police Department currently staffs four full time beats in the northeast, northwest, southwest and southeast quadrants of the city. An additional fifth beat covering Downtown is staffed during the daytime. However, given calls for service under existing conditions, the Police Chief has identified that this fifth beat should be staffed full-time. New population and job growth is projected to increase demand for police protection services. The Woodland Police Department expects to be able to meet this demand with increased staffing rather than new facilities. In the event that new facilities are needed, they would be located within the built footprint analyzed in this EIR, and subject to applicable development regulations. Thus, the impact is similar for all three Alternatives (**less than significant**).

5.5.12.3 SCHOOL FACILITIES

Implementation of each of the Alternatives is expected to increase enrollment in Woodland's public schools. According to the District's classroom loading factors, existing facilities accommodate student enrollment growth. The District uses student generation factors (students per new dwelling units) for single- and multi-family development in order to project student enrollment, and the District must also meet the State's standards for classroom capacity. Table 5-18 shows the WJUSD enrollment, State loading capacity, District loading capacity, and the projected enrollment under each Alternative. Each Alternative provides adequate capacity according to the District standards. However, according to the State standards, the projected enrollment is expected to exceed capacity of elementary schools in the No Project Alternative, elementary and middle schools in the East Alternative, and elementary schools in the South Alternative. However, funding for new school construction is provided through State and local revenue sources. Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) governs the amount of fees that can be levied against new development. Payment of fees authorized by the statute is deemed "full and complete mitigation." Therefore, each Alternative has a **less-than-significant** impact.

Table 5-18. Enrollment and Capacity in WJUSD—No Project, East, and South Alternatives

	2012–2013					Projected New Enrollment by 2035[3]		
		State Loading Capacity		District Loading Capacity				
Grade	WJUSD Enrollment	Existing Total Capacity[1]	Available Capacity	Existing Total Capacity[2]	Available Capacity	No Project Alternative	East Alternative	South Alternative
K–6	5,566	6,550	984	8,384	2,818	1,460	1,939	1,856
7–8	1,538	2,241	703	2,656	1,118	552	739	699
9–12	3,003	4,428	1,425	5,248	2,245	810	1,081	1,072
Total	**10,107**	13,219	3,112	**16,288**	**6,181**	**2,822**	**3,569**	**3,581**

Notes:
[1] Total capacity based on State standards of 25 students per classroom for elementary and 27 students per classroom for middle and high schools.
[2] Total capacity based on a 24 student loading factor for kindergarten and first grade, 32 student loading factor for grades 2-6, and a 36 student loading factor for grades 7-12.
[3] Based on the total number of new dwelling units in each Alternative. In the No Project Alternative, assumes that all development in High Density Residential, Medium Density Residential, and Mixed Use will be multi-family dwelling units; all development in Low Density Residential, Rural Residential, and Neighborhood Preservation will be single-family units; and development in Central Commercial, Medium Low Density Residential and Planned Neighborhood will be 75 percent single-family and 25 percent multi-family units. In the South and East Alternatives, assumed construction of 7,000 new dwelling units, and multi-family dwelling units account for 39 percent of all dwelling units citywide. Calculated using WJUSD student generation factors provided in Table 4.12-6.
Source: Woodland Joint Unified School District 2011; California Department of Education 2013; Dyett & Bhatia 2016.

5.5.12.4 PARK AND RECREATION FACILITIES

Based on the City's 2013 population and parkland as of 2016, Woodland currently provides a ratio of 2.7 acres of developed park area per 1,000 residents. The No Project Alternative anticipates an increase of 15,000 residents between 2013 and 2035 and has a standard of 6.0 acres of parkland per 1,000 residents. The Proposed Project anticipates an increase of 20,000 Woodland residents between 2013 and 2035, and both the East and South Alternatives establish a standard of 5.0 acres of parkland per 1,000 residents. Each of the Alternatives would require more parkland per resident than currently exists. Therefore, implementation of the Alternatives would result in a greater amount of parkland per resident.

Under the East Alternative, the South Alternative, and the No Project Alternative, the development of future parkland is **not expected to result in significant** impacts. Development of new parkland would occur within the Planning Area boundary, and would be required to conduct environmental review pursuant to CEQA prior to approval. To the extent feasible, the environmental impacts associated with the construction of new parks would

be mitigated to below a level of significance, consistent with CEQA. Additionally, any new construction of recreation facilities within parks would be subject to construction permitting and Fire and Building Code standards. Each Alternative has a **less-than-significant** impact on park and recreation facilities.

Under each Alternative, additional population would be expected to place added physical demands on existing park facilities. However, as discussed above, each Alternative requires more parkland per resident than is currently provided under existing conditions. As additional parkland would be added over time with new development, impacts related to use overall would be spread over more facilities, and thus the increased use of existing parks and recreational facilities would not result in substantial physical deterioration of existing facilities. Each Alternative has a **less-than-significant** impact on increased use of park and recreation facilities.

5.5.12.5 OTHER PUBLIC FACILITIES

The City of Woodland 2002 General Plan Appendix D established service standards for general City facilities, including City Hall, the Library Facilities, and Municipal Service Center. The No Project Alternative anticipates an increase in 15,000 residents in Woodland between 2013 and 2035, and it is anticipated that new facilities would be constructed as needed to meet the service standards through 2035. Therefore, the impact for the No Project Alternative **is less than significant**.

The 2035 General Plan does not establish service standards for these other public facilities, but it does include policies that direct the City to provide these facilities commensurate with new growth. The East Alternative and the South Alternative both anticipate an increase of 20,000 residents in Woodland between 2013 and 2035, and it is anticipated that new facilities would be constructed as needed to meet the service standards through 2035.However, the exact character and extent of the public facility needs of the additional population is not analyzed by the 2035 General Plan. Therefore, the 2035 General Plan contains a mitigation measure for a new implementation program to prepare a Municipal Facilities Master Plan to ensure that future space needs are identified and standards are established for public facilities to support the City as it continues to grow. With inclusion of this implementation program in the 2035 General Plan, the impact is **less than significant** for both the East and South Alternatives.

5.5.13 TRANSPORTATION AND CIRCULATION

Transportation and circulation impacts attributable to the East and South Alternative are detailed in Section 4.13 of this EIR, “Transportation and Circulation.” In general, since the No Project Alternative would permit less development compared to the Proposed Project, the No Project Alternative would have fewer transportation-related impacts.

The No Project Alternative reflects expected 2035 conditions based on the City’s 2002 General Plan, as represented by land use and socioeconomic data from the SACOG MTP/SCS. Exhibit 4.13-6 in Section 4.13 of this EIR, “Transportation and Circulation,” shows the Circulation Diagram associated with the No Project Alternative. This Diagram characterizes roadway functional classifications and number of lanes for major roadways. Exhibits 4.13-7 and 4.13-8 show the Circulation Diagrams of the East and South Alternatives, including roadway functional classifications and number of lanes for major roadways.

Based on the reduced amount of development, the No Project Alternative would have a reduced overall amount of travel demand compared to the East and South Alternatives. Travel demand is commonly measured in vehicle

miles traveled, or VMT – representing the total amount of vehicle travel per day required by land use included within the Planning Area. Table 5-19 shows the VMT forecasts for the No Project Alternative, the East Alternative, and the South Alternative. Compared to baseline conditions, the No Project Alternative would result in an increase in the Planning Area VMT of approximately 460,000 VMT per day. The East Alternative would increase VMT by approximately 630,000 VMT per day, and the South Alternative would increase VMT by approximately 615,000 VMT per day. The No Project Alternative increase in VMT is approximately 27 percent less than the East Alternative and 25 percent less than the South Alternative.

Table 5-19. City of Woodland Daily VMT Forecasts

Scenario	VMT[1]	Population[2]	Employment[3]	VMT/Capita[4]	VMT/Service Population[5]
2035 No Project	1,939,400	58,483	33,929	33.2	21.0
2035 East Alternative	2,107,500	62,780	42,268	33.6	20.1
2035 South Alternative	2,092,800	62,953	41,156	33.2	20.1

Notes:

[1] Includes travel from all vehicles. The allocation of VMT includes 100 percent responsibility for all trips with both trips ends in the City of Woodland and 50 percent responsibility for trips with only one trip in the City.

[2] Population estimates and forecasts are based on SACMET household size distribution.

[3] Employment estimates and forecasts based on SACMET land use yields.

[4] VMT Per Capita is calculated by dividing total daily VMT by population. Since total VMT includes VMT generated by commercial vehicles, visitors, and workers/students that live outside Woodland, it is not an estimate of the VMT 'generated' per capita for Woodland residents.

[5] VMT Per Service Population is calculated by dividing total daily VMT by population plus employment. Similar to the VMT per capita metric, this form of VMT includes VMT generated by commercial vehicles, visitors, and students that live outside Woodland. As such, it is not an estimate of the VMT 'generated' per service population for Woodland residents and workers.

Source: Fehr & Peers 2016

Exhibits 4.13-11, 4.13-12, and 4.13-13 in Section 4.13 of this EIR, "Transportation and Circulation," show the evening peak-hour volume and level of service (LOS) on roadway segments in the No Project Alternative, the East Alternative, and the South Alternative, and the results are summarized in Appendix F of this EIR. Overall, most roadway segments are projected to operate at LOS D or better.

The Proposed Project's change in City's LOS policy threshold allows higher peak-hour traffic volumes levels to occur before capacity expansion is warranted compared to the adopted plan. To understand this outcome, the East Alternative and South Alternative LOS results were evaluated to identify locations where the 2002 General Plan LOS thresholds would not be met. These locations are listed below.

East Alternative

- County Road 102 from E. Gibson Road to Farmers Central Road – LOS D
- Kentucky Avenue from N. West Street to N. College Street – LOS D
- E. Gum Avenue from Bourn Drive to Pioneer Avenue – LOS E
- Maxwell Avenue east of County Road 102 – LOS D
- East Street from Lane Drop South of E. Gibson Road to Sports Park Drive – LOS D
- Maxwell Avenue west of County Road 103 – LOS D

South Alternative

- County Road 102 from E. Gibson Road to Farmers Central Road – LOS D
- Kentucky Avenue from N. West Street to N. College Street – LOS D
- *E. Gum Avenue from Bourn Drive to Pioneer Avenue – LOS D*
- Maxwell Avenue south of Bronze Star Drive – LOS D

Implementation of the Proposed Project (both East and South Alternative) would exacerbate unacceptable No Project LOS D conditions on the I-5 Mainline east of County Road 102 under 2035 conditions.

Locations where the expected LOS is D or E are shown in Table 5-20. Locations that result in significant impacts based on the LOS thresholds for City of Woodland and the California Department of Transportation (Caltrans). Congestion management program (CMP) network roadway facilities, as described in Section 4.13 of this EIR, "Transportation and Circulation," are underlined. Each Alternative results in significant impacts due to conflict with LOS standards. However, the East and South Alternatives include mitigation measures that result **in less-than-significant** impacts.

Table 5-20. Roadway Segments with LOS of D or E

Roadway Segment	No Project Alternative	East Alternative	South Alternative
County Road 102 from I-5 Southbound Ramps to Maxwell Avenue	LOS D	LOS D	LOS D
County Road 102 from Maxwell Avenue to E. Gibson Road	LOS better than D	LOS D	LOS D
County Road 102 from E. Gibson Road to Farmers Central	LOS better than D	LOS D	LOS D
Kentucky Avenue from N. West Street to N. College Street	LOS D	LOS D	LOS D
Main Street from Walnut Street to College Street	LOS D	LOS D	LOS D
Main Street from College Street to 3rd Street	LOS D	LOS D	LOS D
Main Street from 3rd Street to East Street	LOS D	LOS D	LOS D
E. Main Street from SR 133 Northbound Ramps to Pioneer Avenue	LOS D	LOS D	LOS D
E. Gum Avenue from Bourn Drive to Pioneer Avenue	LOS E	LOS E	LOS D
I-5 Mainline east of County Road 102	LOS D	LOS better than D	LOS D
SR 16 west of County Road 98	LOS D	LOS D	LOS D
Maxwell Avenue east of County Road 102	LOS better than D	LOS D	LOS better than D
East Street from Lane Drop South of E. Gibson Road to Sports Park Drive	LOS better than D	LOS D	LOS better than D
Maxwell Avenue west of County Road 103	LOS better than D	LOS D	LOS better than D
Maxwell Avenue south of Bronze Star Drive	LOS better than D	LOS better than D	LOS D

Source: Fehr and Peers 2016

The East and South Alternatives result in a slight worsening of LOS for the Maxwell Avenue/County Road 102 intersection compared to the No Project Alternative.

The East and South Alternatives contemplate a change in LOS standards relative to the 2002 General Plan. 2035 General Plan Policy 3.A.1 changes the Citywide LOS standard from C to D and allows other exceptions where LOS F is allowed. Other than the conflicts from performance of roadways as explained above, none of the Alternatives would conflict with applicable plans, ordinances, or policies establishing measures of effectiveness for the performance of the circulation system for other modes including aviation, transit, bicycling, and walking.

The Proposed Project does not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities nor would it adversely affect performance or safety of such facilities. The Proposed Project contains provisions that will enhance these modes to encourage greater use of transit and more walking and bicycling in the future. All new facilities contained in the circulation diagram would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions.

The No Project Alterative also supported a relatively compact development pattern that would support efficient use of transit and would promote cycling and walking. The policies of the No Project Alternative encourage transit services and promote new development at densities and alignments that would foster transit use. They also provide for and encourage non-motorized transportation.

Please refer to Section 4.13 of this EIR, "Transportation and Circulation," for more details.

As explained in Section 4.13 of this EIR, "Transportation and Circulation," the goals, policies, implementation programs, strategies, and actions of the 2035 General Plan (East and South Alternatives) and 2035 CAP were developed largely based on the No Project Alternative and existing adopted plans. Goal and policy language in the 2035 General Plan reflects refinements to the 2002 General Plan (the No Project Alternative) in recognition of new State laws, such AB 1358 mandating the inclusion of complete streets policies in general plan updates. The policy refinements do not create inconsistencies with existing adopted transportation plans.

The Planning Area does not have any public airports, and none of the Alternatives are expected to result in changes to air traffic patterns. Similarly, none of the Alternative is expected to substantially increase hazards due to a design feature or result in inadequate emergency access.

5.5.14 UTILITIES

5.5.14.1 WASTEWATER TREATMENT FACILITIES AND REQUIREMENTS

Woodland's wastewater collection system conveys wastewater by gravity pipelines to the Water Pollution Control Facility (WPCF). The wastewater treatment plant capacity is measured in two ways: (1) hydraulic capacity, which is the maximum inflow/outflow (million gallons per day, mgd) that a plant can treat; and (2) solids (biological oxygen demand, BOD) capacity, which are the maximum biological solids (pounds per day, lbs./day) that a plant can adequately treat.

There is sufficient hydraulic capacity for up to 105,000 residents in the WPCF. As of September 2016, the City completed the conversion of three of the oxidation ditches at the WPCF to the Modified Ludzack-Ettinger (MLE) process, which enhances nitrogen removal in addition to solids capacity. The upgrades to the oxidation ditches result in a higher solids capacity of 13,300 lb/day, from the current 10,300 lbs./day, to serve up to 70,000 residents. The solids capacity of the WPCF would need to be further increased to serve a population of more than

70,000; conversion of a fourth oxidation ditch to the MLE process would result in solids capacity of 19,900 lbs./day, which could serve approximately 105,000 residents.

Full implementation of the No Project Alternative is expected to result in a residential population of approximately 70,000, which is equal to the capacity of the Water Pollution Control Facility (WPCF) for biological solids. Policy 4.A.2 in the 2002 General Plan requires development to be served by adequate public services, meaning that growth exceeding the projected population would not be able to proceed until upgrades to the facility were made.

Full implementation of either the East Alternative or the South Alternative is expected to result in a residential population of 75,000, which would exceed the biological solids capacity of the WPCF. The City will make modifications and upgrades to the WPCF as needed over the horizon of the 2035 General Plan to ensure that it has sufficient capacity to service the population. Like the No Project Alternative, the 2035 General Plan includes policies that ensure adequate public facilities and services, including wastewater infrastructure and treatment facilities, to serve new development. Expansion of the WPCF would be required to be completed before development that overburdens the facility's current capacity would be permitted to operate or be occupied. The current conditions, current capacity, and future capacity of the WPCF is shown in Table 5-21. In regards to exceeding wastewater treatment requirements and requiring the construction of new facilities, all three Alternatives have a **less-than-significant** impact.

Table 5-21. Current and Projected Wastewater Flows and Loads

Item	Current Conditions	Current Capacity	Future Capacity
Residential Population Served	57,000	70,000	105,000
Average Flow, mgd	5.0	6.1	9.2
Peak month loading, BOD, lb/day	10,800	13,300	19,900

Source: City of Woodland General Plan Technical Report Evaluating General Plan Impacts on the City's Water Pollution Control Facility 2015.

The wastewater infrastructure in Downtown Woodland has limited capacity, because the Beamer Trunk Line, which serves Woodland's Downtown, is near capacity. The City is currently lining, replacing, and adding to existing sewer lines, which will delay the need for increased capacity. When it is needed in the future, the City plans to add capacity to the sewer system Downtown by relieving the Beamer Trunk Line with a line to the Kentucky Trunk Line or with redirection of flows to the Gibson Trunk Line. The Kentucky Trunk Line runs underneath Kentucky Avenue in the northern portion of the Planning Area and has additional capacity. The Gibson Trunk Line runs underneath Gibson Road in the southern portion of the Planning Area and has additional capacity. Table 5-22 shows the expected development Downtown under each Alternative. The South Alternative plans for the most development Downtown; however, with planned improvements and anticipated reductions in flows, the impacts would still be **less than significant**. With less development planned for the Downtown in the East Alternative and the No Project Alternative than the South Alternative, the impact on wastewater infrastructure capacity for each of the three Alternatives is **less than significant**.

Table 5-22. Projected New Development Downtown

Alternative	Units	Non-Residential Building Square Footage
No Project Alternative	100	163,233
East Alternative	550	266,432
South Alternative	1,000	484,422

Source: City of Woodland 2016

5.5.14.2 WATER TREATMENT FACILITIES

Treated Sacramento River water supplied by the Woodland-Davis Clean Water Agency's Regional Water Treatment Facility (RWTF) is the primary source of drinking water for Woodland residents. Woodland has a dedicated capacity of 18 mgd of supply from the water treatment plant and an additional 2,000,000 gallons of storage. Groundwater is a backup to the surface water supply and will supplement surface water during times of high demand or reduced surface water availability. Based on the analysis in the 2015 UWMP that assumes a population of 75,000 in Woodland in 2035, the supply of surface water and groundwater will successfully meet water demand through 2035, as shown in Table 4.14-4 in Section 4.14 of this EIR, "Utilities." The No Project Alternative anticipates a population of 70,000, and the South and East Alternatives anticipate a population of 75,000, therefore, the supply exceeds demand for all three Alternatives. In regards to the construction of new water treatment facilities, each Alternative has a **less-than-significant** impact**.**

Infill development will add strain to the existing transmission pipelines Downtown. As shown in Table 5-23 above, the South Alternative is anticipated to add the most development Downtown. The City plans to construct new transmission pipelines to convey surface water supply into Downtown. The impacts are **less than significant** for all three Alternatives.

The construction and operation of new or expanded facilities to serve new development could have the potential to cause secondary environmental effects to air quality, noise, cultural resources, biological resources, hydrology, and water quality or other environmental issues. A detailed discussion of specific future impacts of new development is beyond the scope of this EIR. The placement of such infrastructure has been considered as a component of the Proposed Project in the environmental topic-sections of this EIR. The differential effects associated with the No Project Alternative are described throughout this Chapter.

5.5.14.3 STORMWATER FACILITIES

Each of the Alternatives would result in the conversion of undeveloped land to new urban uses. In these new growth areas, new infrastructure would be needed to accommodate infiltration of stormwater or to convey stormwater to detention basins to prevent flooding. In addition, implementation of each of the Alternatives would result in infill development in existing developed areas that would generate increased stormwater volumes in portions of Woodland. Implementation of each of the Alternatives would require construction and expansion of stormwater drainage facilities. Table 5-23 shows the amount of development in infill and new growth areas under each Alternative. The South Alternative anticipates the most residential and non-residential development in infill areas, and the East Alternative anticipates the most residential and non-residential development in new growth areas.

Table 5-23. Projected New Development by 2035

	No Project Alternative		South Alternative		East Alternative	
	Units	Non-residential Square Feet	Units	Non-residential Square Feet	Units	Non-residential Square Feet
Infill	3,223	4,015,597	4,548	13,266,350	3,589	13,226,489
New Growth	2,195	1,581,234	2,463	3,418,901	3,414	4,160,095
Total	**5,418**	**5,596,831**	**7,011**	**16,685,251**	**7,003**	**17,386,583**

Source: City of Woodland 2016.

The acreage of land disturbed during construction also factors into the stormwater facilities required to serve new development under each of the Alternatives. The actual number of acres subject to development or installation of infrastructure improvement would depend on many factors, including those outside the City's control. However, the following estimates are presented for the purposes of this general Alternatives comparison.

- **No Project Alternative**: approximately 3,080 acres potentially subject to development, 18 percent less than the East Alternative and 2 percent more than the South Alternative.
- **East Alternative**: approximately 3,640 acres potentially subject to development, 18 percent more than the No Project Alternative and 20 percent more than the South Alternative.
- **South Alternative**: approximately 3,030 acres potentially subject to development, 2 percent less than the No Project Alternative and 17 percent less than the East Alternative.

With the relatively higher amount of land area potentially subject to development under the East Alternative relative to the No Project Alternative and the East Alternative, and associated impervious surface added, stormwater infrastructure needs could be somewhat higher. Construction of new stormwater infrastructure could have adverse effects on the physical environment, including potential effects on biological resources; however, the required improvements would occur within rights-of-way and other already disturbed areas and would only occur in conjunction with construction of other infrastructure. The construction and operation of new or expanded facilities to serve new development could have the potential to cause secondary environmental effects to air quality, noise, cultural resources, biological resources, hydrology, and water quality or other environmental issues. A detailed discussion of specific future impacts of new development is beyond the scope of this EIR. The placement of such infrastructure has been considered as a component of the Proposed Project in the environmental topic-sections of this EIR. The differential effects associated with the No Project Alternative are described throughout this Chapter. Any future stormwater drainage projects in the city would be required to conduct environmental review pursuant to CEQA prior to approval. Therefore, the impacts are **less than significant** for all three Alternatives.

5.5.14.4 SOLID WASTE DISPOSAL CAPACITY

Solid waste in Woodland that is not diverted is hauled to the Yolo County Central Landfill. According to the Countywide Siting Element of the Yolo County Integrated Waste Management Plan adopted in August 2012, the Yolo County Central Landfill is expected to reach capacity in the year 2090, based on historical rates of disposal. The impacts on capacity and compliance with federal, state, and local statutes are similar and **less than significant** for all three Alternatives.

5.6 SUMMARY OF COMPARATIVE EFFECTS OF THE ALTERNATIVES

Table 5-24 provides a summary comparison of the environmental impacts of the No Project Alternative, East Alternative, and South Alternative based on the detailed analysis presented throughout this Chapter. This table uses the following symbols to provide the reader with an overview summary:

< Less overall impact than the comparison Alternative

< More overall impact than the comparison Alternative

= Similar level of impact to the comparison Alternative

Table 5-24. Comparison of Environmental Impacts of Alternatives			
Environmental Topic	No Project Alternative	East Alternative	South Alternative
Aesthetics and Visual Resources	< East Alternative < South Alternative	> No Project Alternative = South Alternative	> No Project Alternative = East Alternative
Agriculture	< East Alternative < South Alternative	> No Project Alternative < South Alternative	> No Project Alternative > East Alternative
Air Quality	< East Alternative < South Alternative	> No Project Alternative > South Alternative	> No Project Alternative < East Alternative
Biological Resources	< East Alternative = South Alternative	> No Project Alternative > South Alternative	= No Project Alternative < East Alternative
Climate Change, Greenhouse Gas Emissions, and Energy	> East Alternative > South Alternative	< No Project Alternative > South Alternative	< No Project Alternative = East Alternative
Cultural Resources	< East Alternative > South Alternative	> No Project Alternative > South Alternative	< No Project Alternative < East Alternative
Geology, Soils, Minerals, and Paleontological Resources	< East Alternative < South Alternative	> No Project Alternative > South Alternative	> No Project Alternative < East Alternative
Hazardous Materials and Toxics	= East Alternative = South Alternative	= No Project Alternative = South Alternative	= No Project Alternative = East Alternative
Hydrology, Flooding, and Water Quality	< East Alternative = South Alternative	> No Project Alternative > South Alternative	= No Project Alternative < East Alternative
Land Use Planning, Population, and Housing	< East Alternative < South Alternative	> No Project Alternative > South Alternative	> No Project Alternative < East Alternative
Noise and Vibration	< East Alternative < South Alternative	> No Project Alternative = South Alternative	> No Project Alternative = East Alternative
Public Services and Recreation	= East Alternative = South Alternative	= No Project Alternative = South Alternative	= No Project Alternative = East Alternative
Transportation and Traffic	< East Alternative < South Alternative	> No Project Alternative = South Alternative	> No Project Alternative = East Alternative
Utilities	= East Alternative = South Alternative	= No Project Alternative = South Alternative	= No Project Alternative = East Alternative
Total	3 More than 8 Similar to 17 Less than	17 More than 9 Similar to 2 Less than	8 More than 12 Similar to 8 Less than

5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that, among the alternatives, an "environmentally superior" alternative be selected and that the reasons for such selection be disclosed. In general, the environmentally superior alternative is the alternative that would generate the fewest or least severe adverse impacts.

For the purposes of this EIR, the No Project Alternative is environmentally superior since it would have fewer impacts in the greatest number of environmental impact areas (Table 5-24). In many instances, the No Project Alternative would have fewer impacts compared to the East and South Alternatives because the No Project Alternative would result in less overall development, including residential and non-residential square footage, employment, and total population. Thus, despite the fact that the Proposed Project includes policies that will result in more efficient development, community design approaches that may help to reduce environmental effects, or

other benefits, including implementation of the 2035 Climate Action Plan, the total amount of development would still increase the level of environmental impact for many topic areas compared to the Proposed Project.

When the No Project Alternative is environmentally superior, another alternative must be identified. In this case, the next most environmentally superior Alternative is the South Alternative of the Proposed Project, since it would reduce impacts in eight impact areas compared to two for the East Alternative of the Proposed Project.

The South Alternative would have fewer impacts compared to the East Alternative for air quality, biological resources, cultural resources, hydrology, flooding, and water quality; and land use planning, population, and housing, as described in detail in this Chapter. The South Alternative would have fewer impacts compared to the No Project Alternative for cultural resources, as well.

Since the South Alternative would involve a reduced amount of area of land disturbance, the emissions during trenching, grading, and site preparation would be slightly less than the East Alternative. Under the East Alternative, a greater amount of habitat loss would occur than under the South Alternative or the No Project Alternative because greater acreage of planned growth would occur in areas that are currently undeveloped and provide habitat that could help to support special-status species. Each of the Alternatives would involve ground-disturbing construction in areas where the City anticipates infill development will happen during the planning horizon, as well as in the Specific Plan Areas. Overall, the South Alternative would have the least land area potentially subject to disturbance, relative to the No Project Alternative and the East Alternative. Thus, there is less potential to encounter archaeological and historic architectural resources that could be damaged or destroyed. Implementation of the East Alternative, the South Alternative, and the No Project Alternative could expose people or structures to significant risks due to flooding, including flooding as a result of the failure of a levee or dam. The impact would be significant and unavoidable for East Alternative, South Alternative, and the No Project Alternative, with greater areas of risk for the East Alternative due to the fact that it permits development in the SP-2 area. Housing and employment growth related to the East and South Alternatives exceeds the forecast included in SACOG's current MTP/SCS. This could be considered a growth-inducing impact if the City is successful in attracting more development than forecast by SACOG and if this, in turn, results in less overall development locating in other parts of the region. The East Alternative assumes a total population of approximately 19,300 people, 7,000 dwelling units, 19,340 local jobs, and 17.4 million square feet of nonresidential development. Therefore, the East Alternative is projected to generate the same population and housing growth but more employment than the South Alternative and more population and employment growth than the No Project Alternative.

6 OTHER CEQA CONSIDERATIONS

This chapter addresses California Environmental Quality Act (CEQA) considerations that are required as part of an EIR, including:

- Cumulative Effects (Section 6.1);
- Growth-Inducing Effects (Section 6.2);
- Significant Irreversible Environmental Changes (Section 6.3); and
- Significant and Unavoidable Environmental Effects (Section 6.4).

6.1 CUMULATIVE EFFECTS

Section 15130 of the CEQA Guidelines requires the analysis of all cumulatively considerable impacts resulting from a proposed project. Section 15355 defines a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts can originate from one project or from separate projects. Cumulative impacts result when two or more impacts of a project combine and increase the severity or significance of either impact. Cumulative impacts can also be created when impacts from separate projects combine to make a compound impact that is more severe than the impacts would have been had the projects occurred in isolation.

Pursuant to Section 15130 of the CEQA Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." According to State guidance, the discussion in this section is guided by the standards of practicality and reasonableness and focuses on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

The cumulative analysis examines impacts of a proposed project taken together with past, present, and probable future projects producing related impacts. The analysis in this section includes:

- a determination of whether the long-term impacts of all related past, present, and future plans and projects would cause a cumulatively significant impact; and

- a determination as to whether implementation of the Proposed Project would have a "cumulatively considerable" contribution to any significant cumulative impact.

The two above determinations are evaluated throughout the Cumulative Effects subsection, below, using two key terms: (1) Cumulative Context and (2) Cumulative Scenario. The Cumulative Context describes related past, present, and future plans and projects. The Cumulative Scenario describes the assumptions used for the Proposed Project for evaluating contributions to any cumulative impacts that would occur under the Cumulative Context. The Cumulative Context and Cumulative Scenario are described in detail below.

Effects related to greenhouse gas emissions are inherently cumulative in nature. A detailed discussion of greenhouse gas emissions effects is presented in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy."

6.1.1 CUMULATIVE CONTEXT

As discussed above, the Cumulative Context is a critical element of the cumulative analysis. This represents past, present, and probable future projects that may have impacts to which the project would contribute. For the purposes of evaluating cumulative impacts, the CEQA Guidelines describe two alternative methods to determine the scope of the related projects to be considered:

- **List method**—A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the lead agency (in this case, the City of Woodland).

- **Plan method**—A summary of projections contained in adopted general plans or related planning documents, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

This analysis uses the plan method, based on regional growth projections. The analysis examines population, housing, and employment growth for the six-county Sacramento Area Council of Governments (SACOG) region, which includes the City of Woodland. The SACOG region includes 28 jurisdictions, composed of 22 cities and 6 counties, and a total land area of more than 3.8 million acres. SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) includes a regional-scale land use change scenario covering the period from 2012 to 2036 (SACOG 2016:9). Currently, almost 20 percent of this area has been developed, the population is more than 2.4 million, and there are 952,214 housing units (DOF 2016).

In order to understand the Cumulative Context, the City has collected information on existing and projected future population and employment. Table 6-1 lists the estimated population, number of housing units and jobs in the six-county SACOG region. As shown, developed acreage in the region is forecast to increase by 7 percent between the baseline year for the MTP/SCS (2012) and the MTP/SCS planning horizon of 2036. This 7 percent increase in developed acreage contrasts with an increase in housing units of 32 percent and an increase in jobs of 49 percent, indicating that new development could be more compact. This theme is reflected in the Yolo County portion of the MTP/SCS region, as well, where SACOG has forecast an increase in developed acreage of 8 percent, with an accompanying housing unit growth of 36 percent and job growth of 57 percent.

Table 6-1. Existing and Future Developed Acres, Housing, and Employment—2012 and 2036

County	Developed Acres			Housing Units			Jobs		
	2012	2036	Growth	2012	2036	Growth	2012	2036	Growth
El Dorado	201,148	207,758	3%	64,358	76,269	19%	43,164	64,079	48%
Placer	137,021	151,474	11%	142,582	197,127	38%	128,901	210,040	63%
Sacramento	216,752	236,387	9%	558,835	731,357	31%	573,022	831,161	45%
Sutter	28,679	31,021	8%	33,790	44,820	33%	29,533	43,084	46%
Yolo	38,244	41,160	8%	75,553	102,771	36%	92,899	145,739	57%
Yuba	96,512	98,118	2%	28,331	36,003	27%	20,402	32,500	59%
Total	**718,356**	**765,919**	**7%**	**903,464**	**1,188,347**	**32%**	**887,920**	**1,326,603**	**49%**

Source: SACOG 2015, Tables 2.3, 2.4, and 2.5.

SACOG has created a framework for describing the MTP/SCS that is composed of Community Types. Local land use plans (e.g., adopted and proposed general plans, specific plans, master plans, corridor plans, etc.) were divided into one of five Community Types based on the location of the plans. Exhibit 6-1 shows the Community Types for the six-county SACOG region.

As shown on Exhibit 6-1, the majority of the City of Woodland is identified as an Established Community, which represents existing developed areas typically adjacent to Center and Corridor Communities, "typically made up of existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers" (SACOG 2016:27). The central portion of the City is designated as Center and Corridor Community (SACOG 2016). SACOG has identified Downtown and the East Street Corridor as being part of a Center and Corridor Community (SACOG 2016, Appendix E-3, Attachment A, Table 2). Center and Corridor Communities have higher densities and development intensities, as well as a more diverse mix of land uses compared to other community types in the MTP/SCS. They include "historic downtowns, main streets, suburban or urban commercial corridors, rail station areas, central business districts, or town centers" (SACOG 2016:26). The southern portion of the Planning Area is shown as Developing Community, which represents vacant lands at the edge of existing urban or suburban development that are the next increment of urban expansion. This designation of Developing Community on the SACOG mapping appears to be centered on the City's Spring Lake Specific Plan Area.

The City has collected additional information about the SACOG MTP/SCS to provide a higher level of spatial detail in the Planning Area and surrounding locations. Exhibit 6-2 shows the amount of assumed development in the SACOG MTP/SCS expressed as total service population, and illustrated by traffic analysis zones (as defined by SACOG for its Sacramento Regional Travel Demand Model (SACMET)). "Service population" is the sum of residential population and local jobs. "Traffic analysis zones" or TAZs are boundaries used in transportation analysis to organize existing and future land use spatially. Please note that the TAZ boundaries do not relate to jurisdictional or planning boundaries such as the city limits or City's Planning Area.

As shown in Exhibit 6-2, large portions of unincorporated Yolo, Sutter, and Sacramento counties are projected to have little to no growth in service population per square mile. Already developed and planned areas within Woodland, Davis, Winters, and other cities in the region, as well as unincorporated towns, such as Esparto, are the focus of growth in the 2016 MTP/SCS. The same forecast development pattern is reflected in SACOG's description of Community Types, as presented in Exhibit 6-1, where large portions of unincorporated Yolo, Sutter, and Sacramento counties are designated as "Lands Not Identified for Development in the MTP/SCS or Blueprint."

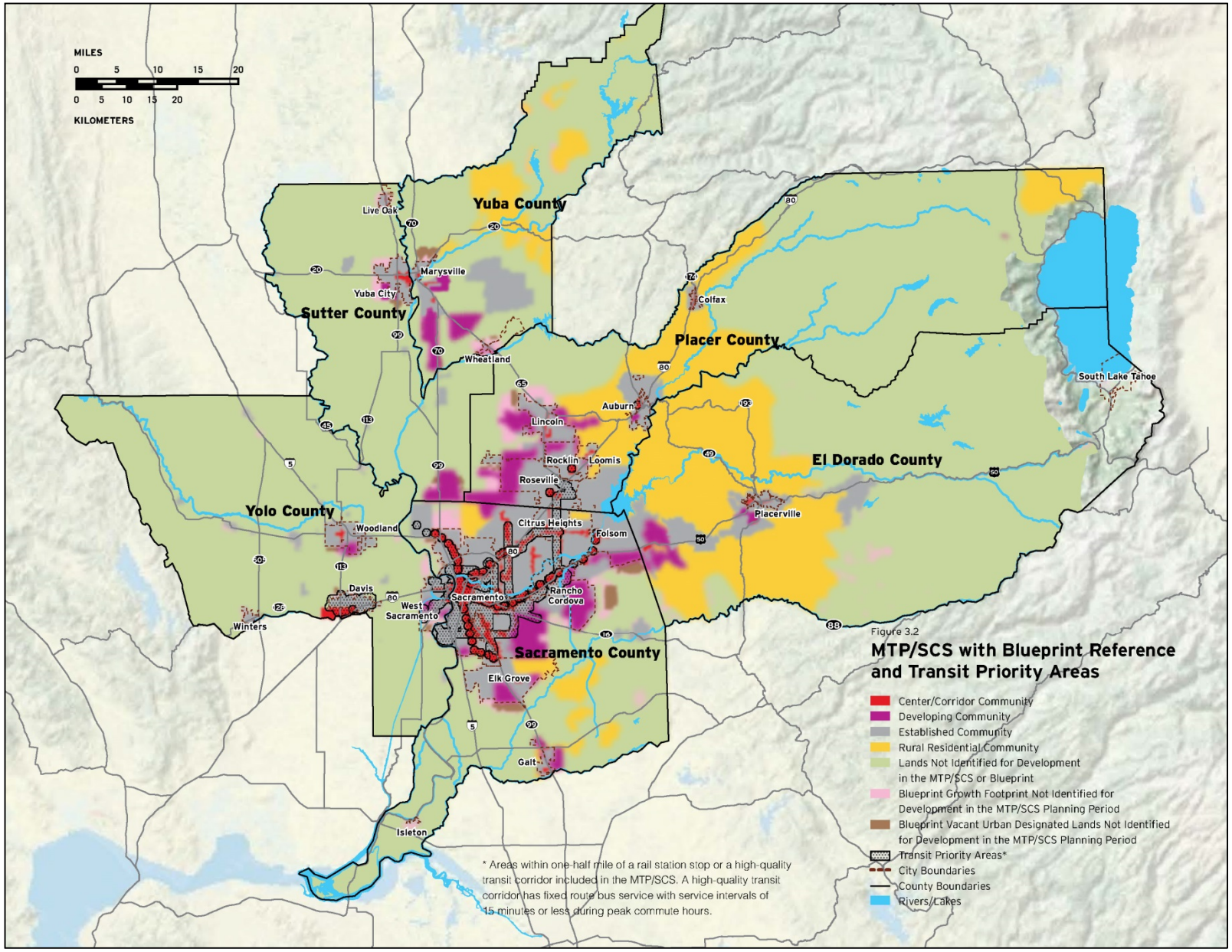
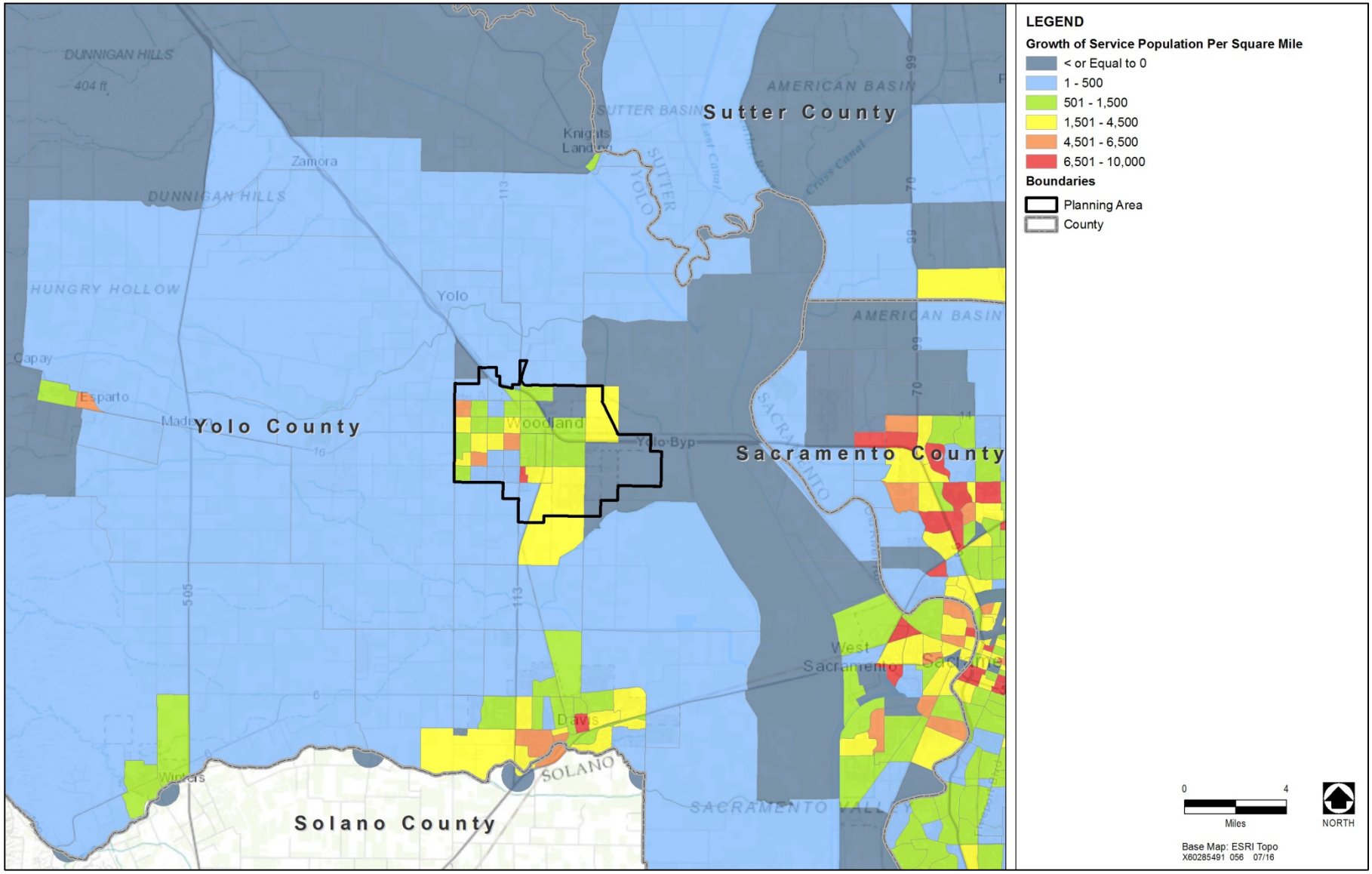


Exhibit 6-1. **2016 MTP/SCS Community Types**



Source: SACOG 2016.

Exhibit 6-2. **2016 MTP/SCS Assumed Growth**

SACOG estimates that Woodland will grow by a total of 24,181 housing units and 33,026 jobs by the planning horizon of the MTP/SCS (which is 2036) and a total of 28,283 housing units and 49,130 jobs at full buildout (SACOG 2016, Appendix E-3, page 165). As discussed elsewhere in this EIR, this estimate is lower than that assumed under the Proposed Project – either for the East Alternative or the South Alternative (see Chapter 3 of this EIR, "Project Description" for details). The methodology and purpose of the City's estimate of development capacity under the Proposed Project is different from the methodology and purpose of SACOG's forecast for the purposes of the MTP/SCS. The SACOG projections are market based growth estimates that project the amount and location of likely growth in the region based on a variety of socio-economic factors that are updated every four years. The City's general plan is a long range planning tool that seeks to create opportunities for growth and provide a range of land use options to encourage economic investment. Given these different purposes it is reasonable to expect variations in the growth forecasts between the two.

6.1.2 CUMULATIVE SCENARIO

As described in detail in Chapter 3, "Project Description," the Proposed Project that is the subject of detailed analysis throughout this EIR includes the 2035 General Plan with an equal weight analysis of two alternatives: the East Alternative and the South Alternative, as well as the 2035 Climate Action Plan (CAP). Various policies in the 2035 General Plan control the timing, location, and sequence under which the Planning Area could build out through the planning horizon year (2035), specifically with regard to development in new Specific Plan Areas under these two Alternatives. Under the policies that control the level of development, neither Alternative would involve full buildout of the City's Planning Area.

The Cumulative Scenario for the Proposed Project, by contrast, *does* consider buildout of the City's Planning Area. Table 6-2 shows the range of new development yields that could result if all vacant and underutilized parcels within the Planning Area developed. Generally assuming the minimum allowable densities and intensities for each land use designation would result in the development of approximately 7,920 new dwelling units and 16,099,000 new non-residential square feet. Assuming the maximum allowable densities and intensities would result in approximately 27,940 new dwelling units and 86,782,000 new non-residential square feet.

There are a variety of factors that influence the City's growth rate over time, including many that are outside the City's control (BAE 2013). Although it is not possible to know in what year the Cumulative Scenario would build out, or whether the Cumulative Scenario actually would fully build out, it would be after 2035, since policies in the 2035 General Plan would control the level of development. Rather than use the absolute minimum or maximum densities and intensities, the City elected to generally use mid-points of allowable density and intensity to develop estimates for the Cumulative Scenario.

The Cumulative Scenario would include development of approximately 15,290 new dwelling units and 40,220 new jobs, which is an increase of 77 percent and 155 percent compared to existing levels, respectively (Table 6-3). Buildout of the Planning Area would add approximately 42,060 new residents, which is an increase of 76 percent.

Table 6-3. New Development Yield at Minimum and Maximum Densities and Intensities				
Land Use Designation	Minimum Density/Intensity[1]		Maximum Density/Intensity[2]	
	Dwelling Units	Non-Residential Square Footage	Dwelling Units	Non-Residential Square Footage
Low Density Residential (LD)	690	-	2,740	-
Medium Density Residential (MD)	570	-	1,390	-
High Density Residential (HD)	470	-	950	-
Downtown Mixed Use (DX)	730	527,000	1,450	2,106,000
Corridor Mixed Use (CX)	1,740	1,356,000	4,980	16,270,000
Specific Plan (SP)	3,720	3,322,000	16,430	6,650,000
Neighborhood Commercial (NC)	-	41,000	-	137,000
Community Commercial (CC)	-	172,000	-	573,000
Regional Commercial (RC)	-	1,193,000	-	5,566,000
Business Park (BP)	-	1,572,000	-	12,409,000
Industrial (IN)	-	7,273,000	-	38,787,000
Public/Quasi Public (PQ)	-	643,000	-	4,284,000
Open Space (OS)	-	-	-	-
Flood Study Area (FS)	-	-	-	-
Total	7,920	16,099,000	27,940	86,782,000

Notes:

1. For land use designations that have a minimum allowable density or intensity that is either zero or not specified, an alternative determined to be the lowest feasible density/intensity was used. In these cases, the assumptions are as follows:
   a. Low Density Residential (LD) – Minimum density assumed at 2.0 du/ac
   b. Specific Plan (SP) – 2.0 du/ac; 0.15 FAR
   c. Industrial (IN) – 0.15 FAR
   d. Public/Quasi Public (PQ) - 0.15 FAR
   For the Corridor Mixed Use designation (CX), a minimum residential density of 14.0 du/ac was assumed given the likelihood that the City will approve densities lower than 20.0 du/ac in locations adjacent to low density residential development.
2. For land use designations that do not specify a maximum allowable density or intensity, a density/intensity determined to be the maximum feasible was used. In these cases, the assumptions are as follows:
   a. Downtown Mixed Use – 40.0 du/ac
   b. Specific Plan – 14.0 du/ac; 0.5 FAR

Source: Dyett & Bhatia 2016

Table 6-2. Cumulative Scenario: Dwelling Units and Jobs: Existing, New, and Buildout								
	Dwelling Units				Jobs			
	Existing	New	Buildout	Change	Existing	New	Buildout	Change
Woodland Planning Area	19,980	15,290	35,270	77%	26,000	40,220	66,220	155%

Note: Estimates are rounded.
Source: Dyett & Bhatia 2016

Under the Cumulative Scenario, most new dwelling units that are developed under the 2035 General Plan would be located within the City's new Specific Plan Areas, while most new non-residential square footage would be developed in infill areas and existing planned areas, including the City's northeastern Industrial area (and not in the 2035 General Plan's new Specific Plan Areas) (Table 6-4).

The Cumulative Scenario would involve an additional 1,090 dwelling units Downtown, 2,470 new dwelling units along major corridors and other infill locations, and 2,600 new dwelling units in the existing Spring Lake Specific Plan Area. Under the Cumulative Scenario, all three of the new Specific Plan Areas are assumed to build out, providing opportunities for up to 3,490 new dwelling units in SP-1, 4,770 new dwelling units in SP-2, and 870 new dwelling units in SP-3.

Table 6-4. Cumulative Scenario: Location of New Dwelling Units and Non-Residential Square Footage

Location	New Dwelling Units	Share of Total	Non-Residential Square Footage	Share of Total
Infill Areas				
Downtown	1,090	7%	527,000	2%
Corridors/Other Infill Areas	2,470	16%	9,084,000	26%
Spring Lake Specific Plan Area	2,600	17%	530,000	2%
Industrial Areas	0	0%	15,559,000	44%
Total Infill Areas	6,160	40%	25,700,000	73%
New Specific Plan Areas				
SP-1	3,490	23%	3,332,000	9%
SP-1A	1,600	10%	2,160,000	6%
SP-1B	1,500	10%	1,172,000	3%
SP-1C	390	3%	0	0%
SP-2	4,770	31%	2,596,000	7%
SP-3	870	6%	3,501,000	10%
SP-3A	420	3%	537,000	2%
SP-3B	450	3%	2,964,000	8%
Total New Specific Plan Areas	9,130	60%	9,429,000	27%
Grand Total	15,290	100%	35,129,000	100%

Note: Estimates are rounded.

Source: Dyett & Bhatia 2016

On the non-residential side, the Cumulative Scenario anticipates approximately 54,953,400 square feet of building space at full buildout of the Planning Area, which is an increase of 177 percent above the estimate of existing building space in the City. The Downtown area is anticipated to capture 527,000 square feet (2 percent) of the new non-residential square footage, along with 9,084,000 square feet (26 percent) along major corridors and in other infill locations, 530,000 square feet (2 percent) in the Spring Lake Specific Plan Area, and 15,559,000 square feet (44 percent) in industrial areas. Under the Cumulative Scenario, SP-1 would add 3,332,000 square feet (9 percent) of non-residential square footage, while SP-2 would add 2,596,000 square feet (7 percent), and SP-3 would add 3,501,000 square feet (10 percent).

As described under the "Cumulative Context" subsection above, the growth assumptions used in Woodland are different from those used by SACOG for the MTP/SCS. This is also true for the Cumulative Scenario. For the purposes of this EIR analysis, the Cumulative Scenario assumes that full buildout of the City would result in approximately 15,290 new dwelling units and 40,220 new jobs. The SACOG MTP/SCS update assumes that Woodland could grow by 8,229 new dwelling units and 27,783 new jobs by 2036. Cumulative impacts under the Cumulative Context are compared with cumulative impacts under the Cumulative Context with the incremental increase in development under the Cumulative Scenario in Woodland. As described above under "Cumulative

Context," some growth is assumed in Woodland under the Cumulative Context, but not as much as assumed under the Cumulative Scenario.

6.1.3 CUMULATIVE EFFECTS OF THE CUMULATIVE CONTEXT AND CUMULATIVE SCENARIO

The following contains an analysis of the cumulative effects by environmental topic. The discussion is divided into the impacts of the Cumulative Context (without the Proposed Project) and the Cumulative Scenario (buildout of the Planning Area as detailed above under the heading, "Cumulative Scenario").

6.1.3.1 AESTHETIC AND VISUAL RESOURCES

Cumulative Context

Growth in the Sacramento region, including the City of Woodland, will result in substantial changes to the visual character of the region. Agricultural lands, viewsheds and scenic, historical resources will all be affected by projects and plans in the area. As development occurs throughout the region, substantial changes in visual conditions would continue as open viewsheds are replaced by urban development, including both higher-density development in tall buildings that are visible from longer distances, as well as rural and lower-density development with one- and two-story buildings that are only visible from adjacent public viewing areas or transportation corridors. Development throughout the SACOG region will change views of foothill and mountain areas, the visual character of developed historic downtowns, residential neighborhoods, commercial districts, parks, and undeveloped open space.

The 2016 SACOG MTP/SCS anticipates the potential for significant impacts on views from State-designated scenic highways. The Caltrans Scenic Highway Program requires protection of the scenic quality of State scenic highway corridors, and many jurisdictions have local protections. However, the views are protected differently in each jurisdiction, and it is possible that the development anticipated in the MTP/SCS will block panoramic views or views of special features.

Many changes in the aesthetic environment are only experienced locally, and would not tend to combine with nearby development to create cumulative impacts that are more severe than the sum of individual plans and projects. As noted in SACOG's MTP/SCS EIR (SACOG 2015:19-18):

> "the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather these effects are independent, and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site also result in localized impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site."

However, cumulative development within the region adds lighting, which combines together to create light pollution – the illumination of the otherwise dark nighttime sky. Future development anticipated under the SACOG MTP/SCS would lead to a more intense nighttime glow, which would be perceptible throughout the region. As urban development occurs in nearby cities and the surrounding unincorporated County land, nighttime light will obscure views of the night sky. Assessment of visual quality is a subjective matter, and reasonable

people may differ as to the aesthetic value of the open space in the region, and whether development of urban uses would constitute a substantial degradation of the existing visual character or quality of the region. While growth does not necessarily cause adverse aesthetic impacts, the MTP/SCS EIR states that growth in the SACOG region may cause adverse impacts relating to existing visual character. The change in visual character would be substantial, and this impact, the change in nighttime glow, and changes in views along State scenic highways are considered **significant cumulative** impacts.

Cumulative Scenario

Woodland's relatively flat topography results in few scenic vistas. Views consist mainly of the farmland surrounding the built environment seen from adjacent properties. Implementation of the Cumulative Scenario will result in development that may limit some existing views. However, it is expected that overall, new views will compensate for—and be very similar to—any lost views. The impact of the Cumulative Scenario makes a **less than cumulatively considerable** contribution to the significant cumulative impact related to scenic vistas.

The State scenic highway nearest to the Planning Areas ends in Capay, more than 10 miles away from the western boundary of the Planning Area. There is no State scenic highway in close proximity to the Planning Area, so the Cumulative Scenario makes **no cumulatively considerable** contribution.

Implementation of the Cumulative Scenario would allow for greater density and development intensity in certain infill areas – particularly areas designated Downtown Mixed Use and Corridor Mixed Use (Exhibit 6-3). Taller or larger buildings do not necessarily constitute a visual impact, and policies in the 2035 General Plan establish high standards for design and compatibility with a project's surroundings. In addition to adding uses and density, new investment in urban infill areas typically improves visual quality by developing vacant or underutilized properties and improving maintenance of existing structures and yards. Nonetheless, the Cumulative Scenario would change the visual character of the Planning Area, which would be perceived within the Planning Area, as well as from adjacent areas. Given the scale of the City's Planning Area, the Cumulative Scenario makes a **cumulatively considerable contribution**. There is no feasible mitigation that would avoid changing the visual character of the Planning Area, while also allowing the City to accomplish its Vision and Guiding Principles for the 2035 General Plan. The impact is **significant and unavoidable**.

The Cumulative Scenario would contribute nighttime light to the already increasing amount of light pollution in the region and therefore makes a **cumulatively considerable contribution**. Mitigation Measure 4.1-4 recommends two additional policies, Policies 2.F.4 and 2.F.5, that require light sources to be aimed downward and shielded, as necessary, to prevent glare or reflection or any nuisance or hazardous interference of any kind on adjoining streets or property and to avoid glare by using exclusively low-reflectance, non-polished finishes, or other equally effective mechanisms. Mitigation Measure 4.1-4 will reduce light and glare from urban development, but these impacts cannot be avoided altogether. The impact is **significant and unavoidable**.

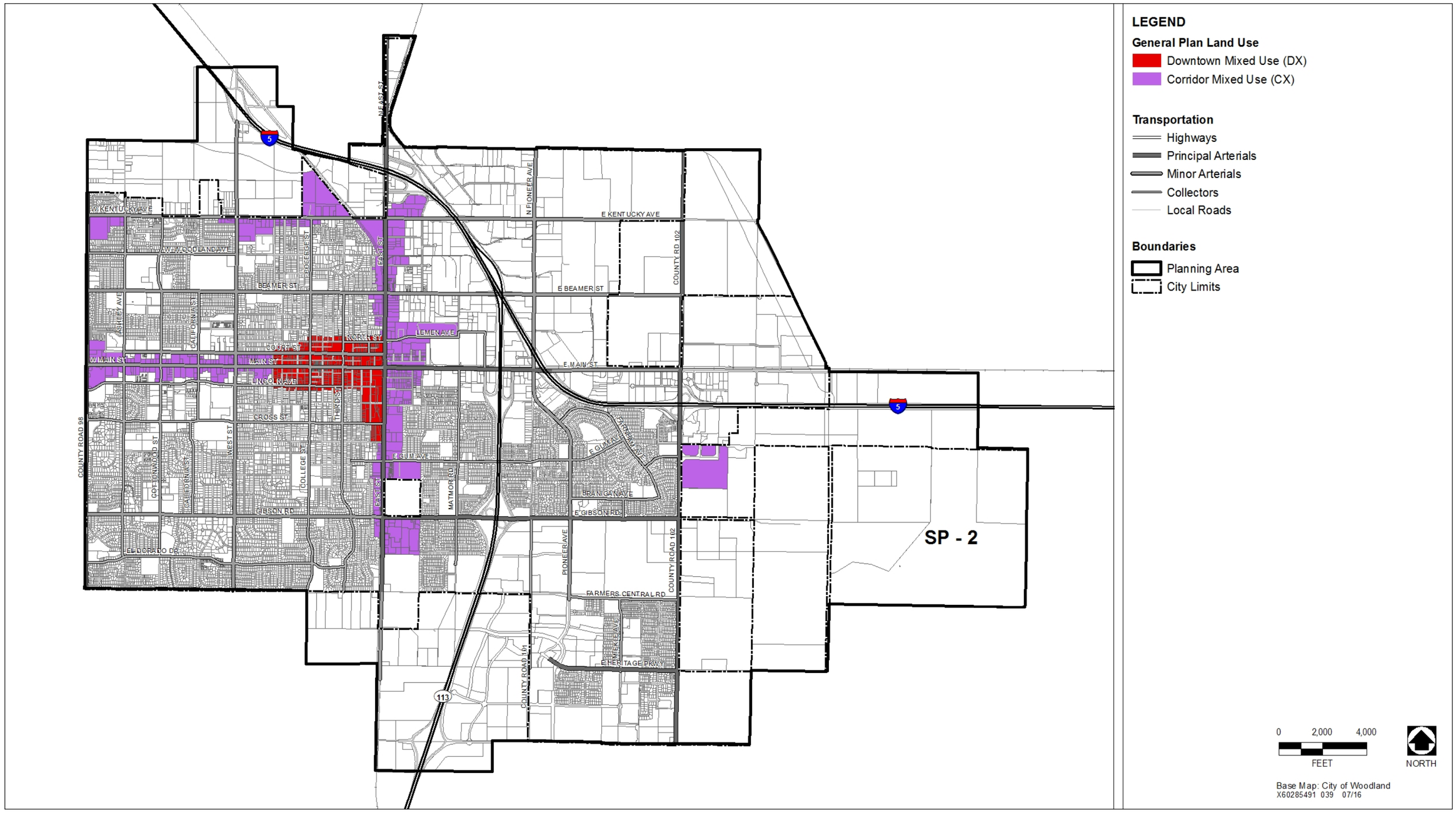


Exhibit 6-3. **2035 General Plan Land Use Diagram: Downtown Mixed Use and Corridor Mixed Use**

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6.1.3.2 AGRICULTURE AND FORESTRY RESOURCES

Cumulative Context

In the SACOG region, land use changes and transportation projects have the potential to impact 5,454 acres of farmland, including 2,466 acres of Prime farmland, as designated by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) (SACOG 2015, page 4-22). The SACOG MTP/SCS EIR includes a recommendation to reduce this regional impact by requiring permanent protection of in-kind farmland at a 1:1 ratio. In addition, by focusing on providing small-lot and attached housing, maximizing infill and redevelopment opportunities, and planning for communities with a mix of uses, the proposed MTP/SCS is intended to help facilitate a relatively more compact land use pattern, reducing impacts on agricultural land. However, the conversion of farmland in the region constitutes a **significant cumulative** impact.

According to the MTP/SCS EIR, as of 2014, there were approximately 705,666 acres of land under active Williamson Act contracts within the SACOG region, of which 27,057 acres were in non-renewal contracts. Approximately 57 percent of the land under Williamson Act contracts in the region are located in Yolo County. Even though the proposed MTP/SCS makes efforts to create a compact land use pattern, its development footprint has the potential to impact 5,309 acres of agricultural zoning, 1,056 acres of agricultural general plan designations, and 697 acres of farmland under active Williamson Act contracts. There is a **significant cumulative** impact.

Cumulative Scenario

Implementation of the Cumulative Scenario would convert all of the farmland in the Planning Area to non-agricultural uses, as shown in Table 6-5. The conversion of farmland that would occur under the Cumulative Scenario will contribute to the loss of agricultural land in the region, which is an irreversible loss of a shared and finite resource.

Table 6-5. Important Farmland Change in the Planning Area – Cumulative Scenario

Type	Existing Acres	Change	Acres at General Plan Horizon Year (2035)	Percent Change by Type
Prime Farmland	1,544.6	1,544.6	0.0	100%
Farmland of Statewide Importance	401.1	401.1	0.0	100%
Unique Farmland	434.9	434.9	0.0	100%
TOTAL	**2,380.6**	**2,380.6**	**0.0**	**100%**

As described in Section 4.2 of this EIR, "Agriculture and Forestry Resources," multiple policies are identified in the 2035 General Plan to manage agricultural land conversion, including an urban limit line that is designed to protect agricultural land surrounding the city limits, which would reduce the potential impact associated with conversion of agricultural land. The 2035 General Plan also requires mitigation for lost farmland within the ULL at a rate of one acre of permanently conserved farmland for every acre converted to urban development or non-agricultural uses. Notwithstanding these policies, there is no feasible mitigation that would allow the City to implement the 2035 General Plan according to the City's Vision and Guiding Principles, while also avoiding the conversion of farmland. No additional feasible mitigation, in addition to those discussed above, are available to further reduce the impact. The loss of farmland associated with the Cumulative Scenario makes a **cumulatively considerable contribution**, and the impact is considered **significant and unavoidable**.

There is no farmland under Williamson Act contract in the Planning Area. Therefore, the impacts of the Cumulative Scenario on existing zoning and Williamson Act contracts make a **less than cumulatively considerable contribution**.

6.1.3.3 AIR QUALITY

The Yolo-Solano Air Quality Management District (YSAQMD) significance thresholds are intended to be used to determine whether or not the subject project would have a cumulatively considerable impact. The YSAQMD also uses its significance thresholds as a proxy for determining whether project are accommodated within in the applicable air quality plan.

Construction Emissions

Cumulative Context

By its nature, air pollution is largely a cumulative impact. The implementation of plans and projects within the Sacramento Valley Air Basin would contribute to this impact on a cumulative basis. The emissions of an individual project may be individually limited but cumulatively considerable when taken in combination with past, present, and future development projects. All new development that would result in an increase in air pollutant emissions would contribute to cumulative construction air quality impacts. The nonattainment status of regional pollutants is a result of past and present development within the air basin, and this regional impact is a **significant cumulative** impact.

Cumulative Scenario

As shown in Tables 4.3-7 and 4.3-8 in Section 4.3 of this EIR, "Air Quality," construction-related criteria pollutant and precursor emissions from the Proposed Project (under either alternative) would exceed YSAQMD's thresholds of significance for ROG, NO_X, and PM_{10}. The Cumulative Scenario of the Proposed Project would involve more construction activities than the South and East Alternatives; therefore, the Cumulative Scenario would also generate construction-related criteria air pollutant and precursor emissions that exceed YSAQMD's thresholds of significance.

This is a **cumulatively considerable** contribution to a significant cumulative impact. Policies and mitigation referenced in Section 4.3 of this EIR, "Air Quality," will reduce emissions, but it is not possible to demonstrate with reasonable certainty that the application of these policies and mitigation would reduce emissions below applicable significance thresholds. There is no additional feasible mitigation. As a result, this cumulative impact is **significant and unavoidable.**

Operational Emissions

Cumulative Context

By its nature, air pollution is largely a cumulative impact. The implementation of plans and projects within the Sacramento Valley Air Basin would contribute to this impact on a cumulative basis. The emissions of an individual project may be individually limited but cumulatively considerable when taken in combination with past, present, and future development projects. All new development that would result in an increase in air pollutant emissions would contribute to cumulative operational air quality impacts. The nonattainment status of

regional pollutants is a result of past and present development within the air basin, and this regional impact is a **significant cumulative** impact.

Cumulative Scenario

As shown in Tables 4.3-9 and 4.3-10 in Section 4.3 of this EIR, "Air Quality," long-term operational criteria pollutant and precursor emissions from the Proposed Project (under either alternative) would exceed YSAQMD's thresholds of significance for ROG, NO_X, and PM_{10}. The Cumulative Scenario of the Proposed Project would involve more operational activities than either alternative, based on the additional proposed residential units and non-residential building space. It is anticipated that at buildout of the Cumulative Scenario of the Proposed Project, operational criteria air pollutant and precursor emissions would exceed YSAQMD's thresholds of significance, violating or contributing substantially to an existing or projected air quality violation. 2035 General Plan policies and mitigation in Section 4.3 of this EIR, "Air Quality," along with reduction strategies outlined in the 2035 CAP would reduce air quality emissions from various sources (e.g., energy, water, transportation). However, operational emissions would still result in a net increase of ROG, NO_X, and PM_{10} emissions that could violate or contribute substantially to an existing or projected air quality violation. The Cumulative Scenario of the Proposed Project would generate operational criteria air pollutant and precursor emissions that would exceed YSAQMD's thresholds of significance. This is a **cumulatively considerable** contribution to a significant cumulative impact. 2035 General Plan policies, mitigation included in Section 4.3 of this EIR, "Air Quality," and strategies outlined in the 2035 CAP will reduce emissions, but it is not possible to demonstrate with reasonable certainty that emissions would be reduced below applicable thresholds. There is no additional feasible mitigation. As a result, this cumulative impact is **significant and unavoidable**.

Toxic Air Contaminant Emissions

Cumulative Context

Existing toxic air contaminant (TAC) sources in the Planning Area include mobile sources, stationary sources, and areawide sources, which all cumulatively contribute to the existing TAC concentrations and the associated health risk. Mobile sources are dispersed on roadways throughout the Planning Area, which are generated, in part by existing and planned uses throughout the region. SR 113 and I-5 both handle heavy-duty diesel trucks with emissions that can expose residents and other adjacent sensitive receptors to TACs. Future development anticipated under SACOG's MTP/SCS would involve substantial development that would further increase traffic along main regional roadways. This is considered a **significant cumulative** impact.

Cumulative Scenario

YSAQMD works closely with the Sacramento Metropolitan Air Quality Management District (SMAQMD) due to their proximity to one another and similar air quality issues. SMAQMD provides screening methods to determine if a project would have the potential to create a violation of the carbon monoxide standard. If all of the following criteria are met, the subject project would result in a less-than-significant impact on air quality for local carbon monoxide:

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.

- The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other locations where horizontal or vertical mixing of air would be substantially limited.

- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average.

Implementation of the Cumulative Scenario of the Proposed Project would generate additional vehicle trips within the Planning Area that would increase vehicle volumes at local intersections. For the Planning Area, the roadway segment with the highest hourly traffic volume would be Interstate 5 (I-5) between East Main Street and County Road 102. Under the Cumulative Scenario, this segment would have a peak hourly volume of approximately 6,480 vehicles (see Appendix G of this EIR, page 4). SMAQMD has a screening criterion of 31,600 vehicles per hour for carbon monoxide concentrations. The cumulative scenario is approximately 22 percent of the SMAQMD screening criteria of 31,600 vehicles per hour for carbon monoxide concentrations. Therefore, traffic volumes would not approach the level that would represent a substantial pollutant concentration.

Toxic air contaminants (TACs) are considered in planning in association with sensitive land uses. The 2035 General Plan Glossary (page D-10) states that sensitive receptors are:

> "Persons or land users that are most sensitive to negative effects of air pollutants. Persons who are sensitive receptors include children, the elderly, the acutely ill, and the chronically ill. The term 'sensitive receptors' can also refer to the land use categories where these people live or spend a significant amount of time. Such areas include residences, schools, playgrounds, childcare centers, hospitals, retirement homes, and convalescent homes."

These receptors are located throughout the Planning Area, particularly concentrated near populated areas. Operational activities that require the use of diesel-fueled vehicles for extended periods, such as commercial trucking facilities or delivery/distribution areas, may generate diesel particulate matter (DPM) emissions near sensitive receptors. As discussed in Section 4.3 of this EIR, "Air Quality," existing TAC sources in the Woodland area include mobile sources, stationary sources, and areawide sources, which all cumulatively contribute to the existing TAC concentrations and the associated health risk. Outside the Planning Area, pollutants will have dispersed, and risk levels drop substantially with distance from the source.

As detailed in in Section 4.3 of this EIR, "Air Quality," the Sacramento Metropolitan Air Quality Management District (SMAQMD) has guidance for the Sacramento region for assessing exposure to health risk for high-volume roadways. As described in that section, YSAQMD works closely with the SMAQMD due to their proximity and similar air quality issues. Development within the Planning Area would contribute vehicle traffic on these roadways, which could increase the potential health risk for sensitive receptors that are located immediately adjacent to high-volume roadways. The highest volume roadway to which the Cumulative Scenario would contribute is Interstate 5 (I-5) between East Main Street and County Road 102, which would handle approximately 6,480 vehicles per hour during the afternoon peak hour (see Section 4.13 of this EIR, "Transportation and Circulation" for more details). The SMAQMD guidance states that if the nearest sensitive receptor's increase in individual cancer risk is lower than the evaluation criterion of 276 cases per million, no further roadway-related air quality evaluation is recommended. This risk level would occur within approximately 100 feet north of I-5 and within 50 feet south of the edge of I-5 under the Cumulative Scenario. The 2035 General

Plan includes a policy that requires buffering from I-5 that would avoid adverse effects related to TAC exposure. Outside the Planning Area, implementation of the Cumulative Scenario would add traffic, but this traffic would be dispersed as the distance from the Planning Area increases so that impacts associated with trips from the Cumulative Scenario of the Proposed Project are **less than cumulatively considerable.** In addition, as detailed in Section 4.3 of this EIR, "Air Quality," the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) have both adopted rules that will substantially reduce diesel particulate matter emissions from heavy-duty trucks, which are the primary sources of diesel particulate matter emissions along high-volume roadways.

As discussed in Impact 4.3-3 in Section 4.3 of this EIR, "Air Quality," the exact nature, intensity, and location of non-residential land uses proposed under the Cumulative Scenario cannot be determined at the time of this analysis. Although commercial and industrial uses that would be developed under the 2035 General Plan have not been identified, it is possible that large-scale commercial uses that could be developed under the 2035 General Plan would have tenants that would require large delivery and shipping trucks that use diesel fuel. As noted in the 2035 General Plan (page LU 2-6):

> "Much of Woodland, including existing residential neighborhoods, is not expected to change during the planning horizon of this General Plan. However, there are some areas where the city does expect to see change. These areas include Downtown, major corridors, the industrial area, and large areas of land designated for future growth. Many of the goals and policies in this element are focused on supporting growth in these areas."

Industrial uses would primarily locate in the northeast quadrant of the city in the area designated "Industrial" in the 2035 General Plan. Appendix C of the 2035 General Plan identifies the Industrial zoning district (I) to be consistent with the Industrial (IN) land use designation and identifies also that multiple sub-districts may be created in the future to implement the IN land use designation. The I zoning district does allows a range of industrial and industrial-related uses and does not allow residential uses or other sensitive uses, with the exception of a residence for a caretaker or watchman for a primary allowed use (City of Woodland 2003). The 2035 General Plan provides broad guidance regarding allowable land use, along with policies that ensure compatibility in relation to important topics, including potential airborne hazards.

The 2035 General Plan includes policies that would require buffers between sensitive land uses and sources of TACs. These would apply in areas such as the transition from Industrial to Corridor Mixed Use along the east side of East Street north of Main Street. The City does not specifically anticipate establishment of any new substantial stationary source of TACs that could expose receptors to increased cancer risk greater than 10 in one million. Land uses include a range of residential densities, civic and open space uses, commercial service and retail, office uses, and light industrial uses. It is possible that commercial and industrial uses would include sources of TAC emissions, such as emergency generators (i.e., diesel PM) and miscellaneous operations (e.g., benzene, hexavalent chromium, etc.). However, emergency generators as part of industrial and commercial land uses would be permitted by the Air District, which has established regulatory limits on operation, testing, and maintenance activities that are designed to be protective of the public health. YSAQMD Rule 3.13 (Toxics New Source Review) requires any constructed or reconstructed major source of hazardous air pollutants to install best available control technology for toxics (T-BACT). The T-BACT should be no less stringent than new source maximum achievable control technology (MACT). Risk levels drop substantially with distance from stationary TAC sources and therefore do not cumulatively combine at the regional scale in the same way as other pollutant sources do.

The 2035 General Plan requires assessment of air quality impacts on a case-by-case basis and buffering of sensitive receptors from SR 113 and I-5, and Section 4.3 of this EIR, "Air Quality," recommends detailed mitigation that would ensure against exposure of sensitive receptors to substantial pollutant concentrations – both as a result of construction and operation of the Proposed Project. With implementation of existing rules and regulations region-wide, there is **no significant cumulative** impact.

Construction activities associated with the Cumulative Scenario would occur at various locations throughout the Planning Area. It is anticipated that over time, construction-related emissions will decrease with construction equipment fleet turnover, increased emissions technology, and more stringent emissions standards. Implementation of the Cumulative Scenario could generate construction-related TAC emissions that would cumulatively expose sensitive receptors to substantial construction-related TAC concentrations. The 2035 General Plan requires assessment of air quality impacts on a case-by-case basis and buffering of sensitive receptors from SR 113 and I-5, and Section 4.3 of this EIR, "Air Quality," recommends detailed mitigation that would ensure against exposure of sensitive receptors to substantial pollutant concentrations – both as a result of construction and operation of the Proposed Project that would also apply to the Cumulative Scenario. As a result, this impact is **less than cumulatively considerable**.

Odor Emissions

Cumulative Context

Odor impacts are generally localized and do not combine with odor impacts in nearby jurisdictions to increase the severity of impacts. Because odor emissions from various land uses differ in nature, these emissions would not cumulatively contribute to each other to expose residents. There is **no significant** cumulative impact.

Cumulative Scenario

Implementation of the Cumulative Scenario would not generate construction or operational odor emissions that are considered a cumulatively considerable contribution. Odor impacts are generally localized and do not combine to increase the severity of impacts. Therefore, the impact of exposing populations to substantial odors is **less than cumulatively considerable**.

6.1.3.4 BIOLOGICAL RESOURCES

Past and present actions by humans have substantially altered biological resources in the Central Valley region of California and Yolo County, specifically, compared to historical conditions. Among the most important of these past actions have been conversion of natural vegetation and habitats to agricultural and developed land uses; flood control projects; and the introduction of nonnative species, which, in many cases, have competed with, preyed upon, and degraded habitat for native species.

These past and present actions have resulted in significant adverse effects on the original extent, species composition, and functioning of natural habitats that occur in the region; and on the distribution and abundance of plant and wildlife species associated with these habitats. Large areas of freshwater marsh, riparian, grassland, alkali prairie, and vernal pool vegetation have been lost or degraded in the region over the past 100 years. The increase in the distribution and abundance of invasive plant species and nonnative plant communities, the large number of plant and wildlife species listed as threatened or endangered or considered sensitive by the California Department of Fish and Wildlife (CDFW), and the dramatic reductions in the extent of wetlands and natural

vegetation in the Central Valley region are evidence of these overall significant adverse effects. These actions have altered habitats, biotic interactions, and physical processes that continue to affect species in the region today.

The majority of the Planning Area consists of developed and agricultural land that provides limited habitat values to most species; however, there is a limited amount of natural and sensitive habitat in the Planning Area, as well as special-status species associated with these habitats. In addition, certain agricultural crops found in the Planning Area provide important habitat for the state and federally-listed giant garter snake and State-listed Swainson's hawk. Cumulative impacts on the most vulnerable habitats and species that occur in the region and may be adversely affected by the Cumulative Scenario of the Proposed Project are discussed below.

Palmate-bracted Bird's Beak

Cumulative Context

Palmate-bracted bird's beak grows in seasonally flooded, saline-alkaline soils of chenopod scrub and alkali sink and prairie habitats and is semi-parasitic on the roots of host plants, often saltgrass. The saline-alkaline habitats this species depends on are historically rare in Yolo County and in California in general, and have been dramatically reduced by conversion to agricultural and urban land uses as well as water impoundment and diversion (U.S. Fish and Wildlife Service [USFWS] 2010). Therefore, this species has a limited distribution, restricted to the Central Valley, and is highly susceptible to the effects of habitat loss and degradation. The only three occurrences of palmate-bracted bird's beak documented in Yolo County are within and immediately adjacent to the Planning Area, and one of the three is believed to be eliminated (California Natural Diversity Database [CNDDB] 2016), leaving the occurrences on the City of Woodland Preserve, Woodland Regional Park, and the adjacent Spring Lake Alkali Sink site as the only remaining occurrences (an occurrence is generally considered to be all individuals growing within 0.25 mile if each other). In addition to Yolo County, palmate-bracted bird's beak is currently found in Alameda, Colusa, Fresno, Glenn, and Madera counties and has been extirpated from San Joaquin County. There have been a total of 26 occurrences of this species documented statewide. This species has been, or is believed to be extirpated from four of the 14 USGS 7.5-minute quadrangles in which it was historically documented and it is threatened by habitat loss from urban and agricultural expansion, and hydrological modification. It is also susceptible to population losses due to random catastrophic events, livestock grazing, off-road vehicle use, road maintenance, and competition from invasive plant species (USFWS 2010). For these reasons, adverse effects on palmate-bracted bird's beak are considered a **significant cumulative** impact.

Cumulative Scenario

Because buildout of the Cumulative Scenario would preserve the remaining occurrences of palmate-bracted bird's beak in the Planning Area with the Open Space designation and would not result in new development adjacent to habitat occupied by this species, implementing the Cumulative Scenario would not have a cumulatively considerable contribution to this significant cumulative impact. Impacts associated with loss of palmate-bracted bird's beak are **less than cumulatively considerable**.

Alkali Prairie and Sink

Cumulative Context

There are a total of approximately 309 acres of alkali prairie and sink remaining in Yolo County, the majority of which is found in and adjacent to the Planning Area (Yolo Habitat Conservation Plan/Natural Community Conservation Plan [HCP/NCCP] Joint Powers Agency 2015). Most of the historical extent of alkali prairie in Yolo County has been developed, converted to agriculture, excavated for stormwater detention, or maintained as flooded habitat for waterfowl (Yolo HCP/NCCP Joint Powers Agency 2015). Because this habitat type was historically rare in California and has been dramatically reduced from its historical extent, adverse effects on alkali prairie and sink habitat are considered a **significant cumulative** impact.

Cumulative Scenario

Because buildout of the Cumulative Scenario of the Proposed Project would preserve the known remaining alkali prairie/sink habitat in the Planning Area with the Open Space designation, impacts associated with the loss or degradation of alkali prairie sink habitat is **less than cumulatively considerable**.

Alkali prairie habitat is the primary habitat type for the special-status plant species alkali milk-vetch, brittlescale, San Joaquin spearscale, and Heckard's peppergrass, all of which are known to occur in the Planning Area. Therefore, the substantial reduction of this habitat type in the region as a result of agricultural and urban land conversion has had a substantial adverse effect on these plant species, given that they have a limited range of distribution and are considered rare throughout their range. Because of the limited amount of habitat that remains in Yolo County and the state overall for these species and the relatively small number of populations of these species that persist in the region, adverse effects on these species are considered a **significant cumulative** impact.

However, because buildout of the Cumulative Scenario would preserve both the known remaining alkali prairie/sink habitat in the Planning Area and the majority of known occurrences of these special-status plant species – alkali milk-vetch, brittlescale, San Joaquin spearscale, and Heckard's peppergrass – in the Planning Area with the Open Space designation, impacts related to the loss of special-status species associated with alkali prairie sink habitat are **less than cumulatively considerable**.

Vernal Pools

Cumulative Context

It is estimated that 75 to 90 percent of the historic California vernal pool habitat has been lost. Results of surveys of vernal pool distribution in the Central Valley indicate that 13 percent of the 1,032,853 acres of vernal pool habitat mapped in 1995 was gone by 2005 (Placer Land Trust 2009). Vernal pool habitat in Yolo County historically occurred in a limited area throughout the floodplains of Cache Creek, Putah Creek, and Willow Slough, and much of this habitat was developed or intensively farmed (Yolo HCP/NCCP Joint Powers Agency 2015). Between 1989 and 2005, Yolo County lost 75 percent of its existing vernal pool habitat going from 3,617 acres of vernal pools in 1989 to 901 acres in 2005. The majority of vernal pool habitat loss has resulted from habitat conversion to agriculture. According to the Yolo HCP/NCCP vegetation mapping, there were 299 acres of vernal pool complexes remaining in Yolo County in 2013 (Yolo HCP/NCCP Joint Powers Agency 2015). Based on the data currently available, the loss of vernal pool habitat in Yolo County and statewide has been substantial, and conversion of vernal pool landscapes to agricultural and urban uses continues. Because of the overall

reduction of this habitat type over the past 20 years and the small amount of this habitat type that remains in Yolo County, adverse effects on vernal pool habitat are considered are considered a **significant cumulative** impact.

Cumulative Scenario

Because buildout of the Cumulative Scenario would preserve the known remaining vernal pool habitat in the Planning Area with the Open Space designation, impacts associated with the loss of vernal pool habitat are **less than cumulatively considerable.**

Vernal Pool Species

Cumulative Context

Historic losses of vernal pool habitat in combination with projected losses from existing, proposed, planned, and approved projects constitute a cumulatively substantial reduction in vernal pool habitat in the region and the state. Habitat losses of this magnitude have a substantial adverse effect on species that rely on this habitat type, including Federally-listed vernal pool crustaceans and California tiger salamander and contribute to the decline of these species. There are 10 known occurrences of vernal pool fairy shrimp, seven known occurrences of vernal pool tadpole shrimp, and seven known occurrences of California tiger salamander in Yolo County (CNDDB 2016). One historic occurrence of California tiger salamander has been extirpated from the county, but all of the vernal pool fairy shrimp and vernal pool tadpole shrimp occurrences reported are believed to be in existence (CNDDB 2016). Development throughout the region anticipated under the MTP/SCS could have a **significant cumulative** impact.

Cumulative Scenario

Because buildout of the Cumulative Scenario would preserve the known remaining vernal pool habitat in the Planning Area with the Open Space designation, implementing the Cumulative Scenario would not have a cumulatively considerable contribution to the significant cumulative impact on vernal pool species, including vernal pool fairy shrimp, vernal pool tadpole shrimp, and California tiger salamander. Impacts associated with loss of vernal pool species area **less than cumulatively considerable.**

Giant Garter Snake

Cumulative Context

Giant garter snake is restricted to the floor of the Central Valley of California. The historic range of this species extended from northern Butte County to Buena Vista Lake in Kern County (USFWS 2012). The current range is believed to extend from the city of Chico in Butte County to the Mendota Wildlife Area in Fresno County; however, populations in the San Joaquin Valley portion of the range appear to be in serious decline while populations north of the Delta appear to be relatively stable (USFWS 2012). There are a total of 54 documented observations of giant garter snake in Yolo County, and all of these are believed to be in existence; however, three of these observation records are over 20 years old (CNDDB 2016). Statewide, there are 346 CNDDB records of giant garter snake observations (CNDDB 2016) and 13 known populations (USFWS 2012). Two of the 13 known populations are believed to no longer be in existence, including one at Liberty Farms in Yolo County (USFWS 2012). The remaining Yolo Basin population, which occupies Willow Slough and the Yolo Bypass and surrounding wetlands, waterways, and rice fields, may utilize drainage channels and rice fields in the Planning

Area. Statewide, this species' population numbers and number of occurrences have declined sharply due to habitat loss and fragmentation from urbanization, flood control and canal maintenance activities, agricultural practices and changes in agricultural crops (e.g., fallowing rice crops, change from rice cultivation to nonsuitable crop types or to nonagricultural uses), managing wetlands for waterfowl, and water transfers (USFWS 2012). This species has also been adversely affected by predation by introduced species, water pollution, introduction and management of invasive plants, and parasites (Yolo County 2009, USFWS 2012). Drought and climate change are also expected to adversely affect this species (USFWS 2012).

As a result of expansive drainage and conversion of the natural wetland habitats this species once occupied, rice fields and associated irrigation and drainage canals now serve an important role as aquatic habitat for giant garter snake. According to the Yolo County HCP/NCCP, there were approximately 36,000 acres of rice fields in the County in 2015, an increase of over 10,000 acres from 1997 (Yolo HCP/NCCP Joint Powers Agency 2015, Yolo County 2009). However, because of the statewide and regional losses of natural wetland habitats suitable to support the life history needs of this species, the limited number of known populations, the apparent loss of one former population in Yolo County, and the past and ongoing declines in population numbers in the southern part of the species' range, adverse effects on giant garter snake are considered a **significant cumulative** impact.

Cumulative Scenario

Implementation of the Cumulative Scenario could result in conversion of approximately 520 acres of rice fields and associated agricultural ditches that currently provide suitable habitat for giant garter snake to incompatible land uses. This constitutes a substantial loss of habitat acreage for the known population of giant garter snakes that occur in the area and could result in increased mortality from increased competition for resources and reduced reproduction. However, mitigation outlined in Section 4.4 of this EIR, "Biological Resources," requires that adverse effects on giant garter snake be mitigated in accordance with guidance from the USFWS and that unavoidable loss of habitat for this species be fully compensated. The 2035 General Plan policies commit the City to implement the Yolo HCP/NCCP, once adopted, and require that mitigation for impacts to covered species, including the giant garter snake, be consistent with the HCP/NCCP conservation strategy. The Yolo HCP/NCCP, as currently envisioned (but not adopted), would result in establishment of 6,400 acres of active season aquatic habitat (i.e., rice and fresh emergent wetland), 192 acres of active season upland movement habitat, and 312 acres of overwintering habitat in addition to existing protected lands consisting of 19,223 acres of active season aquatic habitat, 1,098 acres of active season upland movement habitat, and 312 acres of overwintering habitat (Yolo Habitat Conservancy 2015). The conservation of habitat proposed under the Yolo HCP/NCCP is for covered activities projected to result in permanent loss of 1,669 acres of active season aquatic habitat, 116 acres of active season upland movement habitat, and 156 acres of overwintering habitat. Implementing the Yolo HCP/NCCP will result in establishment of a large, interconnected reserve system for giant garter snake designed to meet all of the life history requirements of this species and to include most of the known occurrences of this species in the county. With successful implementation of the 2035 General Plan policies, mitigation in Section 4.4 of this EIR, "Biological Resources," and compliance with existing State and federal regulations, the Cumulative Scenario of the Proposed Project would not have a cumulatively considerable contribution to the significant cumulative impact on giant garter snake. Impacts associated with the loss of giant garter snake are **less than cumulatively considerable**.

Swainson's Hawk

Cumulative Context

Swainson's hawks are typically found in California only during the breeding season (March through September) and winter in Mexico and South America. Historically, as many as 17,000 Swainson's hawk pairs may have nested throughout lowland California (Bloom 1980). As of 2005, there were estimated to be approximately 2,080 breeding pairs in California, approximately 1,950 of which are in the Central Valley (Estep 2009). The largest concentration of breeding pairs occurs in the counties of Sacramento, San Joaquin, Solano, and Yolo (Estep 2009a). The California population of breeding Swainson's hawks declined by approximately 90 percent from the 1940s to 1980, presumably because of habitat loss; however, other factors, such as mortality in wintering areas in Central America, may have also played a role (Bloom 1980).

Prey abundance and accessibility are the most important features determining the suitability of Swainson's hawk foraging habitat. In addition, agricultural operations (e.g., mowing, flood irrigation) have a substantial influence on the accessibility of prey and, thus, create important foraging opportunities for Swainson's hawk. Crops that are tall and dense enough to preclude the capture of prey do not provide suitable habitat except around field margins, but prey animals in these habitats are accessible during and soon after harvest. Alfalfa fields provide the best foraging habitat because of regular harvesting and irrigation that makes prey available for capture. Alfalfa fields are also farmed over a relatively long period of time (typically four to five years), allowing the establishment of rodent communities that serve as a predictable prey basis for Swainson's hawks. However, a variety of other crop types also provide valuable foraging habitat at different times of the breeding season. The mosaic of annual and perennial crops in Yolo County provides consistently high foraging opportunities throughout the breeding season (Estep 2009). Although the most important foraging habitat for Swainson's hawks lies within a 1-mile radius of each nest (City of Sacramento et. al 2003), Swainson's hawks have been recorded foraging up to 18.6 miles from nest sites (Estep 1989). Any habitat within the foraging distance may provide food at some time in the breeding season that is necessary for reproductive success. There were approximately 53,959 acres of alfalfa in Yolo County in 2007, up by nearly 20,000 acres from 1997, and a total of approximately 200,000 acres of suitable foraging crops (Yolo Habitat Conservancy 2015, Yolo County 2009). Because of the substantial decline in the number of Swainson's hawk breeding pairs in California, the contraction of its range in the state, and the past and ongoing loss of suitable habitat for Swainson's hawk due to urbanization and agricultural conversion to unsuitable crop types (e.g., vineyards), adverse effects on Swainson's hawk are a **significant cumulative** impact.

Cumulative Scenario

Implementation of the Cumulative Scenario could result in permanent loss of approximately 3,500 acres of annual grassland and agricultural crops that currently provide forging habitat for Swainson's hawk. This constitutes a substantial loss of habitat acreage for the local and regional population of Swainson's hawk and could result in reduced reproductive success for local pairs and permanent displacement of individuals from the area. However, mitigation outlined in Section 4.4 of this EIR, "Biological Resources," requires that adverse effects be mitigated in accordance with guidance from CDFW and that unavoidable loss of habitat for this species be fully compensated. The 2035 General Plan policies commit the City to implement the Yolo HCP/NCCP, once adopted, and require that mitigation for impacts to covered species, including Swainson's hawk, be consistent with the HCP/NCCP conservation strategy. The Yolo HCP/NCCP, as currently envisioned (but not adopted), would result in establishment of 11,260 acres of Swainson's hawk foraging habitat, in addition to 3,456 acres of existing protected foraging habitat, to mitigate the permanent loss of 13,539 acres of foraging habitat as a result of covered

activities, including proposed development under the 2035 General Plan (Yolo Habitat Conservancy 2015). This is in addition to 201,000 acres of suitable Swainson's foraging habitat in the county that is neither proposed for development nor protected under existing or proposed conservation easements. Implementing the Yolo HCP/NCCP will result in establishment of a large, interconnected reserve system for Swainson's hawk designed to provide high quality foraging habitat in proximity to active and suitable nest sites. The conservation reserve system, as proposed, has been located to include most of the known nesting occurrences of Swainson's hawk in Yolo County (Yolo Habitat Conservancy 2015). With successful implementation of the 2035 General Plan policies, mitigation in Section 4.4 of this EIR, "Biological Resources," and compliance with existing State and federal regulations, the Cumulative Scenario of the Proposed Project would not have a cumulatively considerable contribution to the significant cumulative impact on Swainson's hawk. Impacts associated with the loss of Swainson's hawk and their habitats are **less than cumulatively considerable.**

6.1.3.5 CLIMATE CHANGE, GREENHOUSE GAS EMISSIONS, AND ENERGY

Greenhouse Gas Emissions

Cumulative Context

Emissions of greenhouse gas (GHGs) have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. Cumulative emissions from many projects and activities affect global GHG concentrations and the climate system. Human-caused emissions of these GHGs have led to atmospheric levels of GHGs exceeding natural ambient concentrations, thus intensifying the greenhouse effect. Such emissions have led to a trend of unnatural warming of the earth's atmosphere and oceans, with corresponding effects on global circulation patterns and climate (IPCC 2013). This is a **significant cumulative** impact.

Cumulative Scenario

Please refer to Impact 4.5-1 in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy," which addresses the significant cumulative impact of climate change and the contributions to this impact attributable to the Proposed Project and the Cumulative Scenario.

As with the East and South Alternatives, the Cumulative Scenario would result in GHG emissions associated with construction and long-term operations. Construction-related emissions are minor relative to total emissions associated with the Cumulative Scenario but would still contribute to the total, as described in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy." Long-term operational emissions would be generated by the day-to-day activities associated with planned land uses within the Planning Area. Operational GHG emission sources would include energy consumption (i.e., electricity and natural gas), transportation, and water and wastewater. Operational GHG emissions are distinguished by direct and indirect GHG emissions. Direct GHG emissions are those emissions that are generated at the location of consumption or use. For example, mobile-source emissions are direct emissions because GHG emissions are generated as a vehicle begins to move. Indirect emissions are those emissions that occur at a different time or location from the point of consumption or use. For example, electricity-related GHG emissions are indirect emissions because as a consumer uses electricity at their home, the fuel combustion and emissions associated with creating that electricity likely occurred off-site or at a different time. The Cumulative Scenario assumes additional development beyond that planned as a part of

the East Alternative and South Alternative. The level of GHG emissions is generally associated with the amount of development (number of trips, VMT, number of dwelling units, amount of non-residential square footage, etc.).

As detailed in Section 4.5 of this EIR, the framework for assessing GHG emissions in California has been created through State legislation and Executive Orders. The Global Warming Solutions Act (AB 32) calls for the State to take action to reduce statewide GHG emissions to 1990 levels by 2020. The California Air Resources Board's (ARB) Climate Change Scoping Plan outlines measures to meet the 2020 GHG reduction target, and ARB is required to update the Scoping Plan at least once every five years to evaluate progress. Executive Order B-30-15 calls for a statewide reduction in GHG emissions to 40 percent below 1990 levels by 2030. Executive Order S-3-05 calls for a reduction to 80 percent below 1990 levels by 2050. Although each of these directives is for the State itself and does not directly create an obligation for local governments, as detailed in Section 4.5, this EIR evaluates GHG emissions associated with the 2035 General Plan and consistent with the 2035 CAP to determine whether Woodland's GHG emissions would be consistent with these statewide targets. If the Proposed Project demonstrates that it is sufficiently reducing its overall GHG emissions, the Proposed Project's impact can be determined not to be cumulatively considerable as it will contribute to the State's GHG emission reduction targets. The City has developed, and is using, a GHG emissions target that allows a comparison of GHG emissions in the Planning Area in the planning horizon year of 2035 with State emission targets for both 2030 and 2050.

The 2035 CAP would achieve local annual reductions so that in 2035, the City will achieve an efficiency level of no more than 2.25 MT CO_2e per service population per year, which is consistent with Executive Order B-30-15, SB 32, and Executive Order S-3-05. Achieving this level of GHG emissions efficiency in Woodland for the 2035 General Plan horizon year demonstrates the City's progress toward the State's longer-term reduction target years, such as 2050.

Emissions associated with the Cumulative Scenario would be beyond those estimated for the two Project Alternatives analyzed in this EIR. The 2035 General Plan includes specific language regarding phasing that would prevent the level of development envisioned under the Cumulative Scenario from occurring. For future General Plan Updates that could involve the level of development assumed under the Cumulative Scenario, the City would need to review emissions, emissions rates, and emission reduction strategies to ensure that the GHG emissions rate is still consistent with the State's framework. For this longer-term scenario, it will also be important to review updated statewide emission reductions strategies. The State has just initiated the effort to begin gathering public and stakeholder input regarding approaches to achieve the Executive Order B-30-15 and SB 32 goal for the State to reduce emissions 40 percent below 1990 levels by 2030. According to ARB's 2030 Target Scoping Plan Concept Paper, Governor Brown has articulated some of the key concepts that will be explored further, including (ARB 2016):

- reducing today's petroleum use in cars and trucks by up to 50 percent;
- increasing from one-third to 50 percent our electricity derived from renewable sources;
- doubling the efficiency savings achieved at existing buildings and making heating fuels cleaner;
- reducing the release of methane, black carbon, and other short lived climate pollutants; and
- managing farm and rangelands, forests and wetlands so they can store carbon.

The next Scoping Plan will outline the actions necessary to achieve the 2030 goal, and it is expected to also help contribute to the more ambitious 2050 goal established in Executive Order S-3-05 for the State government. The

2035 CAP and the 2035 General Plan commit the City to revisiting the emissions inventory and CAP reduction strategies when new information is available and making appropriate changes. Policies in the 2035 General Plan, reduction strategies in the 2035 CAP, and mitigation identified in this section will reduce local GHG emissions and commit the City to adjust policies and reduction measures, as needed, when future information related to the State's efforts become available. In addition, Mitigation Measure 4.5-1a provides additional clarity and requires the City to maintain and revise, as necessary, a Climate Action Plan that would achieve local emission rates for relevant emission sectors consistent with the State's own targets under AB 32, Executive Order B-30-15, SB 32, and Executive Order S-3-05 emissions reductions. The City will update GHG inventories, evaluate the performance of individual strategies, evaluate progress toward the City's reduction targets, and make revisions to strategies, as necessary, to ensure that the City will achieve its targets. With mitigation, the impact is **less than cumulatively considerable**.

Energy

Cumulative Context

Increased demand for electrical and natural gas supplies and infrastructure is a byproduct of all future land uses and development in the City of Woodland, Yolo County, and the region. Energy is consumed for heating, cooling, and electricity in homes and businesses; for public infrastructure and service operations; and for agriculture, industry, and commercial uses. Each service provider is responsible for ensuring adequate provision of these utilities within their jurisdictional boundaries and would be responsible for upgrading their existing electrical and natural gas distribution systems or constructing new distribution systems to meet the demands of individual projects. Yolo County and the cities within the County implement general plans that include goals and policies to reduce energy demands through the use of design features, building materials, and building practices; encourage the use of renewable energy sources; promote land uses and patterns that would not cause wasteful, inefficient, and unnecessary consumption of energy; and ensure adequate electricity and natural gas and related distribution systems are available to meet energy demands. In addition, service providers encourage energy conservation through programs, such as offering rebates for installation of energy efficient appliances and lighting fixtures. The California Public Utilities Commission and California Energy Commission have roles in regulating energy supply and ensuring reliable and sufficient supplies as the state grows.

As dictated by the governing legislation, a primary focus of SACOG's MTP/SCS is the reduction of GHG emissions. This has a co-benefit of reducing transportation energy demand, which would avoid a significant cumulative impact related to consumption of energy at the regional level (SACOG 2015, page 19-23):

> "To reduce the consumption of energy and maintain consistency with smart growth principals, the proposed MTP/SCS includes a proposed land use plan and transportation system focused on mixed uses, compact development, and transportation choices. As a result, as documented in Chapter 8, implementation of the proposed MTP/SCS is anticipated to result in a per-capita and total reduction in energy use in the SACOG region. As such, despite other growth and development in the cumulative impact analysis area that could result in increases in the demand for energy, the contribution of the proposed MTP/SCS to cumulative energy impacts would be less than significant…"

As noted in Section 4.5 of this EIR, "Climate Change, Greenhouse Gas Emissions, and Energy," transportation is, by far, the largest energy consuming sector in California, accounting for approximately 39 percent of all energy use in the state (U.S. Energy Information Administration 2015). Since transportation accounts for more energy

consumption than heating, cooling, and powering of buildings, powering industry, or any other use, the overall efficiency of energy use in the region will depend importantly on the ability of local lead agencies to plan in a way that reduces travel demand. SACOG's 2016 MTP/SCS demonstrates an increase in energy efficiency through 2035 in relation to transportation energy use – household generated vehicle miles traveled (VMT) per capita is forecast to decrease by more than 8 percent; SACOG also estimates that total VMT will decrease by almost 7 percent during the 2016 MTP/SCS planning period (SACOG 2016, Chapter 5B, page 91).

Energy efficiency will also increase in relation to heating and cooling of buildings. The State of California adopted the California Green Building Standards Code (CALGreen Code), which establishes mandatory standards for all buildings in California, including for energy efficiency. This Code is updated over time and in each instance, the energy efficiency standards are increased. The next update takes effect on January 1, 2017.

Since regional transportation and building energy use will become more efficient between present and the SACOG MTP/SCS planning horizon there is **no significant cumulative** impact.

Cumulative Scenario

Implementation of the Proposed Project's Cumulative Scenario would increase the consumption of construction-related energy in the form of electricity, natural gas, and fossil fuels (e.g., gasoline, diesel fuel). Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on-site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site. Under the Cumulative Scenario, the City does not anticipate any unusual or atypical project characteristics that would generate the need for construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the region or state.

Projects facilitated under the Cumulative Scenario are required to meet currently-applicable energy efficiency standards at the time of construction. Buildings would generally be more energy efficient than existing similar use buildings in the City, which were constructed according to existing or previous less stringent energy efficiency standards. In addition, older buildings tend to decrease in energy efficiency as infrastructure begins to degrade with time. Therefore, the space heating and cooling, lighting, and other operational-related energy uses for the Cumulative Scenario's buildings would be more efficient than existing buildings in the region.

The Cumulative Scenario would develop land uses throughout the Planning Area, some of which would be infill, mixed-use development. The intent of the Proposed Project is to develop land uses in a pattern that will allow multi-modal access to new and existing land uses. Land uses developed in infill, mixed-use, and/or transit accessible areas would reduce vehicle miles traveled by allowing residents to use alternative modes of transportation rather than motor vehicles, or reducing trip distances to access amenities. Thus, the Proposed Project's Cumulative Scenario land use patterns would help to minimize trip distances, VMT, and transportation-related energy consumption.

As described above, the Cumulative Scenario includes developments that would improve overall energy efficiency (energy demand *per unit of development* – per capita and per square footage of non-residential development, for example). The Cumulative Scenario would not be expected to cause the inefficient, wasteful, or unnecessary consumption of energy. This impact is **less than cumulatively considerable**.

The actual physical environmental effects associated with the use of energy are evaluated in Section 4.3 of this EIR, "Air Quality," Section 4.5 of this EIR ,"Climate Change, Greenhouse Gas Emissions, and Energy," and Section 4.11 of this EIR, "Noise and Vibration," as well as the cumulative treatment of each of these issues in this section.

Construction of New Energy Production or Transmission Facilities

Cumulative Context

Pacific Gas and Electric (PG&E) provides energy (electricity and natural gas) to the Planning Area, as well as many portions of the Sacramento region. Service providers are responsible for ensuring adequate provision of public utilities within their service boundaries. When development within its service area occurs, PG&E is responsible for ensuring the reliability of electric and natural gas supplies. Individual development projects will be required to coordinate with each local lead agency to ensure sufficient electrical and natural gas supplies. Federal, state, and local regulations and policies would be implemented and would ensure that sufficient energy supplies are available to serve the needs of development throughout the region. Therefore**, no significant cumulative** impact related to increased demand for electrical and natural gas service would occur.

Cumulative Scenario

It is not possible to know the exact location or extent of additional energy transmission facilities and infrastructure that would be required to serve projects that could be facilitated under the Cumulative Scenario. Individual development projects will be required to coordinate with the City to ensure that PG&E has sufficient infrastructure to meet demand. Typically, energy transmission facilities would occur in rights-of-way. In infill areas, such as the areas designated Downtown Mixed Use and Corridor Mixed Use, any new facilities or extended facilities would be expected to locate in existing disturbed areas, and typically in existing rights of way. The development and operation of energy facilities would be subject to 2035 General Plan policies and implementation programs, as well as mitigation imposed in this EIR. Potential adverse physical environmental effects associated with energy related facilities that would be needed to serve the Cumulative Scenario are addressed in the technical sections of this EIR (aesthetics, air quality, biological, cultural, noise, hydrology, geology and soils, and other impact areas). By adhering to the policies proposed in the 2035 General Plan, as well as all applicable State and federal requirements pertaining to energy facilities construction and operation, and mitigation imposed in this EIR, impacts associated with construction and operation of energy facilities to meet Cumulative Scenario demands would be substantially reduced. There are no other known cumulatively considerable impacts associated with energy facilities beyond that already analyzed throughout this EIR. The impact is **less than cumulatively considerable**.

6.1.3.6 CULTURAL RESOURCES

Cumulative Context

Cultural resources in the region generally consist of prehistoric sites, historic sites, historic structures, and isolated artifacts. During the 19th and 20th centuries, localized urbanization and intensive agricultural use in the region caused the destruction or disturbance of numerous prehistoric sites, while many structures now considered to be historic were erected. From the latter half of the 20th century to the present, prehistoric and historic structures have been disturbed and destroyed. During this period, the creation and enforcement of various regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts. However, even

with these regulations, cultural resources are still degraded or destroyed as cumulative development in the region proceeds. Development of projects and plans assumed in the Cumulative Scenario has the potential to result in the discovery of undocumented subsurface cultural resources or unmarked historic-era or prehistoric Native American burials.

Cumulative gains in population, households, and jobs would require a commensurate increase in infrastructure, capital facilities, services, housing, and commercial uses in the City of Woodland, Yolo County, and adjacent counties. Each of these increases carries with it a corresponding increase in the magnitude of ground disturbance and the construction of new buildings and structures and other site development activities. The impact on archaeological deposits, human remains, and potential historic resources would be substantial given the past extent of urban development, and anticipated gains in population, jobs, and housing. There is a potentially **significant cumulative** impact to cultural resources.

Cumulative Scenario

Due to the nature of cultural resources, adverse impacts are site-specific and need to be determined on a project-by-project basis. Future development and infrastructure improvements associated with the Cumulative Scenario could result in significant impacts to historical resources and archaeological resources through either direct physical impacts or by indirect impacts. Direct physical impacts would result from activity such as excavation, demolition, grading, or ground compaction required for construction of new land uses. Indirect impacts would occur if these activities change the setting in a way that diminishes the integrity of a historical resource. Though record searches did not identify known archaeological resources in the Planning Area, the broader vicinity does have sensitivity for undiscovered resources.

Ground-disturbing construction would result from buildout of property in areas where the City anticipates infill development will happen during the planning horizon, as well as in the Specific Plan Areas. Development and infrastructure improvements within the developed portion of the city would involve grading, trenching, excavation, soil stockpiling, and other earthmoving activities that could impact previously unknown archaeological resources. Specific Plan Areas are primarily used for agricultural purposes, consisting of relatively large, rural, open, and minimally developed parcels and agricultural fields. In these areas, the Cumulative Scenario would involve development of a mix of uses, including research and technology facilities, industrial and warehousing, residential and commercial uses, public facilities (schools, libraries, parks, etc.), other types of developed uses, and preserved open space that may also include some habitat restoration activities. There is a moderate likelihood that cultural resources may be impacted by the construction and development of the Cumulative Scenario. The Cumulative Scenario has the potential to affect unidentified cultural resources, like barns and residences located on rural properties that may presently or in the future have cultural significance, as well as prehistoric habitation sites, temporary camps, or milling stations, through demolition of existing properties and ground-disturbing activities.

When projects occur in existing developed areas, and depending on the context, development could add incompatible architectural elements; diminish the historic integrity of a cultural resources setting, feeling, or association; or destroy the historic character of a property. The City has numerous buildings and structures that are either individually significant or contributors to a historic district as well as buildings, structures, and infrastructure that could represent historic resources. These properties are representative of numerous development patterns, property types (residential, civic/cultural, commercial), and architectural styles important to

the City's past, and are listed in or eligible for listing in a federal, State, or local register. Please refer to General Plan Figure 2-14, "Historical Architectural Resources" for more detail.

Although the resources have a different character, if preservation-oriented policies are not in place, new development could also diminish the historic integrity of a cultural resources setting, feeling, or association, or destroy the historic character of a property in a greenfield setting.

Although the policies of the 2035 General Plan and mitigation proposed in Section 4.6 of this EIR, "Cultural Resources" will minimize the severity of significant impacts associated with the above described changes, impacts cannot altogether be avoided. Therefore, the Cumulative Scenario would have a **cumulatively considerable** contribution to the significant cumulative impact related to cultural resources. There is no additional feasible mitigation aside from that identified in Section 4.6. This cumulative impact is **significant and unavoidable**.

6.1.3.7 GEOLOGY, SOILS, MINERAL RESOURCES, AND PALEONTOLOGICAL RESOURCES

Cumulative Context

Development forecast under SACOG's MTP/SCS would involve development in areas with geologic and soils constraints, in areas that could result in soil erosion, and areas that could have important mineral resources. However, impacts for these topics are site-specific and there is no additional cumulative impact that results from the combined geologic, soils, or mineral resources of past, present, and future projects. There is **no significant cumulative** impact.

Cumulative Scenario

As noted in Section 4.7 of this EIR, "Geology, Soils, Mineral Resources, and Paleontological Resources," there are no areas of known mineral resources within the Planning Area, and implementation of the Cumulative Scenario would have no impact related to the loss of availability of mineral resources.

The Cumulative Scenario would result in more construction with more potential exposure to geologic hazards as compared to the other alternatives. All applicable projects would be expected to comply with the California Building Code, which includes engineering practices that require special design and construction methods to reduce or eliminate hazards from seismic ground shaking and construction in expansive soil. In addition, the California Building Code also contains drainage-related requirements to reduce seasonal fluctuations in soil moisture content. Construction in soils of low strength is also addressed in the California Building Code through implementation of soil engineering tests and amending and compacting soils. Therefore, the cumulative effects related to seismic ground shaking; liquefaction; and geologic hazards related to unstable soils, expansive soils, and soil unsuitable for septic systems would be **less than cumulatively considerable**.

Construction activities associated with the Cumulative Scenario would result in substantial grading, excavation, and movement of earth associated with site preparation activities. These activities would increase soil erosion, especially from wind and water, and increase the potential for siltation of local drainages. The Cumulative Scenario would result in more construction with more disturbed soil as compared to the other alternatives. All applicable projects are required to comply with the City of Woodland Stormwater Management Program and National Pollutant Discharge Elimination System (NPDES) regulations, including construction site storm water pollution prevention plans (SWPPPs) and best management practices (BMPs), which would control soil erosion at

each construction site. Therefore, the cumulative effects from construction erosion would be **less than cumulatively considerable**.

Development forecast under SACOG's MTP/SCS would involve development in areas with geologic and soils constraints, in areas that could have paleontological resources sensitivity. Sensitive geologic units considered for paleontological resources are widespread in the Sacramento region, particularly in valley areas and adjacent lower foothills (SACOG 2015). Land use change and infrastructure improvements throughout the region have the potential to adversely affect buried paleontological resources. Since many resources are buried under the ground surface, it is difficult to predict the location of resources in the context of site planning, and therefore difficult to avoid in project designs. This is a **significant cumulative** impact.

With implementation of 2035 General Plan policies and mitigation described in Section 4.7 of this EIR, "Geology, Soils, Mineral Resources, and Paleontological Resources," the impacts of the Cumulative Scenario would be **less than cumulatively considerable**. Mitigation imposed in Section 4.7 of this EIR, "Geology, Soils, Mineral Resources, and Paleontological Resources," requires projects assumed under the Cumulative Scenario that propose earth-moving activities in paleontologically sensitive rock formations to halt of work in the vicinity of any fossil specimen(s) uncovered and prepare a recovery plan for any uncovered specimen(s).

6.1.3.8 HAZARDS AND HAZARDOUS MATERIALS

Cumulative Context

The Cumulative Scenario in conjunction with growth planned in surrounding jurisdictions is not anticipated to present a public health hazard to residents. New development in the region will likely result in an increase in routine use, transportation, and disposal of hazardous materials, as well as handling of hazardous materials near existing and proposed schools. However, existing federal, State, and local regulations create and enforce standards for these activities. Upset or accident conditions, emissions of hazardous materials, and development on a site listed as containing hazardous materials usually occur on a project-by-project basis, rather than in a cumulative manner. Individual projects in Yolo County and nearby cities would be required to comply with federal, State, and local regulations. There is **no significant cumulative** impact.

There are 14 airports in the Sacramento region. SACOG serves as the Airport Land Use Commission (ALUC) and has developed Airport Land Use Compatibility Plans (ALUCP) for almost all of the airports. Compliance with the ALUCPs and existing federal, State, and local laws protect the safety of people near airports and private airstrips. There is **no significant cumulative** impact regarding airports and airstrips.

In the region, including in Yolo County, there are areas designated "Very High" Fire Hazard Severity Zones. Wildfire prevention is a shared responsibility between federal, state, and local agencies. Threats of wildfires on non-federal lands in unincorporated areas are the responsibility of CAL FIRE and addressed through compliance with Title 14 of the California Code of Regulations, Division 1.5. Federal lands fall under Federal Responsibility Areas, and all incorporated areas and other unincorporated lands are classified as Local Responsibility Areas. Although individual projects in the region may be threatened by wildfires, there is **no significant cumulative** impact.

Cumulative Scenario

There are no significant cumulative impacts regarding routine use, transportation, and disposal of hazardous materials; handling of hazardous materials near existing or proposed schools; and development on a site listed as containing hazardous materials; airport and airstrip hazards; and fire hazards. Therefore, the Cumulative Scenario makes **no cumulatively considerable contribution.**

The exclusive impacts of the Cumulative Scenario outside of the context of the region in regards to hazardous materials are less than significant. The Cumulative Scenario anticipates growth that will likely result in an increase in routine use, transportation, and disposal of hazardous materials, as well as handling of hazardous materials near existing or proposed schools. However, existing federal, State, and local regulations create and enforce standards for these activities no matter the scale of the use, transportation, or disposal of hazardous materials.

The exclusive impact of the Cumulative Scenario outside of the context of the region in regards to airport and airstrip hazards is less than significant. The area east of the property that houses the City's Water Pollution Control Facility (wastewater treatment plant) in the Planning Area is within the Airport Influence Area. A small area at the far east of the Planning Area, including approximately half of SP-2, is within the Secondary Approach Area of the ALUC policy boundaries. In the Airport Influence Area, overflight notification is required for residential development, per ALUCP Policy 3.5.2. Policies in the 2035 General Plan, which would apply to the Cumulative Scenario, ensure compliance with federal regulations related to approach and departure zones, as well as notification to residential buyers about the presence of nearby airports per ALUCP Policy 3.5.3.

The exclusive impact of the Cumulative Scenario outside of the context of the region in regards to fire hazards is less than significant. Implementation of the Cumulative Scenario would result in new development in SP-1A, which is adjacent to the Moderate Fire Hazard Severity Zone. Development in this area would be consistent with Woodland's requirements regarding peakload water supply, minimum road widths, and clearances around structures. These requirements reduce the threat to urban areas. In addition, 2035 General Plan policies that would apply to the Cumulative Scenario include those that reduce fire risk.

6.1.3.9 HYDROLOGY AND WATER QUALITY

Long Term Water Quality

Cumulative Context

Development anticipated throughout the region under the SACOG MTP/SCS and associated infrastructure improvements required to serve such development, have the potential to generate impacts related to violation of water quality standards, erosion and sedimentation, construction-related water quality impacts, interference with groundwater recharge, flood hazards, and dam failure.

State and regional regulations described in Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality," will reduce the rate of runoff, filter out pollutants, and/or facilitate groundwater infiltration to meet requirements of Title 22, California Toxics Rule (CTR), Basin Plan water quality objectives, and other program objectives described in the "Regulatory Framework" subsection of Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality." Construction activities are required in order to comply with the State Water Resources Control Board statewide NPDES stormwater permit for general construction activity, and any other necessary site-specific

WDRs or waivers under the Porter-Cologne Act, as well as local agency public works construction standards and applicable ordinances that regulate construction discharges. Impacts related to runoff, water quality violations, and discharge standards are localized and addressed by existing regulations. There is **no significant** cumulative impact.

Cumulative Scenario

Construction activities associated with the projects that could be developed under the Cumulative Scenario would involve grading, other earthmoving activities, and dewatering that could result in temporary and short-term localized soil erosion or other pollutant discharges, which could affect water quality. All projects will be required to comply with the applicable NPDES regulations, including construction site SWPPPs and BMPs, which would control erosion and construction-related contaminants at each construction site. The treatment component of the Phase II MS4 NPDES permit requires that all of the runoff generated by the design storm event from impermeable surfaces be treated on-site. There is **no cumulatively considerable** contribution to any significant cumulative impact.

Interference with Groundwater Recharge or Substantial Depletion of Groundwater Supplies

Cumulative Context

Development throughout the region would add impervious areas, which, depending on the specific location of such development, could adversely affect groundwater recharge. This is a potentially **significant cumulative impact**.

Cumulative Scenario

Most soils within the Planning Area are loams and clays, which typically have low infiltration rates. The major groundwater recharge areas in the vicinity of the Planning Area are the Sacramento River and other active stream channels in Yolo County. The Cumulative Scenario does not assume development in the vicinity of a major groundwater recharge area. Projects that could be facilitated under the Cumulative Scenario are subject to City's Phase II MS4 permit requirements that would require developments to minimize the area of impervious surfaces and infiltrate or reuse storm runoff from project sites so that there would not be an increase in flow volume compared to pre-project conditions. These requirements and the City's switch to surface water supplies would ensure a **less than cumulatively considerable** contribution to any cumulative groundwater impact.

Flooding

Cumulative Context

At a regional level, the 2016 MTP/SCS EIR expects that by 2036, 75,710 dwelling units will be located in a 200-year flood hazard area (Sacramento, Sutter, Yolo and Yuba counties) and 597 units will be located in a 100-year flood hazard area (El Dorado and Placer counties). Development in flood hazard areas can have a cumulative impact, as development can impede and redirect floodwater flow, change drainage patterns, and increase impervious surfaces. An increase in precipitation falling as rain rather than snow could also lead to increased potential for floods because water that would normally be held in the Sierra Nevada snowpack until spring could flow into the Central Valley concurrently with winter storm events. The magnitude and frequency of extreme precipitation events may increase, as well, leading to greater flood risk. These scenarios would place more

pressure on California's levees and overall flood control system (DWR 2006, California Natural Resources Agency 2009, DWR 2015). There is a **potentially significant cumulative impact** with regard to development in flood hazard areas.

According to the 2016 MTP/SCS EIR, 67,754 new housing units will be located in dam inundation areas that are outside of flood hazard areas in the SACOG region. State regulations require local agencies, special districts, and State flood control agencies to develop plans to address the flood risk of development in these areas, and there federal, State, and local regulations that address the integrity of flood control systems. However, residential and non-residential growth in the Sacramento region is expected to occur within the dam inundation area. There is a **significant cumulative impact** with regard to development in dam inundation areas.

Cumulative Scenario

Implementation of the Cumulative Scenario would result in new development in areas currently considered within the flood hazard area. However, Policy 2.B.2 in the 2035 General Plan requires an approved and funded comprehensive flood solution before any development could occur in the new growth areas in the 100-year flood hazard area. Although the Cumulative Scenario anticipates more growth in these areas than under the Proposed Project (either alternative), the amount of growth in these areas is not relevant to this impact analysis because proposed Policy 2.B.2 applies at all intensities of buildout in SP-2 and SP-3A. The implementation of the Cumulative Scenario would not increase or add to the impacts already discussed in Section 4.9 of this EIR, "Hydrology, Flooding, and Water Quality." In addition, Policy 8.B.6 requires that structures would not redirect flows onto adjacent properties. Similar to Policy 2.B.2, Policy 8.B.6 applies to all development. The Cumulative Scenario makes a **less than cumulatively considerable contribution** to this potentially significant cumulative impact for flood hazard areas.

The Cumulative Scenario does result in new development at risk from flooding from the failure of a levee or a dam. Policy 8.B.12 in the 2035 General Plan requires development in levee inundation areas to conduct risk analyses, thus reducing the impact. However, under the Cumulative Scenario, the City anticipates development in the levee inundation area and cannot guarantee that levees will not fail. The Cumulative Scenario would make a **cumulatively considerable** contribution to this significant cumulative impact. There is no additional feasible mitigation beyond that proposed in the 2035 General Plan to address this impact. This impact in dam and levee inundation areas is **significant and unavoidable**.

Tsunamis, Seiches, and Mudflows

Cumulative Context

The Sacramento region is not at risk for tsunamis, although water bodies, such as Folsom Lake, are at risk of seiches, and areas in the western portion of the region are at risk of mudflow. Impacts on the risk of seiches and mudflow are independent of each other and do not combine to create cumulative impacts that are more severe than the sum of individual potential effects. There is **no significant cumulative** impact.

Cumulative Scenario

There are no significant cumulative impacts regarding tsunamis, seiches, and mudflows, therefore, the Cumulative Scenario makes **no cumulatively considerable contribution.**

The exclusive impact of the Cumulative Scenario outside of the context of the region in regards tsunamis, seiches, and mudflows is less than significant. Because of the Planning Area's distance from the Pacific Ocean, tsuanmis do not represent a hazard. The Planning Area is protected from exposure to seiches by levees on both the east and west sides of the Yolo Bypass (which lies between the city and the Sacramento River), as well as levees on the west side of the Sacramento River. The levees were designed and engineered to withstand seismic activity, including the potential for seiches. In addition, the Planning Area's topography is relatively level, ranging from 0-4 percent, and not subject to mudflow.

6.1.3.10 LAND USE PLANNING, POPULATION, AND HOUSING

Land Use and Planning

Cumulative Context

In the context of past and proposed plans and projects in the region, there are no plans or projects that would disrupt or divide established communities. Although individual plans and projects may have significant impacts, they usually occur on a project-by-project basis, rather than in a cumulative manner. Similarly, plans and projects in the SACOG region may conflict with existing plans including habitat conservation plans, however the conflicts do not combine in effect. At the regional level, the MTP/SCS EIR concludes that the MTP/SCS complies with the objectives of California's SB 375 and the Land Use and Resource Management Plan adopted by the Delta Protection Commission. There is **no significant cumulative impact**.

Cumulative Scenario

There are no significant cumulative impacts regarding land use planning; therefore, the Cumulative Scenario's contribution to this impact is **not cumulatively considerable**.

The exclusive impacts of the Cumulative Scenario outside of the context of the region in regards to land use and planning are less than significant. The type of linear project most likely to potentially physically divide an existing community would be a major new road, highway, or similar infrastructure, none of which are proposed as a part of the Cumulative Scenario. The Cumulative Scenario proposes land use designations of unincorporated county land that differ from the land use designations in the Yolo County 2030 General Plan. Through the master planning and annexation process, this discrepancy will be rectified. Until the unincorporated land in the Planning Area is annexed, the Yolo County 2030 General Plan and land use regulations apply. Therefore, there is no conflict.

Population and Housing

Cumulative Context

Population growth, by itself, is not an environmental impact. However, the direct and indirect effects, such as housing and infrastructure needs that are related to population growth, can lead to physical environmental effects. Yolo County's population is anticipated to continue to grow, along with employment through 2035, adding approximately 104,080 households and 141,022 jobs (Yolo County 2013). Job growth in the county and each of the cities within the county is forecast to outpace growth in the number of households.

At the regional level, the population of the six-county SACOG region is forecast to increase to 3,078,772 during the planning horizon of the MTP/SCS. The number of housing units is forecast to increase to 1,188,347, and the number of jobs is forecast to increase to 1,327,265 (SACOG 2015). Increased population and employment in the region could generate the need for additional housing and infrastructure, which could lead to conversion of undeveloped land and associated adverse physical environmental impacts of the sort that are considered in this environmental topic-specific sections of this EIR. Considering the indirect effects from past, present, and future development under the cumulative plans, this is a **significant cumulative** impact.

Cumulative Scenario

As shown in Table 6-6, the Cumulative Scenario is assumed to result in a total population of approximately 97,750 as well as 35,270 dwelling units, 66,220 local jobs, and 54.9 million square feet of nonresidential development.

As discussed in Chapter 4.10 of this EIR, "Land Use Planning, Population, and Housing," SACOG has developed population and employment projections that inform land use and transportation planning throughout the region. According to these projections, the City's population is expected to increase to 66,041 people in 2035, and the number of housing units is expected to increase to 24,452 (City of Woodland 2013:21). SACOG expects employment in the City to increase to 33,368 jobs. As shown on Table 6-6, the population, housing, and employment projections under the Cumulative Scenario would be substantially larger than the SACOG projections. If non-residential development is attracted to Woodland beyond the levels currently forecast by SACOG, this could attract additional residential development to the Planning Area, as new residents seek opportunities to live near their new jobs.

Table 6-6. Population, Housing Units, Non-Residential Square Footage, and Jobs in the Planning Area under the Cumulative Scenario

	Existing Development (2013)	New Development	Total under the Cumulative Scenario
Population	55,690	42,060	97,750
Housing units	19,980	15,290	35,270
Nonresidential square footage	19,824,000	35,129,000	54,953,000
Jobs	26,000	40,220	66,220
Jobs-housing units index	1.3	2.63	1.88

Note: There are a variety of factors that influence the City's growth rate over time, including many that are outside the City's control (BAE 2013). Although it is not possible to know in what year the Cumulative Scenario would build out, or whether the Cumulative Scenario actually would fully build out, it would be after 2035, since policies in the 2035 General Plan would control the level of development. Rather than use the absolute minimum or maximum development yields, the City elected to generally use mid-points of allowable density and intensity for the Cumulative Scenario.
Source: Dyett and Bhatia 2016

Physical cumulative impacts associated with development of nonresidential land uses, such as traffic, air quality degradation, noise generation, greenhouse gas emissions, and increased demand for public services and utilities, are evaluated throughout this EIR, including cumulative impacts associated with each of these environmental topic areas in this chapter. If the Cumulative Scenario were implemented, the ratio of jobs to housing in the Planning Area would substantially increase from 1.3 to approximately 1.9 jobs for each housing unit. If this were to occur, it is possible that there could be some incentive for additional housing development within the Planning

Area or in the vicinity of the Planning Area to accommodate new employees for non-residential developments in the Planning Area. The impact is **cumulatively considerable.**

Policies in the 2035 General Plan and mitigation described within the environmental topic-specific sections of this EIR reduce potential effects associated with both residential and non-residential development within the Planning Area assumed under the Cumulative Scenario. The City's Urban Limit Line (ULL) and associated policies are designed to manage growth within the Planning Area to avoid adverse effects, such as unplanned development indirectly facilitated by planned development within the ULL. The City's ULL can only be modified by the voters. While the City's policies prevent conversion of additional agricultural land outside of the ULL, the City could increase land use density/intensity to allow for additional development to meet demand and/or neighboring jurisdictions may experience increased demand for additional development as a result. For these reasons this impact is **significant and unavoidable**.

6.1.3.11 NOISE AND VIBRATION

Cumulative Context

Noise is generally a localized impact that does not have regional or cumulative considerations. Noise sources associated with past, present, and future development in the SACOG region include construction equipment, landscape and building maintenance activities, mechanical equipment, solid waste collection, parking lots, commercial, office, and industrial activities, and residential, school, and recreation activities and events. Noise sources that are adjacent to one another could combine to increase cumulative noise levels. However, stationary noise sources within Woodland's Planning Area would not generally combine with noise sources outside the Planning Area to create a cumulative increase in stationary noise. Although ambient noise is increasing in urbanized areas over time as a result of increased development, there is **no significant cumulative** impact. Section 4.11 of this EIR, "Noise and Vibration" discusses construction-related impacts involving multiple pieces of noisy equipment operating simultaneously in areas directly adjacent to one another.

However, development forecast under the MTP/SCS would generate and attract vehicular travel along roadways located throughout the region, including within and near the City's Planning Area, which would combine with traffic associated with development in the Planning Area to increase vehicular traffic noise in areas directly adjacent to travelways. This is a **significant cumulative** impact.

Cumulative Scenario

The Cumulative Scenario involves a substantial amount of additional new future development and associated travel demand within the Planning Area. The residences and other sensitive land uses located along most of the City's roadways are currently affected by the existing traffic noise. Also, as illustrated in Section 4.11 of this EIR, "Noise and Vibration," traffic associated with buildout of the South and East Alternatives and regional growth will increase noise levels along City streets and regional thoroughfares throughout the Planning Area. The Cumulative Scenario will further such impacts. The impact is **cumulatively considerable.**

The Cumulative Scenario would add to traffic noise levels assumed under the Cumulative Context, and for certain roadway segments, the additional traffic noise would be noticeable. People are able to begin to detect sound level changes of 3 dB in typical environments. A 5-dB change is readily noticeable, a 6-dB change is clearly noticeable, and a 10-dB change is generally perceived as a doubling or halving of loudness (Caltrans 2013, Egan 1988).

Please refer to Table 4.11-1 for the relationship between increases in environmental noise level and human perception. Noise increases from the Cumulative Context to the Cumulative Scenario could potentially occur along the following roadway segments:

- North Cottonwood Street from Pioneer Avenue to County Road 25A
- Cottonwood Street from Parkland Avenue to Harry Lorenzo Avenue
- Cottonwood Street from County Road 102 to County Road 103
- Cottonwood Street from Harry Lorenzo Avenue to Matmor Drive
- Cottonwood Street from Matmor Drive to East Street
- Cottonwood Street from Sports Park Drive to Unnamed Road
- Cottonwood Street from Sports Park Drive to South of Sports Park Drive
- California Street from E. Gibson Road to Sports Park Drive
- California Street from College Street to East Street
- California Street from E. Kentucky Avenue to E. Beamer Street
- North West Street from East Beamer Street to E. Main Street
- North West Street from North Pioneer Avenue to County Road 102
- West Street from N. Pioneer Avenue to County Road 102
- West Street from County Road 102 to East of County Road 103
- West Street from Miekle Avenue to County Road 102
- West Street from Bourn Drive to County Road 102
- West Street from Gum Avenue to E. Gibson Road
- West Street from Pioneer Avenue to Miekle Avenue
- North College Street from County Road 102 to County Road 103
- College Street from Farmers Central Road to East Heritage Parkway

Implementation of policies in the 2035 General Plan and mitigation described in Section 4.11 of this EIR, "Noise and Vibration" would reduce the potential for noise exposure for noise-sensitive land uses – both existing and future planned noise-sensitive uses. Noise attenuation features are required to be incorporated into new development, where necessary, to comply with specific interior and exterior noise levels for existing and planned development. Future projects under the Cumulative Scenario would be required to satisfy the similar noise criteria and requirements of the 2035 General Plan and incorporate mitigation described in Section 4.11 of this EIR, "Noise and Vibration." While in most locations and for most projects, compliance with General Plan policies and EIR mitigation would reduce ambient noise levels to acceptable levels, it is not possible to demonstrate with reasonable certainty at this time that no significant noise exposure impacts could occur within the Planning Area as a result of the Cumulative Scenario.

In addition, it is possible that traffic generated under the Cumulative Scenario could combine with traffic generated by existing and future development throughout the SACOG region to increase vehicular traffic noise along regional roadways to levels that are deemed unacceptable to Yolo County, Sacramento County, the City of Sacramento, and other local agencies in the region. There is no additional feasible mitigation available. The cumulative impact is **significant and unavoidable**.

6.1.3.12 PUBLIC SERVICES AND RECREATION

The Cumulative Scenario includes changes in land use and the density and intensity of development that, once occupied, could increase demands on public facilities and services. The cumulative impacts associated with these changes are described below.

Fire and Police Protection Services

Cumulative Context

Public services are generally provided by local governments and/or special districts for areas within their jurisdiction and are not provided on a regional basis. Fire and police protection services are provided by local governments or fire protection districts for areas within their jurisdiction, although mutual aid agreements between agencies do help spread resources. For this reason, fire and police protection services have **less than significant cumulative** impacts.

Cumulative Scenario

Growth resulting from the Cumulative Scenario would create demand for new fire protection, law enforcement, and emergency services in the Planning Area.

The Woodland Fire Department operates three fire stations, with an engine company at each one: 101 Court Street (Station #1), 1619 West Street (Station #2), and 1550 Springlake Court (Station #3). To help maintain adequate response times, the Fire Department will need additional fire stations in the city, to serve the Spring Lake Specific Plan Area as well as SP-1, SP-2, and SP-3.

The Woodland Police Department expects to meet increased demand for services through increased staffing rather than new facilities. In order to adequately cover existing development plus the buildout of all parcels under the Cumulative Scenario, the City would require additional police beats, staffed continuously. Beyond this, additional staff and policing resources will be needed to account for workload and to meet response time standards.

The City of Woodland maintains its own fire and police departments, so the construction of additional facilities would not combine with effects in neighboring communities to create cumulative impacts. The 2035 General Plan includes Policy 5.B.4 and 5.A.3 to ensure that sufficient facilities and services are provided to serve additional growth. These policies and programs apply to any level of development, and therefore would mitigate the Cumulative Scenario, which anticipates more growth than the Proposed Project. The Cumulative Scenario makes a **less than cumulatively considerable contribution** to this potentially significant cumulative impact.

Public Education Services

Cumulative Context

Public schools are provided by school districts to areas within their jurisdictions. While districts may have cross-jurisdictional boundaries, school services are still provided at the local, rather than regional, level. For this reason school services have **less than significant cumulative** impacts.

Table 6-7. Cumulative Context and Cumulative Scenario Traffic Noise Levels

			Cumulative Context				Cumulative Context + Cumulative Scenario				
				Contour Distances				Contour Distances			
	Roadway	Segment	Noise Level (L_{dn}, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Noise Level (Ldn, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Increase, dB
1	County Road 98	From W. Kentucky Avenue to North of W. Kentucky Avenue	65	16	51	160	65	16	51	162	0
2	County Road 98	From W. Kentucky Avenue to W. Beamer Street	67	27	85	268	68	32	102	322	1
3	County Road 98	From W. Beamer Street to W. Main Street	68	31	99	313	69	38	120	378	1
4	County Road 98	From Main Street to W. Cross Street	68	31	99	313	69	36	113	356	1
5	County Road 98	From W. Cross Street to W. Gibson Road	67	27	86	272	68	30	95	301	0
6	County Road 98	From W. Gibson Road to South of W. Gibson Road	66	19	60	190	67	22	71	224	1
7	N. Ashley Avenue	From W. Kentucky Avenue to North of W. Kentucky Avenue	55	2	6	18	57	3	9	27	2
8	N. Ashley Avenue	From W. Kentucky Avenue to W. Beamer Street	59	4	14	44	61	6	20	63	2
9	Ashley Avenue	From W. Court Street to W. Main Street	63	10	33	103	63	10	33	104	0
10	Ashley Avenue	From W. Main Street to W. Lincoln Avenue	63	9	28	90	63	9	29	92	0
11	Ashley Avenue	From W. Lincoln Avenue to W. Cross Street	61	7	22	70	62	7	23	73	0
12	Ashley Avenue	From W. Cross Street to W. Gibson Road	61	7	21	67	61	7	22	68	0
13	Ashley Avenue	From W. Gibson Road to W. El Dorado Drive	59	4	12	37	58	3	11	35	(0)
14	N. Cottonwood Street	From W. Kentucky Avenue to W. Beamer Street	60	5	16	51	61	6	20	64	1
15	Cottonwood Street	From W. Beamer Street to W. Court Street	62	9	28	89	63	9	30	95	0
16	Cottonwood Street	From W. Court Street to W. Main Street	64	13	42	131	64	13	42	132	0
17	Cottonwood Street	From W. Main Street to W. Lincoln Avenue	62	8	26	82	62	8	27	84	0
18	Cottonwood Street	From W. Lincoln Avenue to W. Cross Street	63	11	35	111	64	11	36	115	0
19	Cottonwood Street	From W. Cross Street to W. Gibson Road	63	10	31	98	63	10	31	99	0
20	Cottonwood Street	From W. Gibson Road to W. El Dorado Drive	60	5	16	51	60	5	16	50	(0)
21	California Street	From W. Beamer Street to W. Main Street	62	8	25	78	62	8	25	78	(0)
22	California Street	From W. Main Street to W. Cross Street	61	6	20	63	61	6	20	64	0
23	California Street	From W. Cross Street to W. Gibson Road	56	2	6	20	56	2	6	20	-
24	N. West Street	From W. Kentucky Avenue to North of W. Kentucky Avenue	64	12	38	120	65	15	48	151	1
25	N. West Street	From W. Kentucky Avenue to W. Beamer Street	63	11	35	111	64	13	42	134	1
26	West Street	From W. Beamer Street to W. Court Street	64	14	44	140	65	16	50	157	1
27	West Street	From W. Court Street to W. Main Street	65	15	47	147	65	16	51	162	0
28	West Street	From W. Main Street to W. Lincoln Avenue	65	15	46	145	65	15	48	153	0
29	West Street	From W. Lincoln Avenue to W. Cross Street	64	14	44	140	65	15	48	150	0
30	West Street	From W. Cross Street to W. Gibson Road	65	14	45	143	65	15	48	151	0
31	West Street	From W. Gibson Road to South of W. Gibson Road	64	11	36	113	63	11	33	106	(0)
32	N. College Street	From Kentucky Avenue to Beamer Street	60	5	15	47	61	6	20	64	1
33	College Street	From Beamer Street to Court Street	60	5	17	54	61	7	22	68	1
34	College Street	From Court Street to Main Street	61	6	20	64	62	8	26	81	1
35	College Street	From Main Street to Lincoln Avenue	59	4	14	43	60	5	17	53	1
36	College Street	From Cross Street to Gibson Road	59	4	13	42	60	5	17	54	1
37	College Street	From Gibson Road to South of Gibson Road	60	5	16	50	61	6	19	59	1
38	3rd Street	From Beamer Street to Main Street	59	4	14	44	60	5	17	52	1
39	3rd Street	From Main Street to Cross Street	59	4	11	36	59	4	12	39	0
40	3rd Street	From Cross Street to Gibson Road	59	4	13	42	60	5	17	52	1
41	3rd Street	From Gibson Road to South of Gibson Road	57	2	7	24	57	2	7	24	-
42	N. East Street	From Kentucky Avenue to North of Kentucky Avenue	68	29	91	289	68	35	111	352	1
43	N. East Street	From Kentucky Avenue to Beamer Street	66	22	70	220	68	35	110	348	2
44	East Street	From Court Street to Main Street	68	34	107	338	69	44	140	442	1
45	East Street	From Main Street to Cross Street	67	23	72	229	69	38	119	378	2
46	East Street	From Cross Street to Gum Avenue	67	25	80	253	69	40	127	400	2
47	East Street	From Gum Avenue to E. Gibson Road	65	16	51	163	68	31	97	306	3

Table 6-7. Cumulative Context and Cumulative Scenario Traffic Noise Levels

			Cumulative Context				Cumulative Context + Cumulative Scenario				
				Contour Distances				Contour Distances			
	Roadway	Segment	Noise Level (L_{dn}, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Noise Level (Ldn, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Increase, dB
48	East Street	From E. Gibson Road to Sports Park Drive	64	11	36	113	68	34	107	338	5
49	East Street	From Sports Park Drive to South of Sports Park Drive	62	8	24	75	68	30	93	296	6
50	Matmor Road	From E. Main Street to E. Gum Avenue	63	10	32	102	63	10	32	102	0
51	Matmor Road	From E. Gum Avenue to E. Gibson Road	62	8	25	79	62	8	25	78	(0)
52	Matmor Road	From E. Gibson Road to Sports Park Drive	61	6	20	63	62	9	28	89	1
53	Industrial Way	From Cannery Road to E. Main Street	56	2	6	18	56	2	6	20	1
54	Bourn Drive	From E. Gum Avenue to E. Gibson Road	58	3	10	32	58	3	10	33	0
55	County Road 101	From E. Gibson Road to South of E. Gibson Road	63	9	29	92	63	10	33	103	1
56	N. Pioneer Avenue	From Churchill Downs Avenue to E. Kentucky Avenue	63	9	29	92	63	9	28	89	(0)
57	N. Pioneer Avenue	From E. Kentucky Avenue to E. Beamer Street	66	19	59	188	66	21	66	210	0
58	Pioneer Avenue	From E. Beamer Street to E. Main Street	68	35	111	351	69	42	131	416	1
59	Pioneer Avenue	From E. Main Street to E. Gum Avenue	70	45	142	450	69	43	137	432	(0)
60	Pioneer Avenue	From E. Gum Avenue to E. Gibson Road	70	47	148	469	69	44	139	439	(0)
61	Pioneer Avenue	From E. Gibson Road to Farmers Central Road	65	17	52	166	65	17	55	172	0
62	Ogden Street	From Branigan Avenue to E. Gibson Road	58	3	11	33	58	3	11	35	0
63	Miekle Avenue	From Farmers Central Road to E. Heritage Parkway	57	2	8	25	56	2	7	21	(1)
64	County Road 102	From E. Kentucky Avenue to North of E. Kentucky Avenue	65	18	56	177	67	26	82	259	2
65	County Road 102	From E. Kentucky Avenue to E. Beamer Street	67	24	77	245	71	60	189	598	4
66	County Road 102	From E. Beamer Street to E. Main Street	69	39	124	393	73	90	285	902	4
67	County Road 102	From E. Main Street to I-5 Northbound Ramps	71	67	213	673	74	114	360	1,138	2
68	County Road 102	From I-5 Northbound Ramps to I-5 Southbound Ramps	71	69	219	694	73	108	342	1,082	2
69	County Road 102	From I-5 Southbound Ramps to Maxwell Avenue	73	99	314	994	74	129	409	1,292	1
70	County Road 102	From Maxwell Avenue to E. Gibson Road	72	85	268	849	74	134	424	1,339	2
71	County Road 102	From E. Gibson Road to Farmers Central Road	72	81	257	812	74	132	418	1,322	2
72	County Road 102	From Farmers Central Road to E. Heritage Parkway	70	54	171	540	71	62	196	619	1
73	County Road 102	From E. Heritage Parkway to South of E. Heritage Parkway	69	44	138	437	71	67	211	668	2
74	W. Kentucky Avenue	From County Road 98 to N. Ashley Avenue	64	13	41	129	65	15	47	148	1
75	W. Kentucky Avenue	From N. Ashley Avenue to N. Cottonwood Street	66	19	59	186	67	26	82	258	1
76	W. Kentucky Avenue	From N. Cottonwood Street to N. West Street	67	25	80	254	68	34	108	341	1
77	Kentucky Avenue	From N. West Street to N. College Street	68	29	92	290	69	38	119	377	1
78	Kentucky Avenue	From N. College Street to N. East Street	68	35	110	348	70	51	162	514	2
79	E. Kentucky Avenue	From N. East Street to N. Pioneer Avenue	65	17	53	166	67	28	88	279	2
80	E. Kentucky Avenue	From N. Pioneer Avenue to County Road 102	64	11	36	114	68	28	89	282	4
81	W. Woodland Avenue	From County Road 102 to N. Cottonwood Street	56	2	7	22	58	3	9	29	1
82	W. Woodland Avenue	From N. Cottonwood Street to N. West Street	59	4	14	43	60	5	15	47	0
83	W. Beamer Street	From County Road 98 to N. Ashley Avenue	57	2	7	23	57	2	7	23	0
84	W. Beamer Street	From N. Cottonwood Street to N. West Street	62	9	27	86	63	9	29	92	0
85	Beamer Street	From N. West Street to N. College Street	63	11	35	111	64	13	41	131	1
86	Beamer Street	From N. College Street to N. East Street	62	8	25	78	63	10	32	101	1
87	E. Beamer Street	From N. East Street to N. Pioneer Avenue	66	19	61	194	67	24	74	235	1
88	E. Beamer Street	From N. Pioneer Avenue to County Road 102	65	14	45	143	68	33	104	329	4
89	W. Court Street	From Ashley Avenue to Cottonwood Street	62	8	25	80	62	9	27	86	0
90	W. Court Street	From Cottonwood Street to West Street	65	16	49	156	65	16	51	161	0
91	Court Street	From West Street to College Street	65	15	47	150	65	16	51	161	0
92	Court Street	From College Street to East Street	64	12	37	117	64	13	42	133	1
93	North Street	From 3rd Street to East Street	59	4	11	36	59	4	12	39	0
94	Lemen Avenue	From East Street to Matmor Road	57	3	9	27	58	3	10	32	1

Table 6-7. Cumulative Context and Cumulative Scenario Traffic Noise Levels

			Cumulative Context				Cumulative Context + Cumulative Scenario				
				Contour Distances				Contour Distances			
	Roadway	Segment	Noise Level (L_{dn}, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Noise Level (Ldn, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Increase, dB
95	Cannery Road	From Matmor Road to Industrial Way	57	2	7	23	57	3	8	26	0
96	W. Main Street	From County Road 98 to Ashley Avenue	67	23	72	228	67	23	74	233	0
97	W. Main Street	From Ashley Avenue to Cottonwood Street	67	26	82	259	67	27	86	271	0
98	W. Main Street	From Cottonwood Street to West Street	67	27	85	268	67	28	89	280	0
99	Main Street	From West Street to College Street	67	24	77	245	67	27	84	267	0
100	Main Street	From Walnut Street to College Street	68	28	90	285	68	32	102	322	1
101	Main Street	From College Street to 3rd Street	67	26	81	257	67	28	89	280	0
102	Main Street	From 3rd Street to East Street	68	30	96	305	68	34	106	335	0
103	E. Main Street	From East Street to Matmor Road	70	48	150	476	70	54	171	539	1
104	E. Main Street	From Matmor Road to Industrial Way	70	51	161	508	71	57	179	566	0
105	E. Main Street	From SR 113 South Ramps to SR 113 North Ramps	70	55	174	550	71	63	200	631	1
106	E. Main Street	From SR 113 Northbound Ramps to Pioneer Avenue	71	63	200	632	72	77	244	770	1
107	E. Main Street	From Pioneer Avenue to I-5 Northbound Ramps	70	45	142	448	70	54	169	536	1
108	E. Main Street	From I-5 Northbound Ramps to County Road 102	65	18	56	177	68	29	91	287	2
109	E. Main Street	From County Road 102 to East of County Road 103	64	13	41	130	66	18	56	178	1
110	W. Lincoln Avenue	From County Road 98 to Ashley Avenue	58	3	10	31	58	3	10	31	-
111	W. Lincoln Avenue	From Ashley Avenue to Cottonwood Street	59	4	12	39	59	4	12	39	(0)
112	W. Lincoln Avenue	From Cottonwood Street to West Street	61	6	19	62	61	6	20	63	0
113	Lincoln Avenue	From West Street to 3rd Street	61	6	20	64	62	7	23	71	0
114	W. Cross Street	From County Road 98 to Cottonwood Street	59	4	14	43	59	4	14	43	-
115	W. Cross Street	From Cottonwood Street to West Street	62	8	26	83	62	8	27	84	0
116	Cross Street	From West Street to College Street	61	6	21	65	61	7	21	67	0
117	Cross Street	From College Street to East Street	62	7	22	71	62	7	23	73	0
118	E. Gum Avenue	From 4th Street to East Street	60	5	17	52	61	6	19	59	0
119	E. Gum Avenue	From East Street to Matmor Road	64	14	44	141	65	15	48	150	0
120	E. Gum Avenue	From Matmor Road to Bourn Drive	65	16	49	156	66	18	57	181	1
121	E. Gum Avenue	From Bourn Drive to Pioneer Avenue	66	20	62	196	66	21	67	213	0
122	Farnham Avenue	From Pioneer Avenue to E. Gum Avenue	61	6	18	58	61	6	20	63	0
123	E. Gum Avenue	From Pioneer Avenue to Farnham Avenue	62	9	27	85	63	10	32	100	1
124	Farnham Avenue	From E. Gum Avenue to Maxwell Avenue	61	7	21	65	63	9	29	91	1
125	Maxwell Avenue	From Farnham Avenue to County Road 102	63	10	31	97	65	15	46	146	2
126	Maxwell Avenue	From County Road 102 to East of County Road 103	67	23	72	228	70	51	162	512	4
127	Farnham Avenue	From Maxwell Avenue to Branigan Avenue	59	4	14	43	59	4	14	43	(0)
128	Branigan Avenue	From Pioneer Avenue to Farnham Avenue	60	6	18	56	61	6	18	57	0
129	W. Gibson Road	From County Road 98 to Ashley Avenue	64	12	40	125	64	12	39	123	(0)
130	W. Gibson Road	From Ashley Avenue to Cottonwood Street	65	16	52	164	65	16	52	164	-
131	W. Gibson Road	From Cottonwood Street to West Street	67	28	87	277	68	28	89	281	0
132	Gibson Road	From West Street to College Street	68	30	96	303	68	33	103	326	0
133	Gibson Road	From College Avenue to Coloma Way	68	33	105	333	69	36	114	361	0
134	Gibson Road	From Coloma Way to East Street	69	40	128	404	69	44	139	439	0
135	E. Gibson Road	From East Street to Matmor Road	70	51	161	510	70	54	171	540	0
136	E. Gibson Road	From Matmor Road to SR 113 Southbound Ramps	70	53	167	528	71	57	179	567	0
137	E. Gibson Road	From SR 113 South Ramps to SR 113 North Ramps	70	51	161	510	71	58	184	580	1
138	E. Gibson Road	From SR 113 Northbound Ramps to Bourn Drive	70	47	148	469	70	56	176	556	1
139	E. Gibson Road	From Bourn Drive to Pioneer Avenue	69	44	138	437	70	53	167	529	1
140	E. Gibson Road	From Pioneer Avenue to County Road 102	67	28	87	275	70	45	142	448	2
141	El Dorado Drive	From County Road 98 to West Street	57	2	7	23	57	2	7	23	(0)

Table 6-7. Cumulative Context and Cumulative Scenario Traffic Noise Levels

			Cumulative Context				Cumulative Context + Cumulative Scenario				
				Contour Distances				Contour Distances			
	Roadway	Segment	Noise Level (L_{dn}, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Noise Level (Ldn, dBA) @ 50 Feet	70 dB	65 dB	60 dB	Increase, dB
142	El Dorado Drive	From West Street to College Street	60	5	15	46	60	5	16	50	0
143	Farmers Central Road	From Pioneer Avenue to Miekle Avenue	63	9	29	93	65	17	52	165	3
144	Farmers Central Road	From Miekle Avenue to County Road 102	62	7	24	74	66	18	58	183	4
145	E. Heritage Parkway	From Parkland Avenue to Miekle Avenue	61	6	19	61	60	5	15	48	(1)
146	E. Heritage Parkway	From Miekle Avenue to County Road 102	63	10	32	101	63	11	35	110	0
147	I-5 Mainline	From County Road 98 to West Street	78	318	1,004	3,175	78	323	1,022	3,232	0
148	I-5 Mainline	From West Street to East Street	78	325	1,027	3,248	79	381	1,204	3,806	1
149	I-5 Mainline	From East Street to SR 113	79	376	1,187	3,755	80	463	1,464	4,630	1
150	I-5 Mainline	From SR 113 to E. Main Street	78	303	959	3,032	79	360	1,140	3,604	1
151	I-5 Mainline	From E. Main Street to County Road 102	80	493	1,558	4,926	81	564	1,785	5,645	1
152	I-5 Mainline	From County Road 102 to East of County Road 103	81	591	1,868	5,908	81	614	1,941	6,138	0
153	SR 113	From I-5 to E. Main Street	77	229	725	2,292	77	260	821	2,596	1
154	SR 113	From E. Main Street to E. Gibson Road	77	271	858	2,712	79	368	1,165	3,685	1
155	SR 113	From E. Gibson Road to South of E. Gibson Road	77	257	813	2,572	79	362	1,145	3,620	1
156	SR 16	From County Road 98 to West of County Road 99	74	126	399	1,261	74	123	388	1,226	(0)
157	County Road 24	From County Road 102 to County Road 103	56	2	6	19	66	21	68	214	10
158	Bronze Star Drive	From County Road 102 to County Road 103	64	11	36	114	67	25	78	248	3
159	County Road 103	From County Road 22 to I-5 WB Ramps					66	21	66	208	n/a
160	County Road 103	From 1-5 WB Ramps to 1-5 EB Ramps					70	48	153	484	n/a
161	County Road 103	From I-5 EB Ramps to Bronze Star Drive					72	76	240	758	n/a
162	County Road 103	From Bronze Star Drive to County Road 25					67	23	72	227	n/a
163	County Road 25A	From Bourn Drive to County Road 102	63	9	28	90	66	22	69	220	4
164	Marston Road	From Pioneer Avenue to County Road 25A	50	1	2	5	62	8	24	76	11
165	Farmers Central Road	From Pioneer Avenue to Harry Lorenzo Avenue	55	2	5	17	57	2	7	24	1
166	Pioneer Avenue	From Parkland Avenue to Harry Lorenzo Avenue	55	2	5	16	66	20	63	200	11
167	Pioneer Avenue	From Harry Lorenzo Avenue to Matmor Drive	56	2	6	20	66	21	67	210	10
168	Pioneer Avenue	From Matmor Drive to East Street	56	2	6	18	66	20	64	203	10
169	Matmor Road	From Sports Park Drive to Unnamed Road	48	0	1	3	55	1	5	15	7
170	Parkland Avenue	From Farmers Central Road to E. Heritage Parkway	64	11	36	113	66	21	66	208	3
171	Parkland Avenue	From E. Heritage Parkway to County Road 25A	62	7	23	74	64	11	36	113	2
172	Sports Park Drive	From College Street to East Street	58	3	10	33	63	11	34	108	5
173	Sports Park Drive	From East Street to Matmor Road	52	1	3	8	51	1	2	7	(1)
174	I-5 NB Ramp	From I-5 NB to SR 113	63	10	30	95	63	11	35	111	1
175	I-5 NB Ramp	From I-5 NB Off Ramp to County Road 103					63	11	35	111	n/a
176	I-5 NB Ramp	From I-5 NB On Ramp to County Road 103					61	6	20	62	n/a
177	I-5 SB Ramp	From I-5 SB Off Ramp to County Road 103					60	5	17	53	n/a
178	I-5 SB Ramp	From I-5 SB On Ramp to County Road 103					64	11	36	115	n/a

Note: The No Project Alternative includes development assumed in Woodland under the 2002 General Plan. This General Plan was reviewed by SACOG in the last update to the MTP/SCS for growth forecasts and the land use change assumptions in the MTP/SCS for Woodland are very similar to the assumptions used throughout Chapter 5 for the No Project Alternative. The traffic volume estimates and noise modeling for the No Project Alternative also include growth elsewhere in the region in the planning horizon year (2036). Therefore, the No Project Alternative traffic volume estimates and noise modeling above for the No Project Alternative is used as a proxy for the Cumulative Context.

Source: Fehr & Peers 2016 for traffic volume estimates, AECOM 2016 for noise modeling.

Cumulative Scenario

The combined buildout of the Cumulative Scenario would increase the student population, creating additional need for public schools. Implementation of the 2035 General Plan will reduce the impacts related to school services. Specifically, Goal 5.E and Policy 5.E.2 encourage coordination with the District and other educational institutions regarding future school sites. The Woodland Joint Unified School District operates within the City of Woodland and serves all development in the Planning Area, so the construction of additional facilities would not combine with effects in neighboring communities to create cumulative impacts in the region. Therefore, the Cumulative Scenario makes a **less than cumulatively considerable contribution** to this impact.

Parks and Recreation

Cumulative Context

Several agencies provide park and recreation services in the region, including counties, cities, and special districts. Each of these areas has their own parkland ratios and standards and is responsible for providing parkland to meet the local demand. An increase in regional population may increase demand for parks and recreation facilities and services; however these local jurisdictions have authority over land use, set and implement level of service standards, and determine the siting and timing of public service projects. For this reason, parks and recreation have a **less than significant cumulative** impact.

Cumulative Scenario

The additional growth associated with the Cumulative Scenario will likely require new park/recreation facilities to achieve the same parkland ratio. The construction of any additional parks/recreational facilities would not combine with effects in neighboring communities to create cumulative impacts. Implementation of relevant policies in the 2035 General Plan related to parkland ratios will mitigate the additional growth in the Cumulative Scenario and reduce environmental impacts, resulting in a **less than cumulatively considerable contribution** to regional impacts.

6.1.3.13 TRANSPORTATION AND CIRCULATION

Cumulative Context

The population and number of jobs in the SACOG region are expected to increase. However, according to the 2016 SACOG MTP/SCS EIR, VMT per capita is expected to decrease from 17.9 in 2012 to 17.00 in 2036. The 2016 SACOG MTP/SCS EIR explains: “A decline in VMT per capita is a good indication that the [transportation] system is operating more efficiently because individuals are driving less on a daily basis.” Similarly, the congested VMT per capita is expected to decrease from 1.15 in 2008 to 0.99 in 2036. In contrast, the number of weekday bike, walk, and transit trips per capita is expected to increase from 0.39 in 2012 to 0.51 in 2036, and the number of passenger boardings per service hour for all weekday transit service is expected to increase from 36.6 in 2012 to 60.9 in 2036. In general, the transportation system is expected to become more efficient and result in more bike, walk, and transit trips.

According to the 2016 SACOG MTP/SCS EIR, the regional transportation system is not expected to cause a disruption to aviation access or service. The impacts of air traffic patterns that result in substantial safety risks,

increase hazards from design features, inadequate emergency access, and conflict with transit, bike, and pedestrian facilities are considered **less than significant cumulative impacts.**

Cumulative Scenario

Exhibit 4.13-9 shows the circulation diagram of the Cumulative Scenario, which also assumes implementation of the Cumulative Context (see Section 6.1.1 for a detailed description of the Cumulative Context). This mix of land use forecasts creates a unique scenario that may not accurately represent future traffic conditions. The projected VMT for the Cumulative Scenario is shown in Table 6-8. The daily VMT per capita is expected to increase above baseline levels of 32.7 to 34.8 while VMT per service population is projected to decline from 20.5 to 19.2. The LOS of roadway segments are shown in Exhibit 4.13-14, and Table 6-9, summarizes the LOS of intersections.

Table 6-8. City of Woodland Daily VMT Forecasts

Scenario	VMT[1]	Population[2]	Employment[3]	VMT/Capita[4]	VMT/Service Population[5]
Existing	1,476,600	45,207	26,694	32.7	20.5
Cumulative Scenario	2,632,200	75,623	61,745	34.8	19.2

Notes:

[1] Includes travel from all vehicles. The allocation of VMT includes 100 percent responsibility for all trips with both trips ends in the City of Woodland and 50 percent responsibility for trips with only one trip in the City.

[2] Population estimates and forecasts are based on SACMET household size distribution.

[3] Employment estimates and forecasts based on SACMET land use yields.

[4] VMT Per Capita is calculated by dividing total daily VMT by population. Since total VMT includes VMT generated by commercial vehicles, visitors, and workers/students that live outside Woodland, it is not an estimate of the VMT 'generated' per capita for Woodland residents.

[5] VMT Per Service Population is calculated by dividing total daily VMT by population plus employment. Similar to the VMT per capita metric, this form of VMT includes VMT generated by commercial vehicles, visitors, and students that live outside Woodland. As such, it is not an estimate of the VMT 'generated' per service population for Woodland residents and workers.

Source: Fehr & Peers 2016

Table 6-9. City of Woodland Weekday PM Peak-Hour Intersection Operations[1]

Intersection	Control Type	LOS / Average Delay[2]	
		Existing	Cumulative Scenario
1. E Main St / East St	Signal	C / 22	D / 37
2. E Main St / N Pioneer Ave	Signal	B / 18	D / 40
3. E Main St / Co. Rd 102	Signal	C / 20	C / 34
4. Maxwell Ave / Co. Rd. 102	Signal	C / 24	F / 94
5. E Gibson Rd / East St	Signal	B / 15	D / 40

Notes:

[1] Signal timings were assumed to be optimized under each scenario.

[2] Average delay expressed in seconds per vehicle.

Source: Fehr & Peers 2016

The Cumulative Scenario is expected to result in 33 roadway segments with LOS D, one with LOS E, and one with LOS F, as shown in Appendix G. The only unacceptable LOS condition would occur on East Gum Avenue from Bourn Drive to Pioneer Avenue. This segment is projected to operate at LOS F under the Cumulative Scenario, while the acceptable LOS threshold is LOS C. The traffic volume growth on this segment is over 100 peak hour trips. Since a similar impact was identified under the East Alternative, implementing Mitigation Measure 4.13-1a would reduce the impact to a **less than cumulatively considerable** level**.**

Other than the conflicts from performance of roadways as explained above, the Cumulative Scenario is not expected to conflict with applicable plans, ordinances, or policies establishing measures of effectiveness for the performance. In addition, the Cumulative Scenario's contribution to air traffic patterns; hazards due to a design feature; emergency access; and transit, bicycle or pedestrian facilities is expected to be **less than cumulatively considerable.**

6.1.3.14 UTILITIES AND SERVICE SYSTEMS

Water Supply

Cumulative Context

Growth in the region will result in increased water demand from additional development. Because available supply is dictated by water purveyor sources and purveyors who may have different demands, water supplies, water rights, and water quality challenges, the impacts on water supply related to implementation of the MTP/SCS at the regional level are considered potentially significant in the 2016 MTP/SCS EIR. An increase in the global average temperature attributable to climate change is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada (DWR 2015). Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. Runoff is directly affected by changes in precipitation and snowpack. Changes in both the amount of runoff and the seasonality of the hydrologic cycle have the potential to greatly affect the heavily managed water systems of the western U.S. According to the CEC (2006), the snowpack portion of the water supply could potentially decline by 30–90 percent by the end of the 21st century. A study cited in a report by the California Department of Water Resources (DWR) projects that approximately 50 percent of the statewide snowpack will be lost by the end of the century (Knowles and Cayan 2002). Much uncertainty exists with respect to how climate change will affect future demand on water supply (DWR 2006). Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in reservoir inflows (Kiparsky and Gleick 2003, Cayan et al. 2006). Although current forecasts are uncertain, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. There is a **potentially significant cumulative** impact related to the water supply.

Cumulative Scenario

Treated Sacramento River water supplied by the Woodland-Davis Clean Water Agency's Regional Water Treatment Facility (RWTF) is the primary source of drinking water within the Planning Area. Although the RWTF serves other jurisdictions in addition to Woodland, including two-thirds of the urban population of Yolo County, Woodland has legal water rights to 18 mgd of supply from the RWTF. Woodland also has an additional 2,000,000 gallons of storage and a dedicated 4 mgd pump to supplement this supply. Groundwater would be used to supplement surface water supplies and could account for up to 30 percent of total demand in dry years.

The City of Woodland has supported efforts to reduce water demand through conservation and other measures, which will lessen the demand for new water treatment facilities. Nevertheless, the City has not undertaken analysis of the availability of water supply beyond the population anticipated from the Proposed Project through 2035. Therefore, it is possible the water demand from the Cumulative Scenario may exceed supply. Because the City has not analyzed the water supply for the Cumulative Scenario and cannot state with any certainty what

impact on water supply new development will have, this is a **cumulatively considerable contribution**. There is a potential **significant and unavoidable impact**.

Wastewater Management Services

Cumulative Context

Growth in the region is expected to increase demand for wastewater management services because of increased amounts of wastewater effluent. Increased population from cumulative growth may result in the need for construction of new facilities for utilities and service systems. This was identified as a potentially significant impact in the 2016 MTP/SCS EIR, and thus has a **potentially significant cumulative** impact.

Cumulative Scenario

Implementation of the Cumulative Scenario would result in increased development and therefore greater amounts of wastewater effluent. As discussed in Section 4.14 of this EIR, "Utilities," the projected future capacity of the Water Pollution Control Facility (WPCF), which treats Woodland's wastewater, could serve up to 105,000 residents and is sufficient to serve growth under the Cumulative Scenario (Technical Report on WPCF, 2015). The sewer system capacity in the Downtown area is currently faces capacity constraints, but the City has plans to improve the system capacity with a new sewer line. In addition, Policy 5.F.1 of the 2035 General Plan ensures that sufficient public facilities and services will be available to serve new development. Policy 5.H.1 requires "that increased wastewater treatment facility capacity is available to serve planned urban development within the Planning Area consistent with this General Plan". This policy applies to all levels of development and therefore provides mitigation for the Cumulative Scenario, which anticipates more growth than either the South or East Alternative. Therefore, the Cumulative Scenario makes a **less than cumulatively considerable contribution** to the potentially significant cumulative impact.

Solid Waste Management and Recycling

Cumulative Context

Growth in the region is expected to increase demand for solid waste management and recycling due to an increase in the amount of solid waste generated and requiring disposal. Additional landfills may be needed to ensure sufficient capacity on the regional scale. Any new landfill would be required to comply with relevant federal, State, and local statutes and regulations related to permitting and operation prior to construction and operation. This is identified as less than significant in the 2016 MTP/SCS EIR, and thus has a **less than significant cumulative** impact.

Cumulative Scenario

Implementation of the Cumulative Scenario would increase the generation of solid waste; however, the Yolo County Central Landfill's disposal capacity is sufficient to absorb that increase, as well as projected increases from population growth in the rest of the County. Furthermore, the 2035 General Plan and 2035 CAP include policies to reduce solid waste disposal needs through encouraging the development of regional and community-based recycling facilities and secondary resource businesses, and through the promotion of waste reduction measures to Woodland residents and businesses. Therefore, the Cumulative Scenario makes a **less than cumulatively considerable contribution** to the less than significant cumulative impact.

6.2 GROWTH-INDUCING EFFECTS

The CEQA Guidelines (Section 15126.2[d]) require that an EIR evaluate the growth-inducing effects of a proposed project (in this case, the 2035 General Plan and 2035 CAP). Specifically, an EIR must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Direct growth-inducing impacts are generally associated with the provision of urban services to an undeveloped area, although it is also possible to induce rural growth that does not depend on the availability of urban services. The provision of these services to a site, and the subsequent development, can serve to induce other landowners in the vicinity to convert their property to urban uses. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by the additional demands for housing, goods and services associated with the population and employment increase caused by, or attracted to, a new project.

Growth inducement, by itself, is not an environmental effect, but may indirectly lead to environmental effects. Such environmental effects may include increased traffic, degradation of air quality, conversion of agricultural land to urban uses directly from population and employment growth and indirectly from development associated with goods and services needed by such growth.

The 2035 CAP does not propose development or land use change, does not propose infrastructure that would induce development, and does not include components that could induce growth. Rather, it provides a roadmap for reducing emissions of greenhouse gases to achieve specified targets over time.

Based on Section 65300 of the Government Code, the 2035 General Plan is required to serve as a comprehensive, long-term plan for physical development and conservation in the City's Planning Area. Revisions to the General Plan are required in order to address long-range goals related to land use, transportation, public health and safety, housing, open space and conservation, economic development, fiscal sustainability, climate change, and other topics that are a focus of the 2035 General Plan. The goals, policies, and implementation programs of the 2035 General Plan provide a framework for long-term growth and conservation within the City's Planning Area. Projected growth is described in Chapter 3 of this EIR, "Project Description," and the environmental consequences related to the potential growth are analyzed throughout Chapter 4 of this EIR, "Environmental Impact Analysis."

The actual level of buildout and the timing of construction and development activities is subject to market conditions, economic trends, and other factors beyond the City's control. However, with the amount of new development allowed under the 2035 General Plan, it is possible that, through expansion of job opportunities or other aspects of the 2035 General Plan, growth elsewhere could be facilitated. If jobs are created that cause people to move to the Planning Area or nearby communities and create a demand for housing construction beyond that provided under the 2035 General Plan, the 2035 General Plan could be considered growth inducing.

It should be noted however, that the City's ultimate boundaries are circumscribed by a permanent urban limit line established by a vote of the people in 2006. The urban limit line may only be modified by another vote by the people, and the initiative measure also places restrictions on the provision of services outside of the urban limit line. This provides an effective constraint to induced growth outside of the boundary.

Whether or not obstacles to growth are eliminated relates to the extent to which the 2035 General Plan would increase infrastructure capacity or change the regulatory structure such that additional development beyond that assumed in this EIR would be facilitated. A physical obstacle to growth typically involves the lack of infrastructure and public service capacity. The extension of public service infrastructure (e.g., roadways, water and sewer lines) into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth. With respect to the Proposed Project, development in new growth areas is anticipated under either alternative. Therefore, the 2035 General Plan would facilitate elimination of growth obstacles that would result in new growth.

The 2035 General Plan does anticipate development of currently undeveloped areas – both under the East Alternative and the South Alternative. This could result in infrastructure being extended into areas that are currently undeveloped and result in pressure to plan for and entitle development beyond that anticipated under the 2035 General Plan. The 2035 General Plan includes policies for both infill and new development that would avoid unplanned development that could be induced through infrastructure expansions into new growth areas. This reduces the potential for unplanned, induced growth. However, it is possible that, for the factors identified above, the Cumulative Scenario could induce growth that could have indirect effects. The purpose of the 2035 General Plan is to provide for future development of new housing and employment opportunities. There is no feasible mitigation to reduce this impact to a less-than-significant level without changing the purposes of the 2035 General Plan. The impact is **significant and unavoidable**.

6.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires that significant irreversible environmental changes caused by a plan be addressed in an EIR. Specifically, the EIR must consider whether "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely" (CEQA Guidelines Section 15126.2[c]). Nonrenewable resources, as used in this discussion, refer to the physical features of the natural environment: land, air, and waterways.

The 2035 CAP is specifically designed to reduce impacts associated with GHG emissions and provides co-benefits related to air quality and other impact areas. The 2035 CAP does not create any significant irreversible environmental changes.

The land use designations outlined under the 2035 General Plan – both East and South Alternatives – would result in commitment of allowable land uses to these areas for the foreseeable future. Proposed changes to land use designations would allow the development of a different mix, density, and intensity of uses compared to that anticipated under the existing (2002) General Plan. As discussed in Section 4.10 of this EIR, "Land Use Planning, Population, and Housing," of this EIR, the 2035 General Plan would allow urban development in areas the existing 2002 General Plan designated urban reserve.

Development allowed under the 2035 General Plan, under either alternative, would use both renewable and nonrenewable natural resources for construction and operation of projects allowed under the revised Land Use Diagram. Projects allowed under the 2035 General Plan would use nonrenewable fossil fuels in the form of oil and gasoline during construction and operation. Other nonrenewable and slowly-renewable resources consumed as a result of development would include, but not necessarily be limited to, lumber and other forest products, sand

and gravel, asphalt, petrochemical construction materials, steel, copper, lead, and water. Operation of future urban development would also require energy and water.

Irreversible changes would likely occur as a result of future excavation, grading, and construction activities associated with development of land uses allowed under the 2035 General Plan. Although these changes can be reduced by 2035 General Plan policies and mitigation identified in this EIR, the potential for disturbance would still represent an irreversible change. The 2035 General Plan would result in irreversible changes by increasing allowable land use densities and intensities. While increases in allowable densities and intensities may allow the City to better accommodate demand for development without converting open space at the fringes of the Planning Area to urban development, the 2035 General Plan – both East and South Alternatives – would still allow for development on sites that are presently undeveloped.

Land uses and development consistent with the 2035 General Plan would result additional transportation demand, construction, energy demand, and other activities that would increase emissions of air pollutants and generation of noise.

As detailed in Section 4.2 of this EIR, "Agriculture and Forestry Resources," the 2035 General Plan would allow development that would result in the conversion of agricultural lands to non-agricultural uses. The City's Urban Limit Line (ULL) was adopted for the purpose of permanently circumscribing development and preserving surrounding agricultural lands. 2035 General Plan Policy 2.A.1 prohibits public services and facilities beyond Woodland's ULL, enacted by voters in 2006. In addition, Policy 2.A.3 requires agricultural mitigation of farmland within the ULL at a rate of one acre of permanently conserved farmland for every acre converted to urban development or non-agricultural uses. The policy does not require the conservation of the same type of farmland, therefore loss of Prime Farmland could be mitigated with the conservation of Farmland of Local Importance. Goal 7.6 prioritizes the preservation of agricultural land, and Policy 7.C.1 requires the City to minimize the amount of annexed land. Although the 2035 General Plan includes policies aimed at protecting existing agricultural land uses and promoting continuation of agricultural operations, any conversion of agricultural lands would be a significant irreversible environmental change. These areas provide aesthetic benefits, which would be irreversible converted to urban use as a result of implementation of the 2035 General Plan.

The 2035 General Plan could result in irreversible damage from environmental accidents, such as an accidental spill or explosion of a hazardous material. During construction of projects allowed under the 2035 General Plan, equipment on the site would use various types of fuel. Operation of projects allowed under the 2035 General Plan could include the use of hazardous materials, which could increase the risk of an accidental spill or release. However use and sale of hazardous substances are regulated by various local and regional agencies. The enforcement of these existing regulations is expected to minimize the potential for irreversible damage associated with accidental spills or explosions.

The 2035 General Plan – both East and South Alternatives – would generate greenhouse gas emissions as described in Section 4.5 of this EIR, "Climate Change, Greenhouse Gases, and Energy." Such emissions and the impacts of climate change related to greenhouse gas emissions would represent a significant irreversible change to the environment.

Detailed assessments for each of the above mentioned topics are provided throughout Chapter 4 of this EIR. Cumulative impacts associated with each of these topics are additionally addressed in detail in this chapter. The City acknowledges that there could be **significant** irreversible environmental changes. There is no feasible mitigation without changing the purposes of the 2035 General Plan. The impact is **significant and unavoidable**.

6.4 SIGNIFICANT AND UNAVOIDABLE EFFECTS

According to Sections 15126.2(a) and 15126.2(b) of the CEQA Guidelines, an EIR shall identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented. Chapter 4 of this EIR provides a detailed analysis of significant and potentially significant environmental impacts related to implementing the Proposed Project, identifies feasible mitigation measures, where available, that could avoid or reduce these significant and potentially significant impacts; and presents a determination whether these mitigation measures would reduce these impacts to a less-than-significant level.

Section 6.1 of this EIR identifies the significant cumulative impacts resulting from the combined effects of the Cumulative Scenario of the Proposed Project and other related projects. If a specific impact in either of these sections cannot be fully reduced to less than significant, it is considered a significant and unavoidable adverse impact. For the Proposed Project, these would include the following:

4.1 AESTHETICS AND VISUAL RESOURCES

- IMPACT 4.1-3 Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings.
- IMPACT 4.1-4 Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area.

4.2 AGRICULTURE AND FORESTRY RESOURCES

- IMPACT 4.2-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as Shown on the Maps Prepared Pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to Non-Agricultural Use.
- IMPACT 4.2-3 Involve Other Changes in the Existing Environment that, Due to Their Location or Nature, Could Result in Conversion of Farmland, to Non-Agricultural Use

4.3 AIR QUALITY

- IMPACT 4.3-1 Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors.
- IMPACT 4.3-2 Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors.
- IMPACT 4.3-3 Expose Sensitive Receptors to Substantial Pollutant Concentrations (Stationary Sources).

4.6 CULTURAL RESOURCES

- IMPACT 4.6-1 Cause a Substantial Adverse Change in the Significance of Archaeological or Historical Resources as defined in CEQA Guidelines Section 15064.5.
- IMPACT 4.6-2 Disturb Human Remains, including those Interred Outside of Formal Cemeteries.

4.9 HYDROLOGY, FLOODING, AND WATER QUALITY

- IMPACT 4.9-7 Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Flooding,

4.10 LAND USE PLANNING, POPULATION, AND HOUSING

- IMPACT 4.10-2 Conflict with Any Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction over the Project (Including, but not Limited to the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect
- IMPACT 4.10-3 Impacts Related to Inducing Population Growth.

4.11 NOISE AND VIBRATION

- IMPACT 4.11-1 Exposure of Noise-Sensitive Land Uses to Short-Term (Construction).
- IMPACT 4.11-2 Exposure to or Generation of Long-Term Noise Levels.
- IMPACT 4.11-3 Exposure to or Generation of Vibration.

CUMULATIVE IMPACT AREAS

- Aesthetics and Visual Resources
- Agriculture and Forestry Resources
- Air Quality
- Cultural Resources
- Hydrology and Water Quality
- Land Use Planning, Population, and Housing
- Noise and Vibration
- Utilities and Service Systems

GROWTH-INDUCING IMPACTS

As stated above, the 2035 General Plan anticipates development of currently undeveloped areas. This could result in infrastructure being extended into areas that are currently undeveloped and result in pressure to plan for and entitle development beyond that anticipated under the 2035 General Plan. The 2035 General Plan includes policies for both infill and new development that would avoid unplanned development that could be induced through infrastructure expansions into new growth areas. This reduces the potential for unplanned, induced growth. However, it is possible that, for the factors identified above, the Cumulative Scenario could induce growth that could have indirect effects. The purpose of the 2035 General Plan is to provide for future

development of new housing and employment opportunities. There is no feasible mitigation to reduce this impact to a less-than-significant level without changing the purposes of the 2035 General Plan. The impact is **significant and unavoidable**.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Detailed assessments for each of the environmental topics are provided throughout Chapter 4 of this EIR, "Environmental Impact Analysis." Cumulative impacts associated with each of these topics are additionally addressed in detail in this chapter. The City acknowledges that there could be **significant** irreversible environmental changes. There is no feasible mitigation without changing the purposes of the 2035 General Plan. The impact is **significant and unavoidable**.

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None.

7.2 CHAPTER 2. EXECUTIVE SUMMARY

None.

7.3 CHAPTER 3. PROJECT DESCRIPTION

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None.

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Deborah Jew ..... Document Specialist
Angela Schwartz ..... Document Specialist

DYETT AND BHATIA

Sophie Martin, AICP ..... Principal
Melissa Jones, AICP ..... Associate
Elizabeth Schmid ..... Planner
Ella Wise ..... Planner
Isha Bhattarai ..... Senior GIS Specialist

FEHR AND PEERS

Ron Millam, AICP ..... Principal-in-Charge

Kwasi Donkor ..... Associate Transportation Planner
Emily Alice Gerhart..... Transportation Planner

TSCHUDIN CONSULTING GROUP

Heidi Tschudin, AICP.....Principal

BEST BEST & KRIEGER

Kara Ueda ..... Partner