Final
Environmental Impact Report
Woodland Research & Technology Park Specific Plan

State Clearinghouse #2017062042

August 2023



CITY OF
WOODLAND
CALIFORNIA



Final
Environmental Impact Report



Woodland Research & Technology Park Specific Plan

August 2023

Prepared for:

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ACRONYMS AND ABBREVIATIONS

2006 SDFMP	2006 Storm Drainage Facilities Master Plan
2D	two-dimensional
BMPs	best management practices
CalEEMod	California Emissions Estimator Model
CalGreen	California Green Building Standards
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	cubic feet per second
City	City of Woodland
CNDDB	California Natural Diversity Database
County	Yolo County
County Road	Yolo County Road
CUPs	Conditional Use Permits
DWR	California Department of Water Resources
EIR	environmental impact report
GHG	greenhouse gas
HCP	Habitat Conservation Plan
I-	Interstate
ICM	Integrated Catchment Modeling
IPaC	Information for Planning and Conservation
LID	low impact development
LiDAR	light detection and ranging or laser imaging, detection and ranging
LOS	level of service
mi.	Miles
MMRP	mitigation monitoring and reporting program
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MW	megawatt
NAVD88	North American Vertical Datum of 1988
NOP	notice of preparation
NOX	nitrogen oxide
n-value	Manning's n-value
PG&E	Pacific Gas & Electric Company
PM10	particulate matter with aerodynamic diameter less than 10 microns
proposed project	Woodland Research & Technology Park Specific Plan
PV	photovoltaic
ROG	reactive organic gas
RR	railroad
SACOG	Sacramento Area Council of Government
SB1C1, SB1C1 and SB1D1	shed
SLSP	Spring Lake Specific Plan
SWAPE	Soil / Water / Air Protection Enterprise

SP-1B and SP-1C	Specific Plan area
SRP	South Regional Pond
SUGA	South Urban Growth Area
TAC	toxic air contaminant
TK/K	transitional kindergarten and kindergarten
TRUs	transportation refrigeration units
USFWS	U.S. Fish and Wildlife Service
VMT	vehicle miles travelled
WJUSD	Woodland Joint Unified School District
WRP	West Regional Pond
WRR1, WWR2A, and WRR2B	watersheds with baseline conditions
WRTP	Woodland Research & Technology Park
WRTP	Woodland Research and Technology Park
WRTP Specific Plan	Woodland Research & Technology Park Specific Plan
WS	water surface
Yolo HCP/NCCP	Yolo Habitat Conservation Plan/Natural Community Conservation Plan
Yolo LAFCo	Yolo Local Agency Formation Commission
YSAQMD	Yolo-Solano Air Quality Management District

1 INTRODUCTION

The City of Woodland (City) prepared an environmental impact report (EIR) to evaluate the potential environmental effects of the proposed Woodland Research & Technology Park (WRTP) Specific Plan (referred to henceforth as the WRTP Specific Plan or the proposed project) in compliance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations Section 15000 et seq.).

1.1 INPUT ON THE DRAFT EIR

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 June 16, 2017, to government agencies, special service districts, organizations, and individuals with an interest in or jurisdiction over the proposed 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 June 26, 2017 to solicit additional input.

The NOP and responses to the NOP are contained in Appendix A of the Draft EIR.

1.2 PUBLIC REVIEW OF THE DRAFT EIR

The Draft EIR (State Clearinghouse Number 2017062042) was received by the State Clearinghouse and circulated for a 45-day public review period from May 14 through July 2, 2021. The City circulated the document to public agencies, other public and private organizations, property owners, developers, and other interested individuals. Detailed information related to the WRTP Specific Plan and this EIR are available at the City of Woodland City Hall and online at the project webpage: https://www.cityofwoodland.org/585/Documents. The City's 2035 General Plan, Climate Action Plan and related EIR – documents that served as an important foundation for the Specific Plan and this EIR – are also available online at the General Plan Update Website: https://www.cityofwoodland.org/1000/Documents.

City staff provided a presentation on the Draft EIR at a public meeting of the Woodland Planning Commission on June 17, 2021, at 6:30 p.m. to solicit additional input on the Draft EIR.[1]

In accordance with Section 15088 of the CEQA Guidelines, the City, as the lead agency, has reviewed the comments received on the Draft EIR for the WRTP Specific Plan and has prepared written responses to the comments received.

[1] Consistent with Executive Order N-29-20 issued on March 17, 2020, and Executive Order N-35-20 issued on March 21, 2020, by the Governor of the State of California, this meeting was held online only via Zoom. The meeting agendas and virtual login information was made available online through the City's website here: https://www.cityofwoodland.org/654/Meetings-Agendas.

1.3 ORGANIZATION OF FINAL EIR

The City prepared this Final EIR, which includes:

- A full list of agencies, organizations, and individuals that provided comments on the Draft EIR in Chapter 2 of this Final EIR;
- A summary of comments and responses to comments on the Draft EIR in Chapter 2 of this Final EIR; and
- Minor revisions to the Draft EIR detailed in Chapter 3, "Errata," of this Final EIR.[2]
- References used in this Final EIR are provided in Chapter 4, "References," of this Final EIR.

Chapter 2, "Comments and Responses to Comments" of this Final EIR includes the written comments received on the Draft EIR and responses to these comments (as required by the CEQA Guidelines Section 15132). To assist the reader, each response includes a summary of the comment. The range of responses include providing clarification on the Draft EIR, making factual corrections, explaining why certain comments may not warrant further response, or simply acknowledging the comment for consideration by decision makers when the comment does not relate to the adequacy of the EIR for addressing potential adverse physical environmental effects of the proposed project.

In some instances, responses to comments may warrant modification of the text of the Draft EIR. In those cases, the text of the Draft EIR is revised and the changes compiled in Chapter 3, "Errata" of this Final EIR. The text deletions are shown in strikeout (~~strikeout~~) and additions are shown in underline (<u>underline</u>). The revisions summarized in Chapter 3 of this Final EIR do not change any of the impact conclusions presented in the Draft EIR.

This document and the Draft EIR together constitute the Final EIR that the Planning Commission and City Council will consider. Appendix A to this Final EIR is the Mitigation Monitoring and Reporting Program.

1.4 USE OF THE FINAL EIR

The Final EIR allows the public and the City decision makers an opportunity to review revisions to the Draft EIR and the Responses to Comments. The Final EIR serves as the environmental document to inform the City Council's consideration of the proposed project, or one of the alternatives to the project discussed in the Draft EIR.

As required by Section 15090(a)(1)-(3) of the CEQA Guidelines, a lead agency, in certifying a Final EIR, must make the following three determinations:

1. The Final EIR has been completed in compliance with CEQA.
2. The Final EIR was presented to the decision-making body of the lead agency, and the decision-making body reviewed and considered the information in the Final EIR prior to approving the project.
3. The Final EIR reflects the lead agency's independent judgment and analysis.

[2] Chapter 3, "Errata," includes only pages of the Draft EIR where revisions have been made, not the entire Draft EIR.

As required by Section 15091 of the CEQA Guidelines, no public agency shall approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings (Findings of Fact) for each of those significant effects, accompanied by a brief explanation of the rationale for each finding supported by substantial evidence in the record. The possible findings are:

1. Changes or alterations have been required in, or incorporated into the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

The Final EIR, once certified with an adopted Mitigation Monitoring and Reporting Program will serve as the environmental document for future projects consistent with and proposed under the Specific Plan. The Final EIR was designed to streamline review of future private development projects and public infrastructure improvements required to serve development proposed as a part of the Specific Plan. Future projects will be required to incorporate development standards and other guidance included in the Specific Plan and to implement appropriate mitigation measures included as a part of the Mitigation Monitoring and Reporting Program. As projects are proposed, the City would make findings relative to the applicability of this Final EIR, which may include findings that:

- future projects are within the scope of the Specific Plan EIR analysis pursuant to CEQA Guidelines Section 15168;

- the Specific Plan and/or 2035 General Plan and Climate Action Plan EIR considered the impacts of the project and no additional review or only focused review is required pursuant to Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183;

- future projects qualify for streamlining using the Specific Plan EIR using the provisions of CEQA Guidelines Section 15182 for Projects Pursuant to a Specific Plan; or

- future projects qualify for applicable streamlining, tiering, or exemptions that exist today or that may be enacted in the future.

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2 COMMENTS AND RESPONSES TO COMMENTS ON THE WRTP SPECIFIC PLAN DRAFT EIR

This section of the Final EIR contains comment letters received during the public review period for the Woodland Research and Technology Park (WRTP) Specific Plan Draft EIR. In conformance with CEQA Guidelines Section 15088(a), the City has prepared written responses to comments on environmental issues received from reviewers of the WRTP Specific Plan Draft EIR.

2.1 COMMENTS ON THE WRTP SPECIFIC PLAN DRAFT EIR

Table 2-1 identifies a number for each comment letter received, the author of the comment letter, and the date of the comment letter.[1]

Table 2-1. Comments Received on the WRTP Specific Plan Draft EIR

Letter #	Commenter	Date
1	California Department of Transportation (Caltrans)	July 2, 2021
2	Yolo Local Agency Formation Commission (Yolo LAFCo)	June 29, 2021
3	Laborers International Union of North America, Local Union No. 185	July 2, 2021
3A	Exhibit A, Shawn Smallwood, PhD	July 1, 2021
3B	Exhibit B, SWAPE (Soil / Water / Air Protection Enterprise)	July 2, 2021
4	Nathan Benedicto	July 2, 2021
5	John Chen	July 1, 2021
6	Brian Coward	July 2, 2021
7	Eric Garberville	July 2, 2021
8a	Bruce Jacks	June 3, 2021
8b	Bruce Jacks	June 23, 2021
8c	Bruce Jacks	July 2, 2021
9	Paul Kramer	July 1, 2021
10	Sheryl Patterson	June 11, 2021
11	Dorothy Rosenberg	July 1, 2021
12	Jim Smith	May 22, 2021
13	A.Takieu	July 2, 2021
14	Thorton, Randi	June 30, 2021
15	Trotman, Brenda	July 1, 2021

2.2 COMMENTS AND RESPONSES TO COMMENTS

This section of the Final EIR contains summaries of the comment letters received during the public review period for the WRTP Specific Plan Draft EIR and the City's responses to these comments.

[1] The City also received communications after the public review period which do not affect any of the EIR analysis. See Section 3.3 for responses to late communications.

2.2.1 Comment Letter #1:

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

Letter 1

CALIFORNIA STATE TRANSPORTATION AGENCY — GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DISTRICT 3
703 B STREET | MARYSVILLE, CA 95901-5556
(530) 741-4233 | FAX (530) 741-4245 TTY 711
www.dot.ca.gov

July 2, 2021

Ms. Erika Bumgardner
Principal Planner/ Business Development Liaison
City of Woodland Economic Development Department
300 First Street
Woodland, CA 95695

Draft Environmental Impact Report (DEIR)- Woodland Research & Technology Park Specific Plan

Dear Ms. Bumgardner:

Thank you for including the California Department of Transportation (Caltrans) in the review process for the project referenced above. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system. We reviewed this local development for impacts to the State Highway System (SHS) in keeping with our mission, vision, and goals for sustainability/livability/economy, and safety/health. We provide these comments consistent with the State's smart mobility goals that support a vibrant economy, and build communities, not sprawl. 1-1

This is a Draft Environmental Impact Review (DEIR) for the Woodland Research & Technology Park Specific Plan. This project proposes a commercial mixed-use town center with a range of housing options, all connected to provide for approximately 2.15 million square feet of non-residential building space, for approximately 6,100 employees and 1,600 housing units. The Specific Plan is designed to place services and amenities within walking and biking distance of neighborhood residents and accommodate a mix of housing types at a range of densities and cost levels. The Specific Plan also includes approximately 20 acres of parkland, in addition to bicycle and pedestrian trails connecting proposed land uses and adjacent developed and developing areas in the Spring Lake Specific Plan Area. Based on the information provided, Caltrans provides the following comments: 1-2

Right of Way/ Encroachment

- Caltrans requests the site plans show the state right of way delineated. Information for delineation of State Highway right of way can be found by requesting the Right of Way Record Maps for the area of proposed project. Have the developer or representatives request all Right of Way record maps by contacting: D3rwmaprequest@dot.ca.gov for any right of way map request/information needs. 1-3
- Caltrans request all work proposed and performed within the State's highway right of way must be in accordance with Caltrans' standards and require a Caltrans Encroachment Permit prior to commencing construction. 1-4

"Provide a safe and reliable transportation network that serves all people and respects the environment"

- Email: D3encpermit@dot.ca.gov
- Mail: 703 B Street, Marysville CA 95901
  Attn: Encroachment permits.

1-5

- Caltrans recommend the Applicant's consultants may also consider showing any monument preservation plans (if applicable) to identify any vulnerable survey monuments that will need to be perpetuated, as required by PE Act 6731.2 and PLS Act 8771.

Traffic Operations/Safety/Forecasting & Modeling

- Caltrans requests a safety analysis. Queueing onto a city street or freeway mainline is a safety issue. A safety queueing analysis is needed for Project Scenarios showing queueing (ft) as well as % of available storage:
  - Intersection 3 - SR113/E Main (NB off ramp)
  - Intersection 4 - E Main/Pioneer (EB movements)
  - Intersection 5 - I-5/E Main (NB off ramp)
  - Intersection 21 - SR 113/CR25A SB (All Movements)
  - Intersection 22 - SR 113/CR25A SB (All Movements

1-6

- Caltrans requests a safety evaluation to determine the need for ramp metering based on ramp and freeway volumes. An increase of uncontrolled platoons of traffic entering a congested freeway is considered a safety issue. In the Ramp Meter Design Manual (RMDM) the basic upper and lower limits for a 1GP+1HOV are 240 to 900 vph. There are several locations that see an increase in volumes that lie within these limits:
  - SB 113/E Main onramp (slip)
  - SB I-5/E Main onramp (slip)
  - SB I-5/CR 102 (slip)
  - SB113/CR 25A onramp (slip)

1-7

- Caltrans recommends a Freeway Analysis (Weaving Movements):
  - SB I-5/E Main onramp (slip) to CR 102 offramp
  - NB I-5/CR 102 onramp(slip) to I-5/E Main offramp

1-8

- Caltrans requests an evaluation/analysis for the interim timing modifications for our controlled intersections that are impacted. These are located on E Main St at both I-5 and SR 113 intersections.

1-9

- Caltrans recommends all roundabout analysis be completed with Sidra. Synchro has never been considered an approved software for RAB analysis by Caltrans.

1-10

- Caltrans recommends that intersections on the I-5 side be included in the Cumulative Buildout Section 7.1.2 and Table 6.

1-11

"Provide a safe and reliable transportation network that serves all people and respects the environment"

- Caltrans recommends having a fair share fee program agreement in place to handle future projects that are needed to mitigate potential impacts.
    - Caltrans recommends the fair share agreement include projects such as: a I-5/Rte.113 Freeway-Freeway Connector Project, ramp metering, and an auxiliary lane. These projects would be needed in the future to address the anticipated growth and cumulative impacts. 1-12

- Caltrans agrees that the establishment of an ongoing monitoring program is the best way to establish the need for implementation of individual improvement measures.
    - Caltrans recommends the project applicant to conduct focused traffic studies for each phase to assess the cumulative effects of the phased approach.
    - Caltrans recommends mitigation measures if General Plan standards are not met. 1-13

- We have the following questions:
    - How many phases does the project have?
    - What is the timeline for each phase completion/opening year?
    - What is the full build out year? 1-14

Hydraulics

- Caltrans requests drainage calculations verifying that there is no additional flow (Q) of water going into Caltrans' existing drainage system for the 100-year storm event. 1-15

- Caltrans requests spread and depth calculations for the curb and gutter to be constructed with respect to the 10-year design storm (see HDM 831.3). 1-16

- Caltrans requests use of the 2018 version of the Caltrans Standard Plans for Curbs & Driveways. 1-17

Please provide our office with copies of any further actions regarding the Project. We would appreciate the opportunity to review and comment on any changes related to this development.

If you have any questions regarding these comments or require additional information, please contact Edward Lincoln, Intergovernmental Review Coordinator, at (530) 741-5409 or by email at Edward.Lincoln@dot.ca.gov. 1-18

Sincerely,

Alex Padilla

Alex Padilla
Branch Chief, Transportation Planning – South
Planning, Local Assistance, and Sustainability

"Provide a safe and reliable transportation network that serves all people and respects the environment"

RESPONSE TO COMMENT LETTER 1

Comment 1-1 Summary of Comment: The comment states that the California Department of Transportation (Caltrans) has reviewed the Draft EIR for the proposed project and notes that Caltrans has analyzed the impacts of the project to the State Highway System and its consistency with the State's mobility goals.

Response: Thank you for your review. This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

Comment 1-2 Summary of Comment: The commenter has provided a summary of the proposed project.

Response: This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the City appreciates the review of the Draft EIR.

Comment 1-3 Summary of Comment: The commenter requests that the site plans show the State right-of-way delineated.

Response: Any future improvement plans for construction of state facilities will identify exiting state rights of way in addition to any additional right of way needs to construct said facilities. State highway improvement plans will be provided to Caltrans per Caltrans Plans Preparation Manual and/or appropriate Caltrans manuals that establish uniform standards and procedures to be used when preparing right of way maps, preliminary exhibits, and the development of project plans.

Comment 1-4 Summary of Comment: The commenter requests that all work proposed and performed within the State's highway right of way must be consistent with Caltrans' standards and that a Caltrans Encroachment Permit be obtained before construction.

Response: The Draft EIR does not identify any transportation improvement mitigations within the State highway right of way. As such, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

Any future locally funded transportation improvements related to the WRTP Specific Plan that are constructed within the State highway right of way, would obtain a Caltrans Encroachment Permit before construction.

Comment 1-5 Summary of Comment: The commenter recommends identifying any monument preservation plans (if applicable) to identify any vulnerable survey monuments that will need to be perpetuated.

Response: Any future improvement plans for construction of State facilities will identify exiting state highway survey monuments and any other survey monuments that may be disturbed and reset and/or are needed to construct said facilities. State highway improvement plans will be provided to Caltrans per Caltrans Plans Preparation Manual and/or other appropriate Caltrans manuals that establishes uniform standards and procedures to be used when preparing right of way maps, preliminary exhibits, and the development of project plans.

Comment 1-6 Summary of Comment: The comment requests queue analysis at five intersections including two intersections on Yolo County Road (County Road) 25A (at State Route 113 southbound ramp and State Route 113

northbound ramp intersections) and three intersections on East Main Street (between State Route 113 northbound off-ramp and Interstate (I)- 5 northbound off-ramp).

Response: Traffic analysis queues for the intersections were derived from Level of Service analysis that was conducted separate from the Draft EIR and included in Appendix E to the Draft EIR for informational and planning purposes, as Level of Service is no longer an allowable CEQA threshold per Senate Bill 743 (as of July 1, 2020).

Separate from the Draft EIR, a General Plan Level of Service consistency analysis was prepared for the WRTP Specific Plan Area. Level of Service analysis for the two intersections on County Road 25A (at State Route 113 southbound ramp and State Route 113 northbound ramp intersections) provides off-ramp queue results. Forecasts prepared for the cumulative scenario include full build-out of the WRTP Specific Plan Area and build-out of remaining vacant parcels in the adjacent Spring Lake Specific Plan Area as well as anticipated growth under the 2035 General Plan on other parcels through 2035. The Level of Service analysis for this scenario, which is based on application of SimTraffic micro-simulation software for the existing side street stop-controlled interchange configuration, indicate that queues will exceed storage capacity. The implementation of roundabouts and related improvements at the interchange were subsequently evaluated and it was determined these improvements provided Level of Service D or better conditions during both 2035 AM and PM peak hour conditions. The resulting 95th percentile queues for cumulative conditions, identified using SIDRA, are as follows. The results of the queuing analysis show that the implementation of roundabouts will result in reduced vehicle queues and improved safety when compared to the existing side street stop-controlled intersection configuration.

- State Route 113/County Road 25A Southbound Ramp Queues (future storage with roundabout of approximately 1,550 feet)
  - AM Peak Hour – 75 feet (approximately 5 percent of available storage)
  - PM Peak Hour – 75 feet (approximately 5 percent of available storage)
- State Route 113/County Road 25A Northbound Ramp Queues (future storage with roundabout of approximately 1,565 feet)
  - AM Peak Hour – 25 feet (approximately 2 percent of available storage)
  - PM Peak Hour – 200 feet (approximately 15 percent of available storage)

Forecasts prepared to address General Plan Level of Service consistency indicate that a small number of vehicle trips generated by uses in the WRTP Specific Plan Area would use the three intersections on East Main Street (i.e., less than 2 percent of cumulative p.m. peak hour trips on East Main Street between State Route 113 northbound ramps and Pioneer Avenue), which are over 2 miles north of the core of the WRTP Specific Plan Area. Vehicle trips from the WRTP Specific Plan Area destined for the State highway north of the project would use routes that do not include the East Main Street intersections #3, #4, or #5. Trips destined to and from the north on I-5 would gain access to the State Highway System at the State Route 113/County Road 25A interchange and make a direct connection to I-5, while most project-related trips destined to and

from the south on I-5 would gain access to the State Highway System at the I-5/County Road 102 interchange. As such, queues at the three intersections on East Main Street would not be measurably affected by the added vehicle trips from implementation of the WRTP Specific Plan.

As noted, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR, and no change has been made, nor would any change be appropriate, to the Draft EIR.

Comment 1-7 Summary of Comment: The commenter requests a safety evaluation to determine the need for ramp metering at four freeway on-ramps including the I-5 southbound on-ramp at County Road 102, the State Route 113 southbound on-ramp at County Road 25A, the State Route 113 southbound on-ramp at East Main Street, and the I-5 southbound on-ramp at East Main Street.

Response: The I-5 southbound on-ramp at County Road 102 currently has ramp metering that was constructed when locally funded improvements to the interchange were constructed by the City of Woodland in 2010. The Project Report/Environmental Document prepared for the I-5/County Road 102 interchange in 2006 documented the improvements completed in 2010 as well as a series of ultimate design improvements that include further widening of the off-ramps to be constructed at a later date when triggered.

For the State Route 113/County Road 25A interchange, the City of Woodland is initiating consultation with Caltrans on the preparation of project development studies to address design details for the proposed roundabout improvements at the off-ramp intersections. This process will include identification of required ramp metering infrastructure based on the Caltrans criteria in place.

For the other two on-ramps that access southbound State Route 113 and southbound I-5 from East Main Street, forecasts prepared to address General Plan Level of Service consistency indicate that a small number of vehicle trips generated by uses in the WRTP Specific Plan Area would use these on-ramps on East Main Street, which are over 2 miles north of the core of the Specific Plan Area. As such, the need for ramp metering at these on-ramps accessed via East Main Street would not be measurably affected by the added vehicle trips from the WRTP Specific Plan Area (i.e., less than 2 percent of cumulative p.m. peak hour trips on I-5 southbound on-ramp from East Main Street).

As noted, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR, and no change has been made, nor would any change be appropriate, to the Draft EIR.

Comment 1-8 Summary of Comment: The comment requests a weaving analysis of the northbound and southbound segments of I-5 between the East Main Street and County Road 102 interchanges.

Response: A freeway weaving analysis is conducted applying a Level of Service analysis that is not an allowable CEQA threshold. As such, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

Forecasts prepared to address General Plan Level of Service consistency indicate that a small number of vehicle trips generated by uses in the WRTP Specific Plan Area would use these segments of I-5 (i.e., less than 2 percent of cumulative p.m. peak hour trips on I-5 between East Main Street and County Road 102 interchanges), which are over 2 miles north of the core of the Specific Plan Area. As such, a freeway weaving analysis for this segment would not be measurably affected by the added vehicle trips from the WRTP Specific Plan Area. It should be noted that the I-5/State Route 113 Connector Phase 2 project, which is programmed in Sacramento Area Council of Government's (SACOG's) 2020 Metropolitan Transportation Plan / Sustainable Communities Strategy for completion by 2035, would construct a new northbound I-5 to southbound State Route 113 freeway to freeway connection designed to address the level of existing and forecast traffic that exits northbound I-5 to use East Main Street as a connector to southbound State Route 113.

It should be noted that a freeway segment Level of Service analysis was conducted separate from the Draft EIR and included in Appendix E to the Draft EIR for informational and planning purposes. This analysis was prepared for segments of State Route 113 adjacent to the County Road 25A interchange that is the primary freeway access for the WRTP Specific Plan Area. The freeway operations analysis, conducted for cumulative conditions, concluded that the freeway segments and ramps analyzed would operate at Level of Service D or better under cumulative a.m. and p.m. peak hour conditions.

Comment 1-9 Summary of Comment: The commenter requests an evaluation/analysis for the interim timing modifications for intersections on East Main Street between the State Route 113 and I-5 ramp junctions.

Response: An evaluation/analysis of signal timing modifications is conducted applying a Level of Service analysis that is not an allowable CEQA threshold. As such, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR.

Forecasts prepared to address General Plan Level of Service consistency indicate that a small number of vehicle trips generated by uses in the WRTP Specific Plan area would use the four intersections on East Main Street (i.e., less than 2 percent of cumulative p.m. peak hour trips on East Main Street between State Route 113 northbound ramps and Pioneer Avenue), which are over 2 miles north of the core of the Specific Plan Area. Vehicle trips from the WRTP Specific Plan Area destined for the State highway north of the project would use routes that do not include the East Main Street intersections. Trips destined to and from the north on I-5 would gain access to the State highway system at the State Route 113/County Road 25A interchange and make a direct connection to I-5, while virtually all project-related trips destined to and from the south on I-5 would gain access to the State highway system at the I-5/ County Road 102 interchange. As such, the interim timing modifications at the four intersections on East Main Street would not be measurably affected by the small number of added trips from implementation of the WRTP Specific Plan.

Comment 1-10 Summary of Comment: The commenter requests all roundabout analyses be completed with Sidra, as Synchro is not an approved software for roundabout analysis by Caltrans.

Response: The requested roundabout analysis is conducted applying a Level of Service analysis that is not an allowable CEQA threshold. As such, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR.

Separate from the Draft EIR, a General Plan Level of Service consistency analysis was prepared for the WRTP Specific Plan Area and included as Appendix E to the Draft EIR for informational and planning purposes. For the State Route 113/County Road 25A interchange, the ramp intersections were evaluated using SimTraffic micro-simulation for both the existing side-street stop-controlled configuration as well as an evaluation of improvement options that included an alternative with roundabouts and an alternative with traffic signals. For the roundabout alternative at the State Route 113/County Road 25A interchange, the intersections were evaluated using both SimTraffic and SIDRA, with the analysis concluding that the intersections at the State Route 113/County Road 25A interchange would operate at level of service (LOS) D conditions or better with the planned roundabout improvements under cumulative a.m. and p.m. peak hour conditions.

Comment 1-11 Summary of Comment: The comment requests that Level of Service analysis be conducted for cumulative conditions at local ramp intersections on the I-5 side.

Response: The requested LOS analysis would focus on traffic congestion. The social inconvenience of traffic congestion is not an environmental impact under CEQA that would be relevant for study in an EIR. As such, this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

Separate from the Draft EIR, a General Plan Level of Service consistency analysis was prepared for the WRTP Specific Plan Area; this analysis was included in Appendix E to the Draft EIR for informational and planning purposes. The cumulative analysis was conducted for 21 intersections and concluded that 18 (86 percent) of those intersections would meet General Plan Level of Service D goals. The intersections evaluated for cumulative conditions are those located in closest proximity to the WRTP Specific Plan Area and thus the locations where the highest level of added vehicle trips would occur. The cumulative analysis was not conducted for the intersections along East Main Street between State Route 113 and I-5 for several reasons. Forecasts prepared to address General Plan Level of Service consistency indicate that a small number of vehicle trips generated by uses in the WRTP Specific Plan Area would use the four intersections on East Main Street, which are over 2 miles north of the core of the Specific Plan Area. Additionally, the I-5/State Route 113 Connector Phase 2 project, which is programmed in SACOG's 2020 Metropolitan Transportation Plan / Sustainable Communities Strategy for completion by 2035, would construct a new northbound I-5 to southbound State Route 113 freeway to freeway connection design to address the high level of existing traffic that exits northbound I-5 to use East Main Street as a connector to southbound State Route 113.

As noted in response to comment 1-7, the Project Report/Environmental Document prepared by the City of Woodland for the I-5/County Road 102 interchange in 2006 documented the locally funded improvements completed in 2010 as well as a series of ultimate design improvements that include further widening of the off-ramps to be constructed at a later date when triggered.

The additional ultimate interchange improvements are included in the City of Woodland traffic impact fee program.

Comment 1-12 Summary of Comment: The commenter recommends having a fair-share fee program to handle future projects that are needed to mitigate potential impacts due to anticipated growth and cumulative impacts from the project.

Response: This comment does not relate to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

The requested information is in Section 6.4 of the WRTP Specific Plan, which explains the financing and maintenance of public facility improvements to serve the WRTP Specific Plan Area. As noted, a separate Financing Plan has been prepared for the WRTP that details the costs for construction and operation of backbone infrastructure, public facilities, and operational costs necessary for development under the WRTP Specific Plan. A fair-share fee program is one of a variety of funding mechanisms that may be used to fund the necessary improvements. As development progresses under the Specific Plan, the timing and mix of cost and funding sources may change, but the Financing Plan will serve as a framework to guide and support the City's objectives for the WRTP Specific Plan.

Comment 1-13 Summary of Comment: The commenter notes the importance of an ongoing monitoring program for implementation of individual improvement measures. The commenter recommends the project applicant to conduct focused traffic studies for each phase of project development, in addition to mitigation measures if General Plan standards are not met.

Response: Please refer to Appendix E, *Transportation Impact Study*, which was conducted in support of the Draft EIR. Furthermore, as described in Section 6.3.1 of the Specific Plan, analysis prepared by the City's traffic consultant identifies capacity limits of the WRTP Specific Plan Area, beyond which future improvements would be triggered. For development beyond this limit, as stated in Section 6.3.1 of the Final WRTP Specific Plan, "[s]ubsequent development projects within the [WRTP Specific] Plan Area shall be required to prepare a project specific traffic analysis to determine the exact timing for construction of the interchange to the satisfaction of the Community Development Director of City Engineer, in consultation with the State of California Transportation Department."

Comment 1-14 Summary of Comment: The commenter has the following questions:

How many phases does the project have? What is the timeline for each phase completion/opening year? What is the full build out year?

Response: Specific Plan implementation and development sequencing is further explained in Section 6 of the WRTP Specific Plan. This comment does not question to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

Comment 1-15 Summary of Comment: The commenter requests drainage calculations to confirm that no additional flow (Q) of water will be entering Caltrans' existing drainage system for the 100-year storm event.

Response: This is addressed in the Draft EIR on page 3.9-15. The Woodland Research and Technology Park Stormwater Management Technical Memorandum includes existing and proposed drainage patterns and drainage sheds exhibits in addition to peak flow calculation sheets for major drainage pipes. This Technical Memorandum, as updated in 2023, is available on the City's website with the WRTP Specific Plan and other supporting technical reports.

Design plans for construction of highway facilities within the State highway right of way and design plans for facilities that may impact State highway facilities will be provided to Caltrans per appropriate Caltrans manuals that establishes uniform standards and procedures to be used when preparing right of way maps, preliminary exhibits, and the development of project plans.

Comment 1-16 Summary of Comment: The commenter requests spread and depth calculations for the curb and gutter to be constructed with respect to the 10-year design storm.

Response: The design of curb and gutter within the State right of way will follow the requirements for design of curb and gutter and other drainage facilities needed for construction of state facilities per State highway improvement plans that will be provided to Caltrans per Caltrans Plans Preparation Manual and/or other appropriate Caltrans manuals that establishes uniform standards and procedures to be used when preparing right of way maps, preliminary exhibits, and the development of project plans.

Comment 1-17 Summary of Comment: The commenter requests the use of the 2018 version of the Caltrans Standard Plans for Curbs & Driveways.

Response: The design of curbs and driveways within the state right of way will follow the requirements for design of curbs and driveways within state right of way per Caltrans Plans Preparation Manual and/or other appropriate Caltrans manuals that establishes uniform standards and procedures to be used when preparing right of way maps, preliminary exhibits, and the development of project plans.

Comment 1-18 Summary of Comment: The commenter requests copies of any further actions regarding the project.

Response: The City will provide notification of availability of the Final EIR. This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

2.2.2 Comment Letter #2:

YOLO LOCAL AGENCY FORMATION COMMISSION (YOLO LAFCO)

Letter 2

YOLO
LOCAL
AGENCY
FORMATION
COMMISSION

COMMISSION
CHAIR
OLIN WOODS
Public Member

VICE CHAIR
DON SAYLOR
Supervisor – 2nd District

NORMA ALCALA
Councilmember
City of West Sacramento

GARY SANDY
Supervisor – 3rd District

TOM STALLARD
Mayor
City of Woodland

ALTERNATES
ANGEL BARAJAS
Supervisor – 5th District

WADE COWAN
Mayor
City of Winters

RICHARD DELBERTY
Public Member

STAFF
CHRISTINE M. CRAWFORD, AICP
Executive Officer

TERRI TUCK
Administrative Specialist/Clerk

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June 29, 2021

Erika Bumgardner, Business Development Liaison
City of Woodland Economic Development Department
300 First Street
Woodland, CA 95695

Re: Comments on the Woodland Research & Technology Park Specific Plan Draft Environmental Impact Report (DEIR) SCH# 2017062042

Dear Ms. Bumgardner:

Thank you for consulting with Yolo LAFCo as a Responsible Agency for the Woodland Research & Technology Park Specific Plan DEIR. As you are well aware, LAFCo would use the EIR to consider an annexation to implement the Project. 2-1

The DEIR indicates the Project is consistent with the City's general plan and it is able to provide necessary municipal services to the Project. Regarding agricultural loss, the DEIR notes that this Project will be required to comply with mitigation measures from the City's 2035 General Plan EIR, which addressed significant and unavoidable impacts due to the loss of agricultural land. The City's requirements to conserve agricultural land at a 1:1 ratio of similar quality complies with LAFCo's agricultural mitigation policies. 2-2

Thank you again for consulting with Yolo LAFCo. If you have any questions, please feel free to contact me. 2-3

Best regards,

Christine M. Crawford, AICP

RESPONSE TO COMMENT LETTER 2

Comment 2-1 Summary of Comment: The commenter confirmed that the City fulfilled its legal requirement to consult with Yolo LAFCo as a responsible agency for the WRTP Specific Plan EIR.

Response: The City appreciates this review. The comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted.

Comment 2-2 Summary of Comment: The commenter confirmed that the proposed project is consistent with the City's General Plan and that the Specific Plan ensures adequate provision of municipal services. The commenter also provided a summary of the loss of agricultural resources identified in the Draft EIR and notes that the City's requirements to conserve agricultural land is consistent with Yolo LAFCo's agricultural mitigation policies.

Response: The consistency of proposed mitigation with Yolo LAFCo policies is noted.

Comment 2-3 Summary of Comment: The commenter closes the comment letter and gives thanks to the City for consulting with Yolo LAFCo.

Response: The City is appreciative of Yolo LAFCo's review.

2.2.3 COMMENT LETTER #3:

LABORERS INTERNATIONAL UNION OF NORTH AMERICA (LIUNA), LOCAL UNION NO. 185

Letter 3

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July 2, 2021

Erika Bumgardner, Business Development Liaison
City of Woodland Economic Development Department
300 First Street
Woodland, CA 95695
Erika.bumgardner@cityofwoodland.org

Re: Woodland Research & Technology Park Specific Plan and Draft Environmental Impact Report (SCH #2017062042)

Dear Ms. Bumgardner,

I am writing on behalf of Laborers International Union of North America, Local Union 185, regarding the proposed Woodland Research & Technology Park ("WRTP") Specific Plan and the accompanying draft Environmental Impact Report ("DEIR"). The proposal includes a specific plan that would authorize approximately 1,600 new residential units and 2.2 million square feet of non-residential development within a 350-acre plan area on the southern edge of Woodland. Currently the location of prime farmland, the plan would leave about 21.8 acres of park and other types of open space, including stormwater basins. Although noting a lack of information regarding specific commercial projects that would be proposed in the future, the proposed Specific Plan would make almost all of the authorized commercial uses permitted of right. The DEIR identifies a long list of substantial and unavoidable impacts that result from the proposed plan. These projected unavoidable impacts include obstructing implementation of the Yolo-Solano Air Quality Management District ("YSAQMD") air quality plan, construction and operational emissions of particulate matter and ozone precursors (ROGs and NOx) in excess of area air quality standards, and significant operational noise levels. Despite these significant and unavoidable impacts, the DEIR suggests that revisiting these findings as future development projects are permitted would be streamlined and would not reevaluate with the benefits of public comments whether additional mitigations should be required for future individual projects and whether these currently unavoidable impacts could, in the future, be reduced to less than significant. LIUNA believes this runs afoul of CEQA for several reasons and unnecessarily hamstrings the City and current and future residents to make sure additional mitigations of the significant impacts are assessed and required as development occurs over the next two decades. 3-1

First, in order for the City to certify the EIR, the City will need to make a finding that it has adopted all feasible mitigation measures addressing each of the significant and unavoidable impacts. One feasible mitigation measure must include maintaining the City's discretion to apply 3-2

future, specific mitigation measures to development projects, in particular larger commercial developments, addressing the currently unavoidable impacts by requiring a discretionary conditional use permit ("CUP") rather than permitting those future developments of right. Consideration of this mitigation is required by CEQA because, where the City makes a finding of overriding considerations for a specific plan, it has a duty to revisit that finding as future development projects are considered and approved. (*See Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98, 122-125.)

3-2 (Cont'd)

The City also has an obligation to include one or more alternatives that would require CUPs and not permit certain uses of right. For example, by considering an alternative that would make any commercial development proposal in excess of 25,000 square feet subject to a CUP and not permitted of right, the City would reduce the significant impacts of the Specific Plan by ensuring consideration of additional feasible mitigation measures for those future developments that would be more readily apparent in the context of the proposed project. This also would ensure the ability of the public, including future residents of the WRTP, to provide meaningful comments on future large projects rather than the secretive and relatively closed process of over-the-counter permits.

3-3

In addition to these overarching concerns, LIUNA has retained several experts to review the DEIR's air quality and health risk assessments, as well as the biological impacts of the proposed Specific plan. These comments have been prepared with the assistance of wildlife biologist Shawn Smallwood, Ph.D., and environmental consulting firm Soil/Water/Air Protection Enterprise ("SWAPE"). Dr. Smallwood's comment and curriculum vitae are attached as Exhibit A hereto and are incorporated herein by reference and entirety. SWAPE's comment and curriculum vitae are attached as Exhibit B hereto and are incorporated herein by reference in their entirety.

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LEGAL BACKGROUND

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances). *See, e.g.* Pub. Res. Code § 21100. The EIR is the very heart of CEQA. *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652. "The 'foremost principle' in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Communities for a Better Environment v. Calif. Resources Agency* (2002) 103 Cal. App. 4th 98, 109.

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 Cal. Code Regs. ("CEQA Guidelines") § 15002(a)(1). "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564. The EIR has been described as "an

3-5

environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures. CEQA Guidelines § 15002(a)(2) and (3); *see also, Berkeley Jets*, 91 Cal.App.4th at pp. 1344, 1354; *Citizens of Goleta Valley, supra*, 52 Cal.3d at 564. The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines §15002(a)(2). If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns." Pub. Res. Code § 21081; 14 Cal.Code Regs. § 15092(b)(2)(A) & (B). The lead agency may deem a particular impact to be insignificant only if it produces rigorous analysis and concrete substantial evidence justifying the finding. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 732.

In general, mitigation measures must be designed to minimize, reduce or avoid an identified environmental impact or to rectify or compensate for that impact. 14 Cal.Code Regs. § 15370. Where several mitigation measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. *Id.* at § 15126.4(a)(1)(B). A lead agency may not make the required CEQA findings unless the administrative record clearly shows that all uncertainties regarding the mitigation of significant environmental impacts have been resolved.

3-5
(Cont'd)

CEQA requires the lead agency to adopt feasible mitigation measures that will substantially lessen or avoid the Project's potentially significant environmental impacts (Pub. Res. Code §§ 21002, 21081(a)), and describe those mitigation measures in the CEQA document. Pub. Res. Code § 21100(b)(3); CEQA Guidelines § 15126.4. Mitigation measures must be fully enforceable through permit conditions, agreements or other legally binding instruments. *Id.* at § 15126.4(a)(2).

The feasibility of mitigation measures is addressed by a lead agency at two points in the EIR process. First, the EIR itself must disclose all potentially feasible mitigation measures, focusing on the question whether each mitigation measure is "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors." Pub. Res. Code, § 21061.1. Once the final EIR is prepared and in the context of the lead agency deciding whether to proceed with a project in light of the EIR's information and analysis, the lead agency again considers the feasibility of mitigation measures, with greater discretion to consider other factors.

> no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless both of the following occur:
> (a) The public agency makes one or more of the following findings with respect to each significant effect: …
> (3) Specific economic, legal, social, technological, ***or other considerations***, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

Pub. Res. Code § 21081(a)(3) (emphasis added). Thus, the EIR itself cannot avoid addressing potential mitigation measures by asserting they are infeasible based on policy reasons. Policy reasons for rejecting a mitigation measure as infeasible can only be considered after the EIR is completed at the project approval stage. "Broader considerations of policy thus come into play when the decisionmaking body is considering actual feasibility than when the EIR preparer is assessing potential feasibility of the alternatives." *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1000.

"One of [an EIR's] major functions ... is to ensure that *all reasonable alternatives* to proposed projects are thoroughly assessed by the responsible official." *Citizens of Goleta Valley*, 52 Cal.3d at 565. An EIR must describe a range of reasonable alternatives to the Project, or to the location of 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's discussion of alternatives must contain analysis sufficient to allow informed decision making." *Laurel Heights I*, 47 Cal.3d at 404. An EIR must also include "detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." *Id.* at 405.

3-5
(Cont'd)

Whether an alternative is feasible is considered in the same way as mitigation measures. A "feasible" alternative is one that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. Pub. Res. Code § 21061.1; 14 Cal. Code Regs. § 15364. Only at the approval stage may the lead agency consider an alternative infeasible based on other policy considerations. Pub. Resources Code § 21081(a)(3). The lead agency is required to select the environmentally preferable alternative unless it is infeasible. "

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets, supra*, 91 Cal. App. 4th at p. 1355 (emphasis added) (quoting *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal. 3d 376, 391 409, fn. 12). As the court stated in *Berkeley Jets*:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decisionmaking and informed public participation, thereby thwarting the statutory goals of the EIR process." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal. App. 4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal. App. 4th 931, 946.)

More recently, the California Supreme Court has emphasized that:

> When reviewing whether a discussion is sufficient to satisfy CEQA, a court must be satisfied that the EIR (1) includes sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed project raises [citation omitted], and (2) makes a reasonable effort to substantively connect a project's air quality impacts to likely health consequences.

Sierra Club v. Cty. of Fresno (2018) 6 Cal.5th 502, 510 (2018), citing *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 405. "Whether or not the alleged inadequacy is the complete omission of a required discussion or a patently inadequate one-paragraph discussion devoid of analysis, the reviewing court must decide whether the EIR serves its purpose as an informational document." *Sierra Club v. Cty. of Fresno, supra*, 6 Cal.5th at 516. Although an agency has discretion to decide the manner of discussing potentially significant effects in an EIR, "a reviewing court must determine whether the discussion of a potentially significant effect is sufficient or insufficient, i.e., whether the EIR comports with its intended function of including 'detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.'" 6 Cal.5th at 516, citing *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197. "The determination whether a discussion is sufficient is not solely a matter of discerning whether there is substantial evidence to support the agency's factual conclusions." 6 Cal.5th at 516. Whether a discussion of a potential impact is sufficient "presents a mixed question of law and fact. As such, it is generally subject to independent review. However, underlying factual determinations—including, for example, an agency's decision as to which methodologies to employ for analyzing an environmental effect—may warrant deference." 6 Cal.5th at 516. As the Court emphasized:

> [W]hether a description of an environmental impact is insufficient because it lacks analysis or omits the magnitude of the impact is not a substantial evidence question. A conclusory discussion of an environmental impact that an EIR deems significant can be determined by a court to be inadequate as an informational document without reference to substantial evidence.

6 Cal.5th at 514.

3-5 (Cont'd)

A. The EIR Fails to Discuss All Potentially Feasible Mitigation Measures Available to Address the Project's Significant Air Quality Impacts Resulting From its Operation.

3-6

The DEIR finds that "[f]uture development in the WRTP Specific Plan Area would … result in long-term emissions generated from day-to-day operational activities associated with residential and non-residential land uses." DEIR, p. 0-11. "Operational emissions are anticipated to exceed YSAQMD thresholds of significance for ozone precursors, ROG, and NOX." *Id.* These air pollutant emissions are significant and unavoidable. *Id.*

Because the EIR determines that the operation of the WRTP will have significant and unavoidable air quality impacts, it is incumbent that the EIR comply with the mandate that it identify all potentially feasible mitigation measures in an effort to reduce those air pollution impacts. However, there appears to be only one mitigation measure identified in the DEIR to address the Project operations' significant air quality impacts. Mitigation Measure 3.3-2d bans wood-burning stoves and fireplaces in new development. DEIR, p. 0-12. All of the other mitigation measures only address air pollution impacts during construction. There do not appear to be any mitigation measures designed to address emissions of NOx and ROGs from the Project's research and tech park, including potential distribution and logistics activities, warehousing, and other industrial uses.

Up to half of the 2.2 million square feet of commercial development may include warehousing, storage, and distribution/logistics uses. Specific Plan, pp. 3-10; 3-13, Table 3.1, n. 11 ("Only permitted as incidental/ancillary to primary business/company operations; not more than 50 percent of primary building square footage"). As proposed, this use would be permitted of right. *Id*, p. 3-10. Because the DEIR projects that the Specific Plan's operation will exceed air quality standards applicable to NOx and ROGs, the Project must include all feasible mitigation measures.

The California Department of Justice has issued guidance describing feasible mitigation measures to address air quality impacts from proposed warehousing projects. *See* California Department of Justice, "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act" (attached as Exhibit C). In order to comply with CEQA's mandate that the City evaluate all potentially feasible mitigation measures necessary to reduce a project's potential significant impacts to less than significant, the City must amend and recirculate the EIR to evaluate, consider and, where feasible, adopt the following available mitigation measures identified by the Attorney General:

3-6
(Cont'd)

1. Requiring that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
2. Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.

3. Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.
4. Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
5. Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.
6. Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the air district, and the building manager.
7. Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.
8. Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
9. Constructing electric truck charging stations proportional to the number of dock doors at the project.
10. Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
11. Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.
12. Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building's projected energy needs.
13. Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
14. Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
15. Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking. (Currently, the City is proposing that future development only comply with CalGreen Tier 1 energy efficiency standards, rather than the Tier 2 standards. "The Tier 1 optional requirements are more restricted than the basic code requirements and include requirements such as higher energy efficiency goals and reduced water consumption targets. The Tier 2 requirements up the ante with even higher, or more stringent, sustainable goals than Tier 1." https://calgreenenergyservices.com/knowledge-center/calgreen-code/).
16. Achieving certification of compliance with LEED green building standards.
17. Providing meal options onsite or shuttles between the facility and nearby meal destinations. Posting signs at every truck exit driveway providing directional information to the truck route.
18. Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-

3-6
(Cont'd)

approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.

19. Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants to use carriers that are SmartWay carriers.

3-6 (Cont'd)

All of these mitigation measures are feasible for the Project within the Research and Tech Park areas of the Specific Plan. SWAPE Comments, pp. 21-22. Because the Project will have significant and unavoidable air quality impacts from its operation, all of these mitigation measures must be adopted and enforceable in order for the City to make a finding of overriding considerations.

B. The EIR Fails to Discuss All Potentially Feasible Mitigation Measures Available to Address the Project's Significant Air Quality Impacts Resulting From its Construction.

A similar shortcoming is true for the unmitigated air quality impacts identified for the Project's construction. The DEIR concludes that:

> Construction associated with future development of the WRTP Specific Plan Area and off-site improvement areas would generate emissions of criteria air pollutants that could violate an ambient air quality standard or contribute substantially to an existing or predicted air quality violation through incremental emissions of PM and ozone precursors (ROG and NOX).

DEIR, p. 0-11. Mitigation Measure 3.3-2a includes eleven best management practices to be implemented for future construction projects. *Id.* at 0-11 – 0-12. Mitigation Measure 3.3-2b identifies three mobile emission measures to reduce NOx and PM10 emissions during construction, including:

3-7

> a. Maintain all construction equipment properly according to manufacturer's specifications.
> b. Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
> c. Comply with the State On-Road Regulation by using on-road heavy-duty equipment that meet or exceed CARB's Tier 4 standard for on-road heavy-duty diesel engines.

Id., p. 0-12. The measures identified in the DEIR do not include a number of additional feasible measures identified by the Attorney General. These include the following:

1. Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier 4 *Final* engines, and including this requirement in applicable bid documents,

purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

2. Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
3. Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
4. Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
5. Limiting the amount of daily grading disturbance area.
6. Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
7. Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use. (Currently, Mitigation Measure 3.3-2a would allow up to five minutes of idling.)
8. Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
9. Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts
10. Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.

3-7 (Cont'd)

All of these mitigation measures are feasible for the entire Project area. SWAPE Comments, pp. 20-21. Because the Project will have significant and unavoidable air quality impacts from its construction, all of these mitigation measures must be adopted and enforceable in order for the City to make a finding of overriding considerations.

C. The EIR Fails to Discuss All Potentially Feasible Mitigation Measures Available to Address the Project's Significant Noise Impacts Resulting From its Construction and Operation.

The DEIR suffers from similar defects in addressing the significant noise impacts anticipated by the project. The DEIR identifies several noise mitigation measures but nevertheless concludes that construction and operation of the project will have significant and unavoidable noise impacts. DEIR, pp. 0-23 – 0-24. The mitigation measures include "limiting" the hours of construction activities to "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; limiting idling time of noise-generating equipment to 5 minutes, and; various efforts to reduce noise from construction activities within 445 feet of properties with noise-sensitive receptors. *Id*, p. 0-23 (Mitigation Measure 3.11-1).

3-8

Additional feasible mitigation measures that must be included to further reduce this significant impact include further limiting idling time of noise-generating vehicles and equipment to 2 minutes, rather than 5 minutes. The construction hours proposed in the DEIR would appear to maximize the noise impacts by including weekends and holidays as well as a 7 a.m. start time. To reduce the Project's noise impacts, where construction work is within 445-feet of a residence, including new residences developed pursuant to the Specific Plan, the measures should prohibit construction work on weekends and holidays and construction should start no earlier than 8 a.m. Likewise, where construction work is within 445-feet of a residence, the mitigation measures should require the installation of continuous noise curtains between the construction site and those residences.

3-8 (Cont'd)

D. The EIR Fails to Disclose the Potentially Feasible Mitigation Measure That Large Commercial Development Projects Within the WRTP be Conditioned on Obtaining a CUP and Ensure the City and the Public Have an Opportunity to Review Additional Feasible Mitigation Measures to Address Unavoidable Significant Impacts Identified in the DEIR.

Another overarching mitigation measure that is not addressed in the DEIR and which would further reduce the significant air quality and noise impacts from the Project would be for the City to ensure the future discretionary review of specific proposed developments within the Specific Plan area. This measure could consist of requiring commercial projects involving development greater than 25,000 square feet within the Specific Plan to obtain a conditional use permit. This mitigation should apply to Light Industrial, Medium Industrial, Research and development, Specialty Food Processing, and Warehouse, Storage and Distribution/Logistics, all of which are currently proposed as permitted of right or, in the case of Medium Industrial, a Zoning Administrator permit. *See* Specific Plan, pp. 3-9 – 3-10.

3-9

Requiring a CUP for these larger commercial developments is essential in order for the City to address the significant and currently unavoidable air quality and noise impacts for the Project. Given the pace of technology, the growing commitments of many businesses to installing solar power, electrifying their fleets, and the opportunities for development of specific mitigation measures to further reduce the impacts calculated by the DEIR for the Project, a discretionary review of these larger commercial projects is a feasible mitigation measure to ensure further reductions in the Project's significant impacts. In addition, it would ensure that the City has an opportunity to update its finding that no additional feasible mitigation measures for these impacts are available for specific future development proposals.

E. The EIR Fails to Consider an Alternative to the Proposed Specific Plan That Requires Large Commercial Development Projects Within the WRTP be Conditioned on Obtaining a CUP.

3-10

Alternatively, it is incumbent on the City to evaluate an alternative version of the Project which includes requiring CUPs and future environmental reviews pursuant to CEQA for various uses and future development projects proposed to be allowed in the Specific Plan. An alternative should be based on requiring CUPs and additional environmental review related to the

significant air quality and noise impacts identified by the DEIR for the non-residential uses identified in Section D above. Alternative versions of the proposed Specific Plan exploring whether the use of additional CUPs for various future development projects and uses would result in additional mitigation measures being applied to address the Project's significant air quality and noise impacts must be included in order for the DEIR to evaluate a reasonable range of alternatives that would lessen the Project's significant impacts and allow for informed decision making. 3-10

F. The DEIR Does Not Address Adequately the Project's Impacts on Wildlife.

Dr. Smallwood has significant experience reviewing the biological baseline and project impacts on wildlife in the area of the Project, having contributed to the scientific research in the mid-1990s on which the original habitat conservation plan for the area was established. Exhibit A, p. 1. Dr. Smallwood performed three recent site visits to the Project site on June 28, 29 and 30, 2021. Ex. A, p. 2. He detected 39 species of vertebrate wildlife, 7 of which are special-status species, including 2 listed species – Swainson's hawks and tricolored blackbirds, a California Fully Protected Species—white tailed kite, and a USF&WS Bird of Conservation Concern – yellow-billed magpie. *Id.*, pp. 2-3, 5 (photos of tricolored blackbird flock at site and Swainson's hawk nest and chick next to Project site). Dr. Smallwood explains that, if he had more time to conduct additional reconnaissance or protocol-level surveys at different times of year, he would have detected many more species, including sensitive wildlife species. *Id.*, pp. 11-13. Publicly available databases reviewed by Dr. Smallwood indicated that at least 66 special status species of vertebrates are found in the Project area. *Id.*, p. 18. A full list of the species observed by Dr. Smallwood can be found in Table 1 of his attached comment. *Id.*, pp. 15-17. 3-11

His review of the DEIR and relevant documents indicates that the efforts to identify a meaningful baseline of wildlife values in and adjacent to the Specific Plan are woefully inadequate. Dr. Smallwood also identifies significant gaps in the DEIR and its failure to address significant direct and cumulative impacts of habitat loss from the Project, impacts to wildlife from the Project's water demands, impacts on wildlife movement currently occurring through the site, impacts from collisions between the Project's traffic and wildlife, and impacts to avian wildlife from collisions with the Project's windows and other structures. (Exhibit A.)

1. The wildlife baseline described in the DEIR is inadequate and omits numerous special status species observed by Dr. Smallwood on and adjacent to the Project site.

The DEIR reports that no detection-level surveys were conducted to determine the wildlife baseline at and adjacent to the Project site. Smallwood Comments, p. 13. Two field reconnaissance surveys for wildlife are mentioned by the DEIR, one on August 31, 2017 and another on November 8, 2019. *See* DEIR, pp. 3.4-2, 3.4-4, 3.4-19. City staff has confirmed that there are no reports documenting the two reconnaissance visits mentioned in the DEIR. Dr. Smallwood points out numerous flaws in the survey information provided in the DEIR: 3-12

> Unfortunately, the DEIR reports nothing more about these surveys, such as who performed them, what methods were used, what times the surveys began, and how long the surveys lasted. Nothing is said about the fact that neither of the surveys were performed during the breeding season. Nothing was mentioned about the second survey having occurred after Swainson's hawks have left on migration to Mexico. No mention was made of both surveys having been performed outside the winter migration season when one can expect to detect merlin, ferruginous hawk, and multiple additional special-status species. The DEIR provides no list of wildlife species that were detected. The basic information a biologist would expect to see reported about these surveys is, unfortunately, not reported.

Id., p. 13. It is the City's duty to investigate the Project, including assuring the identification of baseline conditions at the site from which to disclose and gauge the Project's impacts. *See County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544, 1597–98 ("[U]nder CEQA, the lead agency bears the burden to investigate potential environmental impacts."). Two casual, undocumented site visits do not meet this duty. Dr. Smallwood's recent site visits confirm the inadequacies of the City's efforts to properly identify the baseline wildlife conditions at the site. As a result, the DEIR significantly understates the wildlife values at stake and is insufficient as an information document pursuant to CEQA.

Among other concerns identified by Dr. Smallwood, the EIR fails to identify the significant wildlife habitat values that are provided by alfalfa fields, currently present at the site. Ex. A, p. 14. 3-12 (Cont'd)

Dr. Smallwood notes that the loggerhead shrike, a special status species, relies on agricultural lands as habitat. Ex. A, p. 14. The DEIR eliminates this species for review. DEIR, p. 3.4-9. Dr. Smallwood also points out that yellow warblers will use the site as stopover habitat and that there is no substantial evidence for the EIR to eliminate this species as potential affected by the Project. Ex. A, p. 14. Similarly, the DEIR asserts there is no suitable nesting habitat at the Project site for northern harriers. DEIR, p. 3.4-10. However, Dr. Smallwood's expert assessment of the habitat he observed at the site indicates that it is suitable nesting habitat for this species of special concern.

The DEIR incorrectly identifies the tricolored blackbird as a candidate species for listing under the California Endangered Species Act. However, this species has been listed under CESA as threatened since 2018. In addition, the DEIR downplays the foraging habitat currently existing on the Project site for the tricolored blackbird. Ex. A, p. 18. Rather than potential, Dr. Smallwood observed tricolored blackbirds actively foraging at the site. *Id.*, pp. 5, 18. Likewise, the DEIR incorrectly asserts that tricolored blackbirds only nest in wetland habitat. DEIR, p. 3.4-30. However, Dr. Smallwood has recorded tricolored blackbird nests in grasslands and agricultural fields. Ex. A, p. 18.

The DEIR also understates the occurrence of the Modesto song sparrow at the site as unlikely to occur. DEIR, p. 3.4-11. However, this assessment is demonstrable incorrect because Dr. Smallwood observed this species of special concern during his visits. Ex. A, p. 18.

> As Dr. Smallwood summarizes:
>
> Of the 66 special-status species of vertebrate wildlife for which I found records in the project area (Table 2), the DEIR addresses occurrence likelihoods of only 16 (24%). The DEIR determines only 1 species is known to occur on site (Swainson's hawk), whereas data bases and site visits have recorded 11 special-status species occurrences on the site, 7 within a quarter mile of the site, another 10 within a half mile, another 12 within 1 mile, and another 8 within 2 miles. Special-status species the DEIR determines as unlikely have been seen right there (Table 2). I saw some of them. The DEIR has grossly underestimated the importance of the site to special-status species of wildlife.

3-12 (Cont'd)

Ex. A, p. 18. As a result, the EIR is inadequate as an information document to disclose the potential impacts to wildlife from the Project.

2. The DEIR fails to address impacts of habitat loss to bird species.

Dr. Smallwood identifies the impact of habitat loss on productive capacity of the Project site. (Ex. A, p. 19.) He estimates there is likely a density of 8.6 bird nests per acre at the site which equates to about 3,300 bird nests supported annually on the Project site. (*Id.*) The Project will remove a fair number of these nests from the area. Dr. Smallwood estimates that the Project would prevent the production of over 9,600 fledglings from the Project area. (*Id.*) This loss of productivity is not discussed in the DEIR.

3-13

3. The DEIR's sole reliance on the Yolo County HCP to mitigate wildlife impacts is not supported by substantial evidence.

The DEIR relies extensively on the Yolo Habitat Conservation Plan ("Yolo HCP") as mitigation for impacts to various wildlife species. However, Dr. Smallwood's expert review establishes that the HCP does not address a number of the species of concern he observed at the site. As he explains:

> The DEIR essentially relies on the Yolo County HCP as an excuse to bypass analysis of potential cumulative impacts. This approach poses multiple shortfalls to the required cumulative impacts analysis. One flaw derives from the many special-status species that would be affected by the project but which are not covered by the HCP. The HCP only covers 10 species of vertebrate wildlife, only 6 of which face substantial direct interface with potential development projects. Most of the species in Table 2 lack coverage under the HCP, and are undergoing substantial declines that could soon result in extirpation. One example is yellow-billed magpie, which underwent a >90% decline within only a few years due to West Nile Virus (Smallwood and Nakamoto 2009). The yellow-billed magpie has continued to decline in Yolo County since 2009 (Smallwood unpublished data) and could be nearing extirpation. Potential cumulative impacts to these non-covered species need to be analyzed in a revised DEIR.

3-14

Ex. A, p. 33. Dr. Smallwood also decries the absence of any information explaining the status of implementation of the HCP, whether it is achieving its habitat goals, and other relevant information necessary to understand if the HCP is actually working. Dr. Smallwood states:

> Another shortfall derives from the absence of any monitoring reports associated with the HCP. I could not locate any documentation of the performance of the HCP to date. The HCP provides no information about the trends of the species it covers, nor about whether and to what degree mitigation has conserved any of its covered species.

Id. As a result, it is anybody's guess whether the HCP is an effective mitigation even for those species it covers, never mind the many species it does not address.

Dr. Smallwood points out that, despite the presence of the HCP, even species covered by that plan are plummeting towards extirpation. These include burrowing owls. Based on his monitoring of burrowing owls in the Davis area for the last 25 years, Dr. Smallwood observes that:

> The last known pair of burrowing owls to successfully breed in the Davis area was last year. No burrowing owl breeding attempts were detected this year. I am aware of only one burrowing owl sighting in all of Yolo County this year. Throughout the month of June – the height of the breeding season – not a single sighting of burrowing owls was reported to eBird this year. This outcome is significant because the burrowing owl is one of the most -- if not *the* most -- popular bird species among bird enthusiasts in Yolo County. 'Birders' drive around searching for this species, and when it is found word travels fast about where burrowing owls are located and other attributes of the discovery. But this year none were found. The year 2021 might be the first year of the species' extirpation from Yolo County, despite whatever it is that the HCP is accomplishing.

3-14
(Cont'd)

Id., pp. 33-34. This is substantial evidence that the HCP is not a sufficient mitigation measure to address the Project's cumulative impacts on burrowing owls. Moreover, the DEIR's failure to report on the dire status of burrowing owls fails further to disclose the existing baseline for this species of special concern.

Dr. Smallwood also points out the lack of any positive effect of the HCP on cumulative impacts to the white-tailed kite. "Last year I repeated the surveys for this species that were performed 27 years earlier, in 1993, within 10 miles of Davis (Erichsen et al. 1995). I confirmed 7 breeding pairs of white-tailed kites in the same study area where 22 were documented in 1993. This 67% decline has happened despite whatever mitigation was provided by the Yolo County HCP." Ex. A, p. 33. Thus, again there is no substantial evidence supporting the assumption that implementation of the HCP will mitigate the Project's cumulative impacts on this species.

The lack of effectiveness of the HCP may be due to the absence of any meaningful wildlife protection goals in the plan. As Dr. Smallwood notes, its goals are so slight that it is not likely to address any impacts of the Project:

> A factor that diminishes the HCP as a buffer against significant cumulative impacts is its conservation goals, which are so meager that they look to me more like guarantors of extirpation. One of the HCP's conservation goals is to preserve 2 pairs of burrowing owls. Two pairs in the entire County would have been last year's situation, which one year later looks like extirpation. Another HCP goal is to protect 2 nest sites of white-tailed kite. Such a small number all but assures extirpation. Similarly, a goal is to protect 20 nest trees of Swainson's hawks in a County that recently supported 300 nest sites. The HCP's goals are empty conservation goals; they cannot prevent significant cumulative impacts to its covered species, let alone to the many special-status species that the HCP does not cover.

Id., p. 34. For these reasons, the DEIR's reliance on the HCP as mitigation is not supported by substantial evidence and is insufficient as a matter of law.

3-14 (Cont'd)

4. The DEIR fails to adequately analyze the Project's impacts on wildlife movement.

According to the DEIR, the Project will not have a significant impact on wildlife movement because it "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" and "[t]he WRTP Specific Plan Area and off-site improvement areas do not currently provide an important connection between any areas of natural habitat that would otherwise be isolated." DEIR, p. 0-19. However, the CEQA standard is whether a project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. Ex. A, p. 22. "The primary phrase of the standard goes to wildlife movement regardless of whether the movement is channeled by a corridor." *Id.* Wildlife movement includes stopover habitat used by birds and bats, and staging habitat during dispersal, and migration or home range patrol. *Id.* Dr. Smallwood notes that many species of wildlife likely use the Project site for movement across the region and the Project would cut wildlife off from stopover and staging habitat, lengthening the distances wildlife must travel before finding alternate stopover habitat. *Id.* The DEIR's cursory consideration of this potential impact is insufficient.

3-15

5. The DEIR fails to address the impacts on wildlife from additional traffic generated by the Project.

The DEIR does not address the impacts on wildlife mortality from traffic generated by the Project. Ex. A, p. 24. According to the DEIR, "[t]he project would generate a total of approximately 49,700 daily trips…." DEIR, Appendix D, p. 26. The DEIR does not disclose the

3-16

miles this number of vehicles will travel. Despite this significant addition of vehicles to area roads, the DEIR provides no analysis of the impacts on wildlife that will be caused by an increase in traffic on the roadways servicing the Project. *Id.*

Vehicle collisions with special-status species is not a minor issue, but rather results in the death of millions of species each year. Dr. Smallwood explains:

> Across North America traffic impacts have taken devastating tolls on wildlife (Forman et al. 2003). In Canada, 3,562 birds were estimated killed per 100 km of road per year (Bishop and Brogan 2013), and the US estimate of avian mortality on roads is 2,200 to 8,405 deaths per 100 km per year, or 89 million to 340 million total per year (Loss et al. 2014). Local impacts can be more intense than nationally.

3-16 (Cont'd)

Id. at 21. Dr. Smallwood estimates that the Project's additional traffic would cause 46,665 wildlife fatalities per year, and 2,333,264 wildlife fatalities over 50 years of operations. *Id.* at 23. The DEIR must be amended and recirculated with an analysis of this potentially significant impact on wildlife.

6. The Project may have significant environmental impacts by causing fatal bird strikes on its structure and windows.

In addition to conflicts with increased vehicle traffic from the Project, the proposed buildings and other structures also pose a significant threat to birdlife. Dr. Smallwood has reviewed the Project's potential impacts to birds from collisions with windows and other structures associated with the Project. Ex. A, pp. 23-31.

Full disclosure of the potential impact on wildlife of window collisions is especially important because "[w]indow collisions are often characterized as either the second or third largest source of human-caused bird mortality." Ex. A, p. 23. Dr. Smallwood extensively summarizes the science establishing the significant bird mortality resulting from collisions with windows. *Id.*, pp. 23-26. Based on his extensive review of the available science, Dr. Smallwood expects an average of 0.073 bird deaths per m^2 of glass per year. *Id.*, p. 26.

3-17

The Project as designed does not incorporate any meaningful bird safe design features nor does the DEIR evaluate the proposed building's impacts from bird strikes. Because of the lack of any analysis, the DEIR does not provide any information regarding the extent of glass facades and windows within the Specific Plan.

According to Dr. Smallwood's calculations, the Project may have about 112,804 m^2 of glass on the façades of the project's building's which would result in approximately 8,206 bird deaths per year. *Id.*, p. 27. Looking ahead, Dr. Smallwood notes that "[t]he 100-year toll from this average annual fatality rate would be 824,997 bird deaths" at a confidence level of 95 percent. *Id.* These potential impacts were not considered in the DEIR. To be legally sufficient,

the DEIR must discuss the likely magnitude of bird collisions with the Project as well as the particular species that would be most likely to collide with the Project and evaluate the direct and cumulative impacts of those bird fatalities.

3-17 (Cont'd)

7. The DEIR fails to analyze the impacts of house cats on wildlife.

The residential component of the Project will likely introduce house cats to the Project site that will prey upon birds and small mammals, yet the DEIR does not address this issue. Ex. A, p. 32. Dr. Smallwood explains that house cats are one of the largest sources of avian mortality in North America. *Id.* In addition, cats contribute to downstream loading of *Toxoplasma gondii*, which is a "parasite that can infect virtually all warm-blooded animals, but the only known definitive hosts are cats." *Id.* Based on his review of numerous cited scientific papers, Dr. Smallwood calculates that the Project's 4,386 new residents will add about 1,930 cats to the Specific Plan area. Dr. Smallwood then calculates that those cats will kill about 235,460 vertebrate wildlife per year. The DEIR must analyze this potentially significant impact.

3-18

G. The DEIR Relies on Unsubstantiated Input Parameters to Estimate Project Emissions and Thus Fails to Provide Substantial Evidence of the Project's Air Quality Impacts.

Matt Hagemann, P.G., C.Hg., and Paul E. Rosenfeld, Ph.D., of the Soil/Water/Air Protection Enterprise ("SWAPE") reviewed the air quality analysis in the DEIR. SWAPE's comment letter and CVs are attached as Exhibit B and their findings are summarized below.

The DEIR relies on emissions calculated from the California Emissions Estimator Model Version CalEEMod.2016.3.2 ("CalEEMod"). This model relies on recommended default values based on site specific information related to a number of factors. The model is used to generate a project's construction and operational emissions. SWAPE reviewed the Project's CalEEMod output files and found that the values input into the model were inconsistent with information provided in the DEIR, resulting in an underestimation of the Project's emissions. Ex. B, pp. 1-8. As a result, the DEIR's air quality analysis fails to provide substantial evidence as to the Project's air quality impacts. As such, the City must revise the DEIR adequately evaluate the impacts that construction and operation of the Project will have on local and regional air quality.

3-19

1. The DEIR's air quality models use unsubstantiated reductions to land use sizes.

SWAPE's review of the Project's CalEEMod output files found that the air model made unsubstantiated reductions to land use sizes. Ex. B, p. 2. The default floor surface area for the proposed non-residential building space was manually reduced by 27,831 SF compared to the total allowed square footage described in the DEIR. *Id.* Without providing justification for the reductions, the reductions are unsubstantiated and may underestimate the Project's emissions. As such, the DEIR's conclusions are not supported by substantial evidence and cannot be relied upon to determine the Project's actual air quality impacts.

3-20

2. The DEIR's air quality model made unsubstantiated reductions related to parking.

SWAPE's review of the Project's CalEEMod output files found that, although the DEIR mentions that future projects will include parking, neither the DEIR nor the CalEEMod output files provide an estimate of the extent of that parking. Ex. B, pp. 2-3. Including the expected parking areas in the modeling is important to estimated VOC emissions as well as energy impacts. *Id.*, p. 3. As a result, the model underestimates the Project's construction-related and operational emissions and cannot be relied upon to determine the Project's actual air quality impacts. 3-21

3. The Modeling Does Not Include An Adequate Basis for Changing the Default Percent Paved Values.

Adjustments to the model's default values for percent paved values assumes that future hauling, vendor, and worker trips will only travel on paved surfaces, increasing the default value during construction for 94 to 99 percent and during operation from 94 to 100 percent. Ex. B, pp. 3-4. These values are critical to properly estimating the Project's fugitive dust emissions. *Id.*, p. 4. Given the siting of the Project on farmland, the construction percentage appears highly optimistic. Unless these changes are substantiated, the model should be run using the default value. 3-22

4. The air quality model improperly assumes reductions to default values for energy usage.

SWAPE's review indicates there is an absence of a sufficient explanation of the reductions to the default energy usage values in the model. Ex. B, pp. 4-5. The DEIR should be supplemented to provide a more detailed explanation justifying these reductions for the Project's air modeling. 3-23

5. The DEIR's air quality model improperly assumed that off-road construction equipment would meet Tier 4 Interim standards.

SWAPE's review of the Project's CalEEMod output files found that the DEIR's air model assumed that off-road construction equipment would meet Tier 4 Final emission standards. Ex. B, pp. 6-8. However, the justification for this assumption states that "Construction mitigation of equipment that meets Tier 3 or better emissions standards…." *Id.*, p. 6. Mitigation Measure 3.3-2b does require Tier 4 for on-road heavy-duty equipment but only mentions using CARB-certified fuel for off-road equipment. DEIR, p. 0-12; Ex. B, p. 7. Hence, there is nothing in the explanation or DEIR to support an assumption that all of the Project's off-road construction equipment will meet the Tier 4 Final standard. As a result, the air model underestimates the Project's construction-related emissions and the DEIR fails to provide substantial evidence of the Project's actual air quality impacts. 3-24

H. The DEIR Failed to Disclose a Significant Air Quality Impact from Construction-Related NOx Emissions.

In an effort to accurately determine the proposed Project's construction emissions, SWAPE prepared an updated CalEEMod model that corrected the existing and proposed land use types and sizes; omitted unsubstantiated changes to the default values and applied the Tier 3 standard to off-road construction requirement. Ex. B, p. 10.

3-25

Rather than the no significant effect identified in the DEIR, SWAPE's updated modeling found that the Project's construction-related NOx emissions exceed BAAQMD's threshold of 10 tons/year. Ex. B, p. 10. Due to the inaccuracies in the DEIR's air model discussed above, the DEIR failed to provide substantial evidence that the Project's NOx emissions would be less than significant. The DEIR failed to disclose, discuss, or mitigate the Project's significant NOx emissions. When new information demonstrates, as here, that "[a] new significant environmental impact would result from the project," the DEIR must be updated and recirculated for public review and comment. 14 CCR 15088.5.

I. The DEIR Fails to Adequately Evaluate Health Risks from Diesel Particulate Matter Emissions

The DEIR's analysis of the Project's emission of toxic air contaminants ("TACs") due to construction and operational activities over the next two decades also provides a strong reason for ensuring public review of future development project's health risks by requiring a CUP for commercial projects with greatest likelihood of posing health risks from extensive grading or TAC-emitting operations.

The DEIR's conclusion that the project's TAC emissions will not result in significant health risks is based entirely on future health risk analyses of specific projects. However, whether any health risks analyses would be conducted remains unclear because the triggering criteria are entirely subjective and undefined. The DEIR qualifies in undefined and expansive terms the City's future determination whether or not a specific project will need to prepare a TAC health risk analysis:

3-26

> For projects with the ***potential*** to generate ***substantial*** TAC emissions or expose sensitive receptors to ***substantial*** TAC pollutant concentrations, the City will require a site-specific analysis for construction and/or operational activities, and appropriate mitigation, as necessary, to ensure that sensitive receptors are not exposed to substantial pollutant concentrations.

DEIR, p. 3.3-41 (emphasis added). It makes little sense to require an analysis to determine whether a future project will exceed the identified health risks thresholds if the initial trigger to require the analysis is qualified by a subjective decision by City staff that TAC emissions be potentially substantial. A more objective criteria for requiring site specific health risk assessments should be based on location relative to any residence at the time of the project or

category of uses for operational TAC emissions. For construction TAC emissions, the mitigation measure should be amended to require a site specific health risk analysis applying the health risk thresholds identified in the DEIR for any future projects that include construction activities within 1,000 feet of any residence existing at the time of construction. For operational TAC emissions of future projects, a health risk assessment should be required for any future commercial project within 1,000 feet of any existing or potential future residence. 3-26 (Cont'd)

J. The DEIR's Reliance on the City's Climate Action Plan to Find That the Project's GHG Emissions Will be Less Than Significant is in Error Because the Project Does Not Comply With A Number of Measures Set Forth in the CAP. 3-27

SWAPE's review has identified a number of inconsistencies or omissions between the Project and the City's Climate Action Plan. Ex. B, pp. 12-19. The City should review these comments and ensure that GHG reduction measures are binding and enforceable on future projects prior to approving the Specific Plan.

CONCLUSION

For the foregoing reasons, LIUNA requests that the City amend and supplement the DEIR and recirculate it for additional public comment prior to considering the approvals for the Project. 3-28

Sincerely,

Michael R. Lozeau

Michael R. Lozeau
Lozeau Drury LLP

EXHIBIT A

Shawn Smallwood, PhD
3108 Finch Street
Davis, CA 95616

Attn: Erika Bumgardner, Principal Planner
City of Woodland
Community Development Department
300 First Street
Woodland, CA 95695

1 July 2021

RE: Woodland Research Park

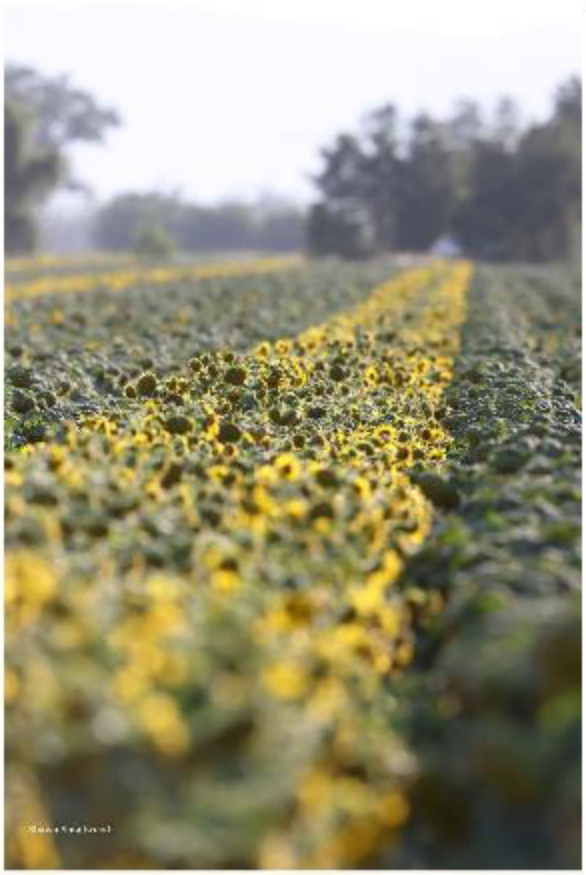
Dear Ms. Bumgardner,

I write to comment on the draft Environmental Impact Report (DEIR) prepared for the Woodland Research Park (City of Woodland 2021). I understand this project would add 1,600 dwelling units, 2.2 million square feet of non-residential floor space, up to 5,000 employees, and 21.8 acres of parks and other open space on 350 acres of prime farmland (374 to 387 acres of disturbance with modifications to the Highway 113-County Road 25A interchange). Unfortunately, the analysis of baseline conditions is incomplete and flawed, and the impacts analysis neglects multiple potential impacts to wildlife that are both substantial and significant, including from habitat loss, water and energy demands, traffic, glass windows, and house cats. 3A-1

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I authored numerous papers on special-status species issues. I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-six years, including at many proposed project sites. My CV is attached. 3A-2

I hereby disclose that in 1994-1995, I provided the scientific foundation for the earliest version of the Yolo County Habitat Conservation Plan (HCP) (Smallwood et al. 1998), the later, certified version of which is proposed in the DEIR as a principal means of mitigating impacts to biological resources. I also served as a petitioner for writ of mandate over City of Woodland's certification of the Spring Lake Specific Plan located adjacent to the proposed Woodland Research Park. My co-petitioners and I settled with the City and Spring Lake developers in 2002.

Photo 1. *Cultivated sunflowers on the project site, 28 June 2021.*



SITE VISITS

I visited the site of the proposed project on 28, 29 and 30 June 2021. I stopped to perform visual scans for vertebrate wildlife at various locations within the project area for 412 minutes, starting at 18:23 hours on the 28th, 05:56 hours on the 29th, and 18:04 hours on the 30th. I used binoculars. The site consists of agricultural land used for growing field and orchard crops, as well as annual grassland and ruderal vegetation (Photos 1 through 4). Alfalfa is grown just south of the project site, and new homes are under construction east and north of the site.

3A-3



Photo 2. *Rock pigeons settle upon wheat-cultivated portion of project site that was just disked, 29 June 2021.*

2



Photos 3 and 4. *At top, California ground squirrels occupy an uncultivated portion of the project site, and at bottom a young coyote carries off one of the ground squirrels photographed above, 29 June 2021. Houses in the background compose the western edge of the Spring Lake development. A barn swallow is also visible, having just flown over the coyote.*

3A-3
(Cont'd)

While visiting the site, I saw 39 species of vertebrate wildlife, 7 of which are special-status species (Table 1). I saw a flock of tricolored blackbirds – a California Threatened species – foraging within a crop of sunflowers (Photo 5). I saw Swainson's hawks, which are members of another California Threatened species, foraging over various portions of the project site in support of at least 2 chicks on a nest located just south of the project site (Photos 6 and 7). I saw a white-tailed kite, which is a California Fully Protected species (Photo 8), and a yellow-billed magpie, which is a U.S. Fish and Wildlife Service Bird of Conservation Concern (Photo 9).

Table 1. *Species of wildlife I observed during 4 hours and 40 minutes of visits on 28-29 June 2021 at the site of the proposed project.*

3A-3
(Cont'd)

Species	*Scientific name*	Status[1]	Notes
Great egret	*Ardea alba*		Flyover
Killdeer	*Charadrius vociferus*		
Red-tailed hawk	*Buteo jamaicensis*	BOP	Fledglings
Swainson's hawk	*Buteo swainsoni*	CT, BCC, BOP, HCP	Chicks on nest
White-tailed kite	*Elanus leucurus*	CFP, BOP, HCP	Fledgling
American kestrel	*Falco sparverius*	BOP	
Mourning dove	*Zenaida macroura*		Fledglings
Eurasian collared-dove	*Streptopelia decaocto*	Non-native	
Rock pigeon	*Columba livia*	Non-native	
Barn owl	*Tyto alba*	BOP	
Anna's hummingbird	*Calypte anna*		Territoriality
Ash-throated flycatcher	*Myiarchus cinerascens*		
Western kingbird	*Tyrannus verticalis*		Fledglings
Say's phoebe	*Sayornis saya*		Fledglings
Northern rough-winged swallow	*Stelgidopteryx serripennis*		
Barn swallow	*Hirundo rustica*		
Cliff swallow	*Petrochelidon pyrrhonota*		
European starling	*Sturnus vulgaris*	Non-native	Fledglings
American crow	*Corvus brachyrhynchos*		Fledglings
Common raven	*Corvus corax*		Fledglings
California scrub-jay	*Aphelocoma californica*		Fledglings
Yellow-billed magpie	*Pica nuttallii*	BCC	
Northern mockingbird	*Mimus polyglottos*		Fledglings
American robin	*Turdus migratorius*		
Song sparrow	*Melospiza melodia*		
Red-winged blackbird	*Agelaius phoeniceus*		Fledglings
Tricolored blackbird	*Agelaius tricolor*	CT, BCC, HCP	
Black-headed grosbeak	*Pheucticus melanocephalus*		
Brown-headed cowbird	*Molothrus ater*		
Brewer's blackbird	*Euphagus cyanocephalus*		
House finch	*Haemorhous mexicanus*		Fledglings
Lesser goldfinch	*Carduelis psaltria*		Fledglings
American goldfinch	*Catrduelis tristis*		Fledglings
House sparrow	*Passer domesticus*	Non-native	Fledglings
Coyote	*Canis latrans*		Juvenile
Striped skunk	*Mephitis mephitis*		
California ground squirrel	*Otospermophilus beecheyi*		Pups
Desert cottontail	*Sylvilagus audubonii*		
Black-tailed jackrabbit	*Lepus californicus*		

[1] See status notes in footnote to Table 2.

4



Photo 5. *A flock of tricolored blackbirds arriving to forage among sunflowers, 29 June 2021.*



Photos 6 and 7. *Swainson's hawk adult (left) and chick on the nest (right) next to the project site, 30 June 2021*

3A-3
(Cont'd)

5

I saw many house finches and two pairs of American kestrels (Photos 10 and 11). I saw American crows, barn swallows (Photos 12 and 13), American goldfinches and a black-headed grosbeak (Photos 14 and 15), Say's phoebes feeding their fledglings (Photos 16-18), mourning doves and western kingbirds (Photos 19 and 20), Anna's hummingbirds and northern mockingbirds (Photos 21 and 22), and great egrets and black-tailed jackrabbits (Photos 23 and 24) among other species.



Photos 8 and 9. *White-tailed kite (left) and yellow-billed magpie (right) on the project site, 28 June 2021.*



3A-3 (Cont'd)





Photos 10 and 11. *House finch borrowing a sunflower seed (left) and an American kestrel taking a break (right) on the site, 29 June 2021.*

6





Photos 12 and 13. *American crow in the almonds (left) and one of many barn swallows (right) at the project site, 29 June 2021.*

3A-3
(Cont'd)





Photos 14 and 15. *American goldfinch (left) and black-headed grosbeak (right) at the project site, 29 June 2021.*

7





Photos 16 – 18. *A Say's phoebe delivers food from grassland (top) to one of its fledglings amid the sunflowers (bottom), 29 June 2021.*

3A-3
(Cont'd)

8



Photos 19 and 20. *Mourning dove (left) and western kingbird (right) at the project site, 29 June 2021.*

3A-3
(Cont'd)



Photos 21 and 22. *Anna's hummingbird (left) and northern mockingbird (right) at the project site, 29 June 2021.*





Photos 23 and 24. *Great egret (left) and black-tailed jackrabbit (right) on the project site, 29 June 2021.*

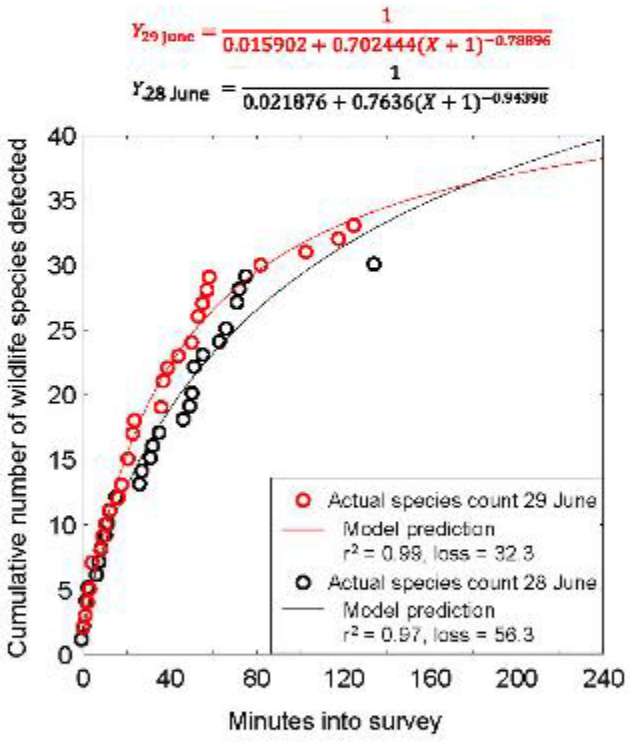
3A-3
(Cont'd)

Although the site has been heavily disturbed by intensive agriculture and encroachment of the Spring Lake residential development, it provides extensive habitat value to local species of wildlife. The site is relatively rich in wildlife (Table 1). California ground squirrels I saw on site (Photo 3) heighten the likelihood that burrowing owls occur on site, as well as multiple additional special-status species that rely on ground squirrels for food (e.g., Swainson's hawk) or their burrows for refugia. Evidence of breeding was abundant on site, including defense of breeding territories and the parental feeding of fledglings of multiple species. Even the coyote in Photo 4 was barely older than a pup. The site likely owes its wildlife productivity to its position on the landscape. Ongoing, extensive loss of habitat in the area might also concentrate wildlife on this site.

My detection of 39 species of vertebrate wildlife needs to be interpreted within the context of my survey effort. The results of one or a few reconnaissance-level surveys qualify as an absurdly thin empirical foundation for characterizing the environmental setting of any given site, including one proposed for a project. Such surveys can serve only as a starting point toward characterization of a site's wildlife community. I had only 6+ hours available to perform visual-scan surveys on 28-30 June 2021, so there were only so many species I was likely to detect. It would have been inappropriate of me to have reported that the site supports only 39 species of wildlife. However, when reconnaissance-level surveys are diligently performed, and when the outcomes are analyzed appropriately and fully reported, the number of species detected within a given reconnaissance survey effort can inform of the number of species that likely would have been detected with a larger survey effort during the same time of year. This potential is of critical importance when making determinations about occurrence likelihoods of special-status species, which I will discuss further below.

By recording when I detected each species, I was able to forecast the number of species that could have been detected with a longer effort using the same visual scan method. Figure 1 shows my cumulative counts of species detected at the site with increasing time into each of my surveys. Just as I have seen for many other survey efforts, nonlinear regression models fit the data very well, explaining 97% and 99% of the variation in the data from my first 2 surveys (I did not have time to analyze data from the 3rd survey), and each model shows progress towards the inevitable asymptote of the number of species detectable over a longer time period using the same survey method. Trends in the data were also very close between the first two surveys, with most data points overlapping through 18 minutes of survey. In the case of this project site, my models predicted I would have eventually detected 46 and 63 species had I continued performing morning and evening surveys, respectively, during late June. I actually detected only 48% and 72% of what the patterns in my data predicted I could have detected with expanded survey efforts.

Figure 1. *Actual and predicted relationships between the number of vertebrate wildlife species detected and the elapsed survey time based on visual-scan surveys on 28-29 June 2021. Note that although patterns in the data are very similar between the two surveys, the relationships would differ if the surveys were based on another method or during another season. Also note the cumulative number of vertebrate species across all methods, times of day, and seasons would increase substantially.*



I could have detected many more species than predicted by also performing surveys at other times of day to detect nocturnal and crepuscular species, or surveys in different seasons and years to detect migrants and species with multi-annual cycles of abundance, or surveys of different methods such as se of acoustic detectors or thermal-imaging for bats, owls, and nocturnally migratory birds, and live-trapping for small mammals. As it was, I detected 39 species after 3 surveys instead of only 30 species in my first survey, 33 in my second, and 28 in my third. My reconnaissance-level surveys, performed

3A-3
(Cont'd)

carefully and analyzed appropriately, inform me that the site is rich in wildlife but its environmental setting remains insufficiently characterized as foundation for analysis of impacts to special-status species. What my surveys do not inform me, and what detection surveys could, is which of the potentially occurring special-status species actually occur at the site in addition to those I had the good fortune to detect.

The likelihood of detecting special-status species is typically lower than that of more common species. This difference can be explained by rarity of special-status species, which also tend to be more cryptic, fossorial, or active during nocturnal periods when reconnaissance surveys are not performed. Another useful relationship from careful recording of species detections and subsequent comparative analysis is the probability of detection of listed species as a function of an increasing number of vertebrate wildlife species detected (Figure 2). (Note that listed species number fewer than special-status species, which are inclusive of listed species.) As demonstrated in Figure 1, the number of species detected is largely a function of survey effort. Therefore, greater survey effort increases the likelihood that listed species will be detected (which is the first tenet of detection surveys for special-status species). Based on the outcomes of 152 previous surveys that I performed at sites of proposed projects, my survey efforts at the project site carried 37% to 41% chances of detecting a listed species (Figure 2, left). As it turned out, I beat the odds by detecting tricolored blackbird (California Threatened) in one survey and white-tailed kite (California Fully Protected) in the other. My odds of detecting 2 listed species in the same survey were only 10% to 12%, thus indicating a much greater survey effort to achieve the feat (Figure 2, right), but again I beat the odds on my third survey when I detected both white-tailed kite and Swainson's hawk.

3A-3
(Cont'd)

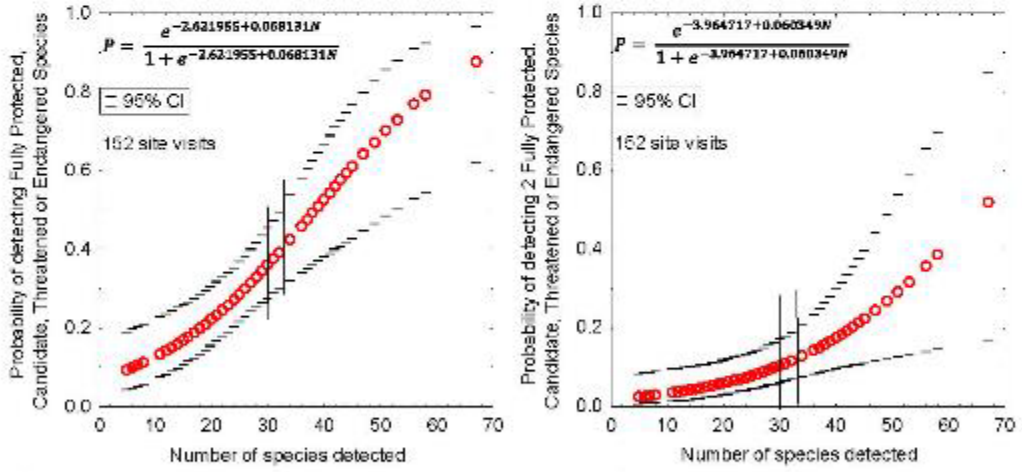


Figure 2. *Probability of detecting ≥1 Candidate, Threatened or Endangered Species of wildlife listed under California or federal Endangered Species Acts, based on survey outcomes that I logit-regressed on the number of wildlife species I detected as an expert witness during 152 site visits throughout California (left), and the probability of detecting≥1 listed species (right). The vertical lines represent the cumulative numbers of species I detected on 28 and 29 June 2021.*

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I am confident that with greater survey effort, including surveys during other times of year and using additional methods, and including the appropriate detection survey protocols, multiple additional special-status species would be detected, including Swainson's hawk, merlin, burrowing owl, multiple additional species of bats, and most of the species listed in Table 2. My confidence derives not only from survey experience, but also my many trips along Highway 113 between my home only 4.5 miles away and Woodland. I have many times seen Swainson's hawks on the project site, though not during a defined survey. Many members of the public have also reported seeing special-status species at and nearby the project site (Table 2). A larger survey effort is needed to inform the public and decision-makers about the potential project impacts to wildlife and how to mitigate them.

3A-3 (Cont'd)

BIOLOGICAL IMPACTS ASSESSMENT

The DEIR mentions two field reconnaissance surveys having been performed by one consulting biologist on 31 August 2017 and 8 November 2019. Unfortunately, the DEIR reports nothing more about these surveys, such as who performed them, what methods were used, what times the surveys began, and how long the surveys lasted. Nothing is said about the fact that neither of the surveys were performed during the breeding season. Nothing was mentioned about the second survey having occurred after Swainson's hawks have left on migration to Mexico. No mention was made of both surveys having been performed outside the winter migration season when one can expect to detect merlin, ferruginous hawk, and multiple additional special-status species. The DEIR provides no list of wildlife species that were detected. The basic information a biologist would expect to see reported about these surveys is, unfortunately, not reported.

3A-4

The DEIR discloses that no detection surveys were performed for special-status species, but this disclosure is admission of a major shortfall in the analysis of project impacts to biological resources. Detection surveys are surveys formulated by species' experts to provide a high likelihood of detection of the species at reasonable cost. Detection surveys need to be completed to inform an EIR. Detection surveys are needed to detect a species when it is present or to support absence determinations when the species is indeed absent. They are needed to assess impacts, to inform preconstruction take-avoidance surveys by mapping out where biologists performing preconstruction surveys are most likely to find animals before the tractor blade finds them, and to inform the formulation of appropriate mitigation measures. Detection surveys need to be consistent with guidelines and protocols that wildlife ecologists have uniquely developed for use with each special-status species. A good example is the survey guidelines for burrowing owl (CDFW 2012). Catch-all surveys, such as the surveys performed at the project site, are inappropriate for determining the absence of any special-status species.

The DEIR acknowledges that ground squirrels occupy the site, and that the presence of squirrels increases the likelihood of presence of burrowing owls. This acknowledgement warrants implementation of detection surveys for burrowing owl (CDFW 2012). The DEIR argues that the HCP somehow exempts City of Woodland from having to perform detection surveys, but I have seen no evidence that such exemptions are justified.

3A-5

The DEIR accurately describes alfalfa production as part of the crop rotation typical of the project site, and indeed it includes a photo of alfalfa as an existing crop during the 2017 reconnaissance survey. Because alfalfa is part of the crop rotation, and because it would be likely planted again if the project was not to go forward, it should be regarded as part of the existing environmental conditions of the site. As such, the DEIR misses the opportunity to also inform the reader of the importance of alfalfa to wildlife in Yolo County, and particularly to multiple special-status species in the area.

I had the privilege of studying wildlife in alfalfa in Yolo County for 4 years, 1990-1994, having been awarded a grant to do so by the U.S. Department of Agriculture. I mapped the distributions of pocket gopher burrow systems across 40 alfalfa stands, which varied in stand age and growing practices (e.g., whether to control pocket gophers). I also related wildlife visitations to the alfalfa stands. Prior to this study, and during and ever since, I also surveyed for wildlife along a 128-mile road transect, along which I map wildlife observations relative to my updated map of land uses. The transect includes Road 102 from Mace Blvd in Davis to Highway 113 and through Knights Landing, and passes only 1 mile east of the project site. Much was learned about wildlife use of alfalfa and of other Yolo County crops (Smallwood and Geng 1993, Smallwood et al. 1996). The DEIR makes no use of this information, nor of what was specifically learned about the local ecology of Swainson's hawk (Smallwood 1995, Smallwood et al. 1996, 2001), white-tailed kite (Erichsen et al. 1996, Smallwood et al. 1996), and other special-status species (Smallwood and Nakamoto 2009). 3A-6

My studies were not the only studies performed of special-status species in the project area. There have been studies of Swainson's hawk (Estep 2008, Battistone et al. 2018, H. T. Harvey & Associates 2019), tricolored blackbird (Meese 2017). Estep mapped a Swainson's hawk nest site only 500 m south of the project site (I confirmed it remains active this year) and another only 1 km west of the project site (Photos 6 and 7).

The DEIR rules out the occurrence likelihood of loggerhead shrike. Reasons given for ruling out species listed on page 3.4-9 include the project site's location outside the species' geographic range and lack of suitable habitat. But these reasons do not apply to loggerhead shrike, which I have many times recorded on agricultural lands near the project site. Habitat on the site appears suitable for loggerhead shrikes.

The DEIR also rules out yellow warbler, which is a species amply reported to eBird as occurring in the area. Yellow warblers visit my own backyard only 4.5 miles from the project site. Although the site does not include conditions typical of where yellow warblers would nest, it does provide important stop-over opportunities for this and other species.

The DEIR asserts that the site provides no suitable habitat for nesting by northern harrier. I disagree. I have recorded northern harriers breeding in fallow fields such as what occurs on the project site, and the species is also known to breed in wheat fields and in ruderal vegetation. What I saw of the site appears to be suitable habitat for breeding by northern harrier.

Table 2. *Occurrence likelihoods of special-status species at the project site, based on records of sightings in eBird and iNaturalist (data bases) and my site visits. Entries in bold font represent species I observed at the site.*

Species	Scientific name	Status[1]	Occurrence likelihood	
			DEIR	Data bases and site visits
Aleutian cackling goose	*Branta hutchinsonii leucopareia*	WL		Within 1 mile
American white pelican	*Pelecanus erythrorhynchos*	SSC1		Within ¼ mile
Double-crested cormorant	*Phalacrocorax auritus*	WL		Within ½ mile
White-faced ibis	*Plegadis chihi*	WL		Within ¼ mile
Greater sandhill crane	*Grus c. canadensis*	CT, CFP, SSC3		Within ½ mile
Long-billed curlew	*Numenius americanus*	BCC, WL		Within 1 mile
Marbled godwit	*Limosa fedua*	BCC		Within 1 mile
Mountain plover	*Charadrius montanus*	BCC, SSC2	Could occur	2 miles
Snowy plover	*Charadrius alexandrinus*	SSC3		2 miles
Caspian tern	*Hydroprogne caspia*	BCC		Within 1 mile
California gull	*Larus californicus*	WL		Within ¼ mile
Turkey vulture	*Cathartes aura*	BOP		Within ¼ mile
Osprey	*Pandion haliaetus*	WL, BOP		Within 1 mile
Bald eagle	*Haliaeetus leucocephalus*	BGEPA, BCC, CE, CFP		Within ½ mile
Golden eagle	*Aquila chrysaetos*	BGEPA, BCC, CFP		2 miles
Red-tailed hawk	*Buteo jamaicensis*	BOP		**On site**
Ferruginous hawk	*Buteo regalis*	BCC, WL, BOP		Within 1 mile
Swainson's hawk	*Buteo swainsoni*	BCC, CT, BOP, HCP	Known to occur	**On site**
Rough-legged hawk	*Buteo regalis*	BOP		On site
Red-shouldered hawk	*Buteo lineatus*	BOP		Within ¼ mile
Sharp-shinned hawk	*Accipiter striatus*	WL, BOP		Within ½ mile
Cooper's hawk	*Accipiter cooperi*	WL, BOP		On site
Northern harrier	*Circus cyaneus*	SSC3, BOP	Unlikely to nest	Within ¼ mile
White-tailed kite	*Elanus leucurus*	CFP, BOP, HCP	Could occur	**On site**
American kestrel	*Falco sparverius*	BOP		**On site**
Merlin	*Falco columbarius*	WL, BOP		Within 1 mile
Prairie falcon	*Falco mexicanus*	BCC, WL, BOP		Within 1 mile
Peregrine falcon	*Falco peregrinus*	BCC, CFP, BOP		Within ½ mile
Burrowing owl	*Athene cunicularia*	BCC, SSC2, BOP, HCP	Could occur	Within ½ mile

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3A-6
(Cont'd)

Species	Scientific name	Status[1]	Occurrence likelihood	
			DEIR	Data bases and site visits
Great-horned owl	*Bubo virginianus*	BOP		Within ½ mile
Short-eared owl	*Asio flammeus*	SSC3, BOP		Within 1 mile
Barn owl	*Tyto alba*	BOP		**On site**
Western screech-owl	*Megascops kennicotti*	BOP		2 miles
Allen's hummingbird	*Selasphorus sasin*	BCC		4.5 miles
Rufous hummingbird	*Selasphorus rufus*	BCC		Within ½ mile
Costa's hummingbird	*Calypte costae*	BCC		4.5 miles
Nuttall's woodpecker	*Picoides nuttallii*	BCC		On site
Lewis's woodpecker	*Melanerpes lewis*	BCC		2 miles
Vaux's swift	*Chaetura vauxi*	SSC2		2 miles
Willow flycatcher	*Epidomax traillii*	CE, BCC		Within ½ mile
Olive-sided flycatcher	*Contopus cooperi*	BCC, SSC2		3 miles
Oak titmouse	*Baeolophus inornatus*	BCC		1.6 miles
Horned lark	*Eremophila alpestris*	WL		Within 1 mile
Bank swallow	*Riparia riparia*	CT, HCP	Ruled out	Within 1 mile
Purple martin	*Progne subis*	SSC2	Unlikely	4.5 miles
Loggerhead shrike	*Lanius ludovicianus*	BCC, SSC2	Ruled out	Within 1 mile
Yellow-billed magpie	*Pica nuttalli*	BCC		**On site**
Yellow warbler	*Setophaga petechia*	BCC, SSC2	Ruled out	Within ½ mile
Yellow-breasted chat	*Icteria virens*	SSC3	Ruled out	2.3 miles
Modesto song sparrow	*Melospiza melodia*	SSC3	Unlikely	**On site**
Grasshopper sparrow	*Ammodramus savannarum*	SSC2	Ruled out	6.5 miles
Tricolored blackbird	*Agelaius tricolor*	CT, BCC, HCP	Unlikely to nest	**On site**
Yellow-headed blackbird	*X. xanthocephalus*	SSC3	Ruled out	1 mile
Lawrence's goldfinch	*Spinus lawrencei*	BCC		Within ½ mile
Pallid bat	*Antrozous pallidus*	SSC, WBWG H	Could occur	15 miles
Townsend's big-eared bat	*Plecotus t. townsendii*	SSC, WBWG H		In region
Silver-haired bat	*Lasionycteris noctivagans*	WBWG:M		In region
Western red bat	*Lasiurus blossevillii*	SSC, WBWG H	Could occur	2 miles
Little brown bat	*Myotis lucifugus*	WBWG:M		In range
Canyon bat	*Parastrellus hesperus*	WBWG:M		In region

3A-6
(Cont'd)

16

Species	Scientific name	Status[1]	Occurrence likelihood	
			DEIR	Data bases and site visits
Small-footed myotis	*Myotis ciliolabrum*	WBWG M		In range
Miller's myotis	*Myotis evotis*	WBWG M		In range
Fringed myotis	*Myotis thysanodes*	WBWG H		In range
Long-legged myotis	*Myotis volans*	WBWG H		In range
Yuma myotis	*Myotis yumanensis*	WBWG LM		10 miles
Hoary bat	*Lasiurus cinereus*	WBWG LM		7.5 miles

[1] Listed as FT or FE = federally Threatened or Endangered, BGEPA = Bald and Golden Eagle Protection Act, BCC = US Fish and Wildlife Service's Bird Species of Conservation Concern, CT or CE = California Threatened or Endangered, CFP = California Fully Protected (CFG Code 3511), BOP = California Fish and Game Code 3503.5 (Birds of prey), and SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3 (Shuford and Gardali 2008), TWL = Taxa to Watch List (Shuford and Gardali 2008), WBWG = Western Bat Working Group with low, medium and high conservation priorities, HCP = covered for incidental take by the Yolo County Habitat Conservation Plan.

3A-6
(Cont'd)

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The DEIR inaccurately asserts that tricolored blackbird nests only in wetlands, which do not occur on the site. I have recorded tricolored blackbirds nesting in annual grassland, and I have recorded them foraging in grasslands and agricultural fields (and see Photo 5). Others have recorded tricolored blackbirds on dairies and in rice fields. The DEIR mischaracterizes tricolored blackbird habitat and downplays the critical importance of foraging to nesting success. Even if the site is only used for foraging, tricolored blackbirds cannot successfully nest without finding sufficient forage.

The DEIR determines the occurrence likelihood of Modesto song sparrow as low, but I saw a song sparrow on site. The DEIR too often applies unrealistically narrow habitat descriptions to special-status species, and then points out that the narrowly characterized habitat is absent from the site. For example, the DEIR claims that bank swallow is confined to riparian corridors which do not occur at the project site, but bank swallows forage relatively far from riparian corridors and in fact none of the nearby eBird records are of bank swallows within riparian corridors. In reality, wildlife will strive to make use of whatever degraded environment we leave for them; they occur where we find them. The DEIR should more realistically assess occurrence likelihoods. Observers have reported many special-status species at or near the site while City of Woodland determines only 6 of them could or actually do occur at the site.

3A-6 (Cont'd)

Of the 66 special-status species of vertebrate wildlife for which I found records in the project area (Table 2), the DEIR addresses occurrence likelihoods of only 16 (24%). The DEIR determines only 1 species is known to occur on site (Swainson's hawk), whereas data bases and site visits have recorded 11 special-status species occurrences on the site, 7 within a quarter mile of the site, another 10 within a half mile, another 12 within 1 mile, and another 8 within 2 miles. Special-status species the DEIR determines as unlikely have been seen right there (Table 2). I saw some of them. The DEIR has grossly underestimated the importance of the site to special-status species of wildlife. A fair argument can be made for the need to revise the DEIR to more carefully and thoroughly analyze potential project impacts to wildlife.

HABITAT LOSS

The project would contribute to an ongoing trend of declining birds in North America. A recent study documented a 29% decline in overall bird abundance across North America over the last 48 years – a decline driven by multiple factors, but principally attributed to habitat loss and habitat fragmentation (Rosenberg et al. 2019). The ecological and economic impacts of this decline have yet to be quantified, but are likely substantial.

3A-7

Habitat loss not only results in the immediate numerical decline of wildlife, but it also results in permanent loss of productive capacity. For example, a complex of grassland, wetland, and woodland at one study site had a total bird nesting density of 32.8 nests per acre (Young 1948). In another study on a similar complex of vegetation cover, the average annual nest density was 35.8 nests per acre (Yahner 1982). These densities averaged 34.3 nests per acre. Given that the project site lacks wetlands and grasslands of the extent and quality of the Young (1948) and Yahner (1982) study sites, and

therefore assuming nesting density at the project site is a quarter of the average between the Young (1948) and Yahner (1982) studies, then 8.6 bird nests per acre multiplied against the project's 387 acres of potential impacts would predict the site currently supports 3,328 bird nests annually. Even though much of the project site is intensive agriculture, many birds are known to successfully breed in agricultural fields prior to harvest. Many birds nest on the ground amid field crops. Many birds nest in orchard trees, of which hundreds are grown on the project site. There are also many trees growing along roadsides and canals, and birds are certainly nesting in them. Many trees and shrubs provide nest substrates for birds at farm houses, around groundwater pumps, and at equipment yards. Barns and silos on site also provide nesting substrate.

3A-7 (Cont'd)

Even assuming a total breeding density of only a quarter of the mean between the Young (1948) and Yahner (1982) study sites, 3,328 nest sites is a great many nest sites. The loss of this many nest sites would qualify as a significant project impact that has not been addressed in the DEIR. But the impact does not end with the immediate loss of nests as the site is graded for construction. The reproductive capacity of the site is lost. The average number of fledglings per nest in Young's (1948) study was 2.9. Assuming Young's (1948) study site typifies bird productivity, the project would prevent the production of 9,651 fledglings per year. After 100 years and further assuming an average bird generation time of 5 years, the lost capacity of both breeders and annual fledgling production would total 1,098,220 birds {(nests/year × chicks/nest × number of years) + (2 adults/nest × nests/year) × (number of years ÷ years/generation)}. **The project's denial to California of 1.1 million birds over the first century following construction would easily qualify as a significant and substantial impact**. This impact has not been addressed in the DEIR, nor does the DEIR provide any compensatory mitigation for this impact. The DEIR should be revised to appropriately analyze the project's impacts from habitat loss.

Habitat Loss from Project Water Demand

According to the DEIR (p. 3.14-12), the project would use 1.14 million gallons of water per day, or 416.1 million gallons per year. This water must come from other sectors of California's annual water allocation, a portion of which must be from wildlife habitat. In the Central Valley, irrigated agriculture largely doubles as wildlife habitat, as is abundantly evident at the site of the proposed project. One of the most important irrigated crops for wildlife, and for multiple special-status species, is alfalfa. Alfalfa helps maintain populations of Swainson's hawk, white-tailed kite, northern harrier and others that convene at alfalfa while it is being flood-irrigated (Smallwood and Geng 1993, Erichsen et al. 1996, Smallwood et al. 1996, 2001). Alfalfa attracts these special-status species of wildlife because its flood-irrigation forces Botta's pocket gophers and California voles aboveground where they can be captured, and because mowing and windrowing and bailing also disturb arthropods, small mammals and snakes, revealing them to predators. In fact, complexes of alfalfa fields and other irrigated crops are where the highest breeding densities of Swainson's hawks have been recorded (Smallwood 1995).

3A-8

At 3.06888785 acre-feet per 1,000,000 gallons, the project would require 1,277 acre-feet of water. If this water was to come entirely from the agricultural sector, and estimating that the typical farm in California uses 4 acre-feet per acre per year to grow such crops as alfalfa, tomatoes, and fruits and nuts, then one can estimate that 319 acres of arable farmland would be taken out of production. Thus, the project would not only remove 350 acres from agricultural production on the project footprint, but would remove another 319 acres beyond the project footprint by starving that farmland (and wildlife habitat) of water. The project's water use would remove 669 acres of agricultural production, while also removing 706 acres of wildlife habitat.

It is also possible that some portion of the project's use of 1,277 acre-feet of water would come directly from streams or other natural areas that support wildlife at full capacity. If one could identify the acreage of wildlife habitat that would be lost as a result of losing the water the project needs, then one could apply the equation above to calculate the project's numerical impacts on loss of breeding sites and annual production. I lack the data I would need for doing that herein, but it is an analysis that should be performed as part of a revised EIR.

3A-8 (Cont'd)

WILDLIFE MOVEMENT

According to the DEIR, the project would not interfere with wildlife movement along corridors or any form of habitat linkage. The DEIR asserts that the Yolo Bypass, Cache Creek and Willow Slough will provide ample movement opportunities for wildlife in the region. The DEIR determines that no mitigation is necessary for interference with wildlife movement. These conclusions are flawed.

The DEIR leaves vague its notion of a linkage. What does a linkage need to link before it facilitates wildlife movement? In fact, linkages are typically discussed in the context of mitigation or conservation actions to reduce the effects of habitat fragmentation, and so it is a human construct rather than a natural feature of a landscape (Smallwood 2015). Sometimes a linkage is defined by convenience as the last remaining patch of natural vegetation cover between two protected areas. In either case, the CEQA standard is whether a project would interfere with wildlife movement in the region. The primary phrase of the CEQA standard goes to wildlife movement regardless of whether the movement is channeled by a corridor or some linkage. A site such as the proposed project site is critically important for wildlife movement because it composes an increasingly diminishing expanse of open space within a growing expanse of residential, commercial and industrial uses, forcing more species of birds to use the site for stopover and staging during migration, dispersal, and home range patrol (Warnock 2010, Taylor et al. 2011, Runge et al. 2014). The project would cut birds and bats off from stopover, staging and roosting opportunities, forcing them to travel even farther between remaining stopover areas along migration routes. The project would interfere with wildlife movement in the region. The DEIR needs to be revised to address the project's impacts on wildlife movement in the region.

3A-9

TRAFFIC IMPACTS ON WILDLIFE

A fundamental shortfall of the DEIR is its failure to analyze the impacts of the project's added road traffic on special-status species of wildlife, including many animals that would be killed far from the project's construction footprint; they would be crossing roads traversed by cars and trucks originating from or headed toward the project site. The project's impacts to wildlife would add to the traffic impacts of recently constructed residential, commercial and industrial projects, and would reach as far from the project as cars and trucks travel to or from the project site.

Vehicle collisions have accounted for the deaths of many thousands of reptile, amphibian, mammal, bird, and arthropod fauna, and the impacts have often been found to be significant at the population level (Forman et al. 2003). Across North America traffic impacts have taken devastating tolls on wildlife (Forman et al. 2003). In Canada, 3,562 birds were estimated killed per 100 km of road per year (Bishop and Brogan 2013), and the US estimate of avian mortality on roads is 2,200 to 8,405 deaths per 100 km per year, or 89 million to 340 million total per year (Loss et al. 2014). Local impacts can be more intense than nationally.

3A-10

In a recent study of traffic-caused wildlife mortality, investigators found 1,275 carcasses of 49 species of mammals, birds, amphibians and reptiles over 15 months of searches along a 2.5 mile stretch of Vasco Road in Contra Costa County, California (Mendelsohn et al. 2009). Using carcass detection trials performed on land immediately adjacent to the traffic mortality study (Brown et al. 2016) to adjust the found fatalities for the proportion of fatalities not found due to scavenger removal and searcher error, the estimated traffic-caused fatalities was 12,187. This fatality estimate translates to a rate of 3,900 wild animals per mile per year killed. In terms comparable to the national estimates, the estimates from the Mendelsohn et al. (2009) study would translate to 243,740 animals killed per 100 km of road per year, or 29 times that of Loss et al.'s (2014) upper bound estimate and 68 times the Canadian estimate. An analysis is needed of whether increased traffic generated by the project would similarly result in local impacts to wildlife.

Increased use of existing roads would increase wildlife fatalities (see Figure 7 in Kobylarz 2001). It is possible that project-related traffic impacts would far exceed the impacts of land conversion to the proposed use. Wildlife roadkill is not randomly distributed, and so it can be predicted. Causal factors include types of roadway, human population density, and temperature (Chen and Wu 2014), as well as time of day and adjacency and extent of vegetation cover (Chen and Wu 2014, Bartonička et al. 2018), and intersections with streams and riparian vegetation (Bartonička et al. 2018). For example, species of mammalian Carnivora are killed by vehicle traffic within 0.1 miles of stream crossings >40 times other than expected (K. S. Smallwood, 1989-2020 unpublished data). Reptiles are killed on roads where roadside fences end or where fences are damaged (Markle et al. 2017). There has even been a function developed to predict the number of golden eagles killed along the road, where the function includes traffic volume and density of road-killed animals available for eagles to scavenge upon

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(Lonsdorf et al. 2018). These factors also point the way toward mitigation measures, which should be formulated in a revised DEIR.

Predicting project-generated traffic impacts to wildlife

The DEIR does not report a prediction of vehicle miles traveled, but it does predict annual consumption of 331,065 gallons of diesel and 2,618,095 gallons of gasoline. Assuming average miles per gallon of 20 for diesel-powered vehicles and 30 for gasoline-powered vehicles, one can predict 85,164,150 miles traveled per year to and from the project site. This is a lot of mileage to be driven at great peril to wildlife that must cross roads to go about their business of foraging, patrolling home ranges, dispersing and migrating (Photos 25 and 26). Despite the obvious risk to wildlife, and despite the multiple papers and books written about this type of impact and how to mitigate them, the DEIR does not address impacts to wildlife caused by vehicles traveling to and from the project site.

3A-10 (Cont'd)



Photo 25. *A Gambel's quail dashes across a road* in southern California. *Such road crossings are usually successful, but too often prove fatal to the animal. Photo by Noriko Smallwood.*



Photo 26. *A mourning dove killed by vehicle traffic on a California road. Photo by Noriko Smallwood, 21 June 2020.*

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For wildlife vulnerable to front-end collisions and crushing under tires, road mortality can be predicted from the study of Mendelsohn et al. (2009) as a basis, although it would be helpful to have the availability of more studies like that of Mendelsohn et al. (2009) at additional locations. My analysis of the Mendelsohn et al. (2009) data resulted in an estimated 3,900 animals killed per mile along a county road in Contra Costa County. Two percent of the estimated number of fatalities were birds, and the balance was composed of 34% mammals (many mice and pocket mice, but also ground squirrels, desert cottontails, striped skunks, American badgers, raccoons, and others), 52.3% amphibians (large numbers of California tiger salamanders and California red-legged frogs, but also Sierran treefrogs, western toads, arboreal salamanders, slender salamanders and others), and 11.7% reptiles (many western fence lizards, but also skinks, alligator lizards, and snakes of various species).

During the Mendelsohn et al. (2009) study, 19,500 cars traveled Vasco Road daily, so the vehicle miles that contributed to my estimate of wildlife fatalities was 19,500 cars and trucks × 2.5 miles × 365 days/year × 1.25 years = 22,242,187.5 vehicle miles per 12,187 wildlife fatalities, or 1,825 vehicle miles per fatality. I predict the project would generate 85,164,150 vehicle miles per year (see assumption and calculation above), which divided by the 1,825 miles per fatality, would predict 46,665 wildlife fatalities per year. **Operations over 50 years would accumulate 2,333,264 wildlife fatalities.** It remains unknown whether and to what degree vehicle tires contribute to carcass removals from the roadway, thereby contributing a negative bias to the fatality estimates I made from the Mendelsohn et al. (2009) fatality counts. The Project's toll on wildlife could be even higher than I predict. The DEIR does not address this impact in the least.

Based on my assumptions and simple calculations, the project-generated traffic would cause substantial, significant impacts to wildlife. There is at least a fair argument that can be made for the need to revise the DEIR to analyze this impact. Mitigation measures to improve wildlife safety along roads are available and are feasible, and they need exploration for their suitability with the proposed project.

3A-10 (Cont'd)

WINDOW COLLISIONS

Window collisions are often characterized as either the second or third largest source or human-caused bird mortality. The numbers behind these characterizations are often attributed to Klem's (1990) and Dunn's (1993) estimates of about 100 million to 1 billion bird fatalities in the USA, or more recently by Loss et al.'s (2014) estimate of 365-988 million bird fatalities in the USA or Calvert et al.'s (2013) and Machtans et al.'s (2013) estimates of 22.4 million and 25 million bird fatalities in Canada, respectively. The proposed project would impose windows in the airspace normally used by birds.

3A-11

Glass-façades of buildings intercept and kill many birds, but these façades are differentially hazardous to birds based on spatial extent, contiguity, orientation, and other factors. At Washington State University, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a three-story glass

walkway (no fatality adjustments attempted). Prior to marking the windows to warn birds of the collision hazard, the collision rate was 84.7 per year. At that rate, and not attempting to adjust the fatality estimate for the proportion of fatalities not found, 4,404 birds were likely killed over the 52 years since the start of their study, and that's at a relatively small building façade (Photo 27). Accounting for the proportion of fatalities not found, the number of birds killed by this walkway over the last 50 years would have been about 13,213. And this is just for one 3-story, glass-sided walkway between two college campus buildings.



Photo 27. *A walkway connecting two buildings at Washington State University where one of the earliest studies of bird collision mortality found 85 bird fatalities per year prior to marking windows (254 annual deaths adjusted for the proportion not found). Given that the window markers have long since disappeared, this walkway has likely killed at least 12,705 birds since 1968, and continues to kill birds. Notice that the transparent glass on both sides of the walkway gives the impression of unimpeded airspace that can be navigated safely by birds familiar with flying between tree branches. Also note the reflected images of trees, which can mislead birds into seeing safe perch sites. Further note the distances of ornamental trees, which allow birds taking off from those trees to reach full speed upon arrival at the windows.*

3A-11 (Cont'd)

Klem's (1990) estimate was based on speculation that 1 to 10 birds are killed per building per year, and this speculated range was extended to the number of buildings estimated by the US Census Bureau in 1986. Klem's speculation was supported by fatality monitoring at only two houses, one in Illinois and the other in New York. Also, the basis of his fatality rate extension has changed greatly since 1986. Whereas his estimate served the need to alert the public of the possible magnitude of the bird-window collision issue, it was highly uncertain at the time and undoubtedly outdated more than three decades hence. Indeed, by 2010 Klem (2010) characterized the upper end of his estimated range – 1 billion bird fatalities – as conservative. Furthermore, the estimate lumped species together as if all birds are the same and the loss of all birds to windows has the same level of impact.

Homes with birdfeeders are associated with higher rates of window collisions than are homes without birdfeeders (Kummer and Bayne 2015, Kummer et al. 2016a), so the developed area might pose even greater hazard to birds if it includes numerous birdfeeders. Another factor potentially biasing national or North American estimates low was revealed by Bracey et al.'s (2016) finding that trained fatality searchers found 2.6× the number of fatalities found by homeowners on the days when both trained

searchers and homeowners searched around homes. The difference in carcass detection was 30.4-fold when involving carcasses volitionally placed by Bracey et al. (2016) in blind detection trials. This much larger difference in trial carcass detection rates likely resulted because their placements did not include the sounds that typically alert homeowners to actual window collisions, but this explanation also raises the question of how often homeowner participants with such studies miss detecting window-caused fatalities because they did not hear the collisions.

By the time Loss et al. (2014) performed their effort to estimate annual USA bird-window fatalities, many more fatality monitoring studies had been reported or were underway. Loss et al. (2014) were able to incorporate many more fatality rates based on scientific monitoring, and they were more careful about which fatality rates to include. However, they included estimates based on fatality monitoring by homeowners, which in one study were found to detect only 38% of the available window fatalities (Bracey et al. 2016). Loss et al. (2014) excluded all fatality records lacking a dead bird in hand, such as injured birds or feather or blood spots on windows. Loss et al.'s (2014) fatality metric was the number of fatalities per building (where in this context a building can include a house, low-rise, or high-rise structure), but they assumed that this metric was based on window collisions. Because most of the bird-window collision studies were limited to migration seasons, Loss et al. (2014) developed an admittedly assumption-laden correction factor for making annual estimates. Also, only 2 of the studies included adjustments for carcass persistence and searcher detection error, and it was unclear how and to what degree fatality rates were adjusted for these factors. Although Loss et al. (2014) attempted to account for some biases as well as for large sources of uncertainty mostly resulting from an opportunistic rather than systematic sampling data source, their estimated annual fatality rate across the USA was highly uncertain and vulnerable to multiple biases, most of which would have resulted in fatality estimates biased low.

3A-11 (Cont'd)

In my review of bird-window collision monitoring, I found that the search radius around homes and buildings was very narrow, usually 2 meters. Based on my experience with bird collisions in other contexts, I would expect that a large portion of bird-window collision victims would end up farther than 2 m from the windows, especially when the windows are higher up on tall buildings. In my experience, searcher detection rates tend to be low for small birds deposited on ground with vegetation cover or woodchips or other types of organic matter. Also, vertebrate scavengers entrain on anthropogenic sources of mortality and quickly remove many of the carcasses, thereby preventing the fatality searcher from detecting these fatalities. Adjusting fatality rates for these factors – search radius bias, searcher detection error, and carcass persistence rates – would greatly increase nationwide estimates of bird-window collision fatalities.

Buildings can intercept many nocturnal migrants as well as birds flying in daylight. As mentioned above, Johnson and Hudson (1976) found 266 bird fatalities of 41 species within 73 months of monitoring of a four-story glass walkway at Washington State University (no adjustments attempted). Somerlot (2003) found 21 bird fatalities among 13 buildings on a university campus within only 61 days. Monitoring twice per week, Hager at al. (2008) found 215 bird fatalities of 48 species, or 55 birds/building/year, and at another site they found 142 bird fatalities of 37 species for 24

birds/building/year. Gelb and Delacretaz (2009) recorded 5,400 bird fatalities under buildings in New York City, based on a decade of monitoring only during migration periods, and some of the high-rises were associated with hundreds of fatalities each. Klem et al. (2009) monitored 73 building façades in New York City during 114 days of two migratory periods, tallying 549 collision victims, nearly 5 birds per day. Borden et al. (2010) surveyed a 1.8 km route 3 times per week during 12-month period and found 271 bird fatalities of 50 species. Parkins et al. (2015) found 35 bird fatalities of 16 species within only 45 days of monitoring under 4 building façades. From 24 days of survey over a 48-day span, Porter and Huang (2015) found 47 fatalities under 8 buildings on a university campus. Sabo et al. (2016) found 27 bird fatalities over 61 days of searches under 31 windows. In San Francisco, Kahle et al. (2016) found 355 collision victims within 1,762 days under a 5-story building. Ocampo-Peñuela et al. (2016) searched the perimeters of 6 buildings on a university campus, finding 86 fatalities after 63 days of surveys. One of these buildings produced 61 of the 86 fatalities, and another building with collision-deterrent glass caused only 2 of the fatalities, thereby indicating a wide range in impacts likely influenced by various factors. There is ample evidence available to support my prediction that the proposed project would result in many collision fatalities of birds.

3A-11 (Cont'd)

Project Impact Prediction

Researchers have reported findings as bird collisions per building per year and as collisions per building per day. Some have reported findings as collisions per m² of window. Using 'buildings' in the metric treats buildings as all the same size, when we know they are not. Using square meters of glass in the metric treats glass as the only barrier upon which birds collide against a building's façade, when we know it is not. It also treats all glass as equal, even though we know that collision risk varies by type of glass as well as multiple factors related to contextual settings. Nevertheless, bird collisions per m² of glass provides the most consistent basis for a metric.

Klem's (1990) often-cited national estimate of avian collision rate relied on an assumed average collision rate of 1 to 10 birds per building per year, but studies since then have all reported higher rates of collisions: 12 to 352 birds per building per year. Because the more recent studies were likely performed at buildings known or suspected to cause many collisions, collision rates from them could be biased high. By the time of these comments, I had reviewed and processed results of bird collision monitoring at 213 buildings and façades for which bird collisions per m² of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010, Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Gomez-Moreno et al. 2018, Schneider et al. 2018, Loss et al. 2019, Brown et al. 2020, City of Portland Bureau of Environmental Services and Portland Audubon 2020, Riding et al. 2020). These study results averaged 0.073 bird deaths per m² of glass per year (95% CI: 0.042-0.102). This average and its 95% confidence interval provide a robust basis for predicting fatality rates at a proposed new project.

Assuming 1,600 s.f. of floorspace per residential dwelling (the DEIR does not specify floor areas of proposed dwelling units), the proposed 1,600 units would total 2,560,000 s.f. of floorspace. Based on my measurement of window extents on residential units in multiple California projects, the proposed project would add 36,197 m² of new glass windows. The proposed non-residential uses would total 2,160,000 s.f. of floorspace. Based on the rate of window extents per square foot of floor space in 10 recent California commercial and mixed-use projects, the proposed project would add 76,607 m² of new glass windows in nonresidential buildings. Altogether, new glass windows added by the project would total about 112,804 m² of glass windows.

Aplying the mean fatality rate (above) to my estimate of 112,804 m² of glass on the façades of the project's building predicts **8,206 bird deaths per year (95% CI: 4,896-11,596)**. The 100-year toll from this average annual fatality rate would be 824,997 bird deaths (95% CI: 489,569-1,159,625), which would continue until the buildings are either renovated to reduce bird collisions or they come down. The vast majority of these deaths would be of birds protected under the Migratory Bird Treaty Act and under the recently revised California Fish and Game Code section 3513, thus causing significant unmitigated impacts. Given the predicted level of bird-window collision mortality, and the lack of any proposed mitigation in the DEIR, it is my opinion that the project would result in potentially significant adverse biological impacts. The DEIR needs to be revised to appropriately address this impact.

3A-11 (Cont'd)

Bird-Window Collision Factors

Below is a list of collision factors I found in the scientific literature. Following this list are specific notes and findings taken from the literature and my own experience.

(1) Inherent hazard of a structure in the airspace used for nocturnal migration or other flights
(2) Window transparency, falsely revealing passage through structure or to indoor plants
(3) Window reflectance, falsely depicting vegetation, competitors, or open airspace
(4) Black hole or passage effect
(5) Window or façade extent, or proportion of façade consisting of window or other reflective surface
(6) Size of window
(7) Type of glass
(8) Lighting, which is correlated with window extent and building operations
(9) Height of structure (collision mechanisms shift with height above ground)
(10) Orientation of façade with respect to winds and solar exposure
(11) Structural layout causing confusion and entrapment
(12) Context in terms of urban-rural gradient, or surrounding extent of impervious surface vs vegetation
(13) Height, structure, and extent of vegetation grown near home or building
(14) Presence of birdfeeders or other attractants
(15) Relative abundance
(16) Season of the year

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(17) Ecology, demography and behavior
(18) Predatory attacks or cues provoking fear of attack
(19) Aggressive social interactions

(1) Inherent hazard of structure in airspace.—Not all of a structure's collision risk can be attributed to windows. Overing (1938) reported 576 birds collided with the Washington Monument in 90 minutes on one night, 12 September 1937. The average annual fatality count had been 328 birds from 1932 through 1936. Gelb and Delacretaz (2009) and Klem et al. (2009) also reported finding collision victims at buildings lacking windows, although many fewer than they found at buildings fitted with widows. The takeaway is that any building going up at the project site would likely kill birds, although the impacts of a glass-sided building would likely be much greater.

(2) Window transparency.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the transparency of glass used in windows on the buildings (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred where transparent windows revealed interior vegetation.

3A-11
(Cont'd)

(3) Window reflectance.—Widely believed as one of the two principal factors contributing to avian collisions with buildings is the reflectance of glass used in windows on the buildings (Klem 1989). Reflectance can deceptively depict open airspace, vegetation as habitat destination, or competitive rivals as self-images (Klem 1989). Gelb and Delacretaz (2009) felt that many of the collisions they detected occurred toward the lower parts of buildings where large glass exteriors reflected outdoor vegetation. Klem et al. (2009) and Borden et al. (2010) also found that reflected outdoor vegetation associated positively with collisions.

(4) Black hole or passage effect.—Although this factor was not often mentioned in the bird-window collision literature, it was suggested in Sheppard and Phillips (2015). The black hole or passage effect is the deceptive appearance of a cavity or darkened ledge that certain species of bird typically approach with speed when seeking roosting sites. The deception is achieved when shadows from awnings or the interior light conditions give the appearance of cavities or protected ledges. This factor appears potentially to be nuanced variations on transparency or reflectance or possibly an interaction effect of both of these factors.

(5) Window or façade extent.—Klem et al. (2009), Borden et al. (2010), Hager et al. (2013), and Ocampo-Peñuela et al. (2016) reported increased collision fatalities at buildings with larger reflective façades or higher proportions of façades composed of windows. However, Porter and Huang (2015) found a negative relationship between fatalities found and proportion of façade that was glazed.

(6) Size of window.—According to Kahle et al. (2016), collision rates were higher on large-pane windows compared to small-pane windows.

(7) Type of glass.—Klem et al. (2009) found that collision fatalities associated with the type of glass used on buildings. Otherwise, little attention has been directed towards the types of glass in buildings.

(8) Lighting.—Parkins et al. (2015) found that light emission from buildings correlated positively with percent glass on the façade, suggesting that lighting is linked to the extent of windows. Zink and Eckles (2010) reported fatality reductions, including an 80% reduction at a Chicago high-rise, upon the initiation of the Lights-out Program. However, Zink and Eckles (2010) provided no information on their search effort, such as the number of searches or search interval or search area around each building.

(9) Height of structure.—I found little if any hypothesis-testing related to building height, including whether another suite of factors might relate to collision victims of high-rises. Are migrants more commonly the victims of high-rises or of smaller buildings?

(10) Orientation of façade.—Some studies tested façade orientation, but not convincingly. Confounding factors such as the extent and types of windows would require large sample sizes of collision victims to parse out the variation so that some portion of it could be attributed to orientation of façade. Whether certain orientations cause disproportionately stronger or more realistic-appearing reflections ought to be testable through measurement, but counting dead birds under façades of different orientations would help.

3A-11
(Cont'd)

(11) Structural layout.—Bird-safe building guidelines have illustrated examples of structural layouts associated with high rates of bird-window collisions, but little attention has been directed towards hazardous structural layouts in the scientific literature. An exception was Johnson and Hudson (1976), who found high collision rates at 3 stories of glassed-in walkways atop an open breezeway, located on a break in slope with trees on one side of the structure and open sky on the other, Washington State University.

(12) Context in urban-rural gradient.—Numbers of fatalities found in monitoring have associated negatively with increasing developed area surrounding the building (Hager et al. 2013), and positively with more rural settings (Kummer et al. 2016a).

(13) Height, structure and extent of vegetation near building.—Correlations have sometimes been found between collision rates and the presence or extent of vegetation near windows (Hager et al. 2008, Borden et al. 2010, Kummer et al. 2016a, Ocampo-Peñuela et al. 2016). However, Porter and Huang (2015) found a negative relationship between fatalities found and vegetation cover near the building. In my experience, what probably matters most is the distance from the building that vegetation occurs. If the vegetation that is used by birds is very close to a glass façade, then birds coming from that glass will be less likely to attain sufficient speed upon arrival at the façade to result in a fatal injury. Too far away and there is probably no relationship. But 30 to 50 m away, birds alighting from vegetation can attain lethal speeds by the time they arrive at the windows.

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(14) Presence of birdfeeders.—Dunn (1993) reported a weak correlation ($r = 0.13$, $P < 0.001$) between number of birds killed by home windows and the number of birds counted at feeders. However, Kummer and Bayne (2015) found that experimental installment of birdfeeders at homes increased bird collisions with windows 1.84-fold.

(15) Relative abundance.—Collision rates have often been assumed to increase with local density or relative abundance (Klem 1989), and positive correlations have been measured (Dunn 1993, Hager et al. 2008). However, Hager and Craig (2014) found a negative correlation between fatality rates and relative abundance near buildings.

(16) Season of the year.—Borden et al. (2010) found 90% of collision fatalities during spring and fall migration periods. The significance of this finding is magnified by 7-day carcass persistence rates of 0.45 and 0.35 in spring and fall, rates which were considerably lower than during winter and summer (Hager et al. 2012). In other words, the concentration of fatalities during migration seasons would increase after applying seasonally-explicit adjustments for carcass persistence. Fatalities caused by collisions into the glass façades of the project's building would likely be concentrated in fall and spring migration periods.

3A-11 (Cont'd)

(17) Ecology, demography and behavior.—Klem (1989) noted that certain types of birds were not found as common window-caused fatalities, including soaring hawks and waterbirds. Cusa et al. (2015) found that species colliding with buildings surrounded by higher levels of urban greenery were foliage gleaners, and species colliding with buildings surrounded by higher levels of urbanization were ground foragers. Sabo et al. (2016) found no difference in age class, but did find that migrants are more susceptible to collision than resident birds.

(18) Predatory attacks.—Panic flights caused by raptors were mentioned in 16% of window strike reports in Dunn's (1993) study. I have witnessed Cooper's hawks chasing birds into windows, including house finches next door to my home and a northern mocking bird chased directly into my office window. Predatory birds likely to collide with the project's windows would include Peregrine falcon, red-shouldered hawk, Cooper's hawk, and sharp-shinned hawk.

(19) Aggressive social interactions.—I found no hypothesis-testing of the roles of aggressive social interactions in the literature other than the occasional anecdotal account of birds attacking their self-images reflected from windows. However, I have witnessed birds chasing each other and sometimes these chases resulting in one of the birds hitting a window.

Window Collision Solutions

Given the magnitude of bird-window collision impacts, there are obviously great opportunities for reducing and minimizing these impacts going forward. Existing structures can be modified or retrofitted to reduce impacts, and proposed new structures can be more carefully sited, designed, and managed to minimize impacts.

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However, the costs of some of these measures can be high and can vary greatly, but most importantly the efficacies of many of these measures remain uncertain. Both the costs and effectiveness of all of these measures can be better understood through experimentation and careful scientific investigation. **Post-construction fatality monitoring should be an essential feature of any new building project.**

Any new project should be informed by preconstruction surveys of daytime and nocturnal flight activity. Such surveys can reveal the one or more façades facing the prevailing approach direction of birds, and these revelations can help prioritize where certain types of mitigation can be targeted. It is critical to formulate effective measures prior to construction, because post-construction options will be limited, likely more expensive, and probably less effective.

(1) Retrofitting to reduce impacts
(1A) Marking windows
(1B) Managing outdoor landscape vegetation
(1C) Managing indoor landscape vegetation
(1D) Managing nocturnal lighting

3A-11
(Cont'd)

(1A) Marking windows.—Whereas Klem (1990) found no deterrent effect from decals on windows, Johnson and Hudson (1976) reported a fatality reduction of about 69% after placing decals on windows. In an experiment of opportunity, Ocampo-Peñuela et al. (2016) found only 2 of 86 fatalities at one of 6 buildings – the only building with windows treated with a bird deterrent film. At the building with fritted glass, bird collisions were 82% lower than at other buildings with untreated windows. Kahle et al. (2016) added external window shades to some windowed façades to reduce fatalities 82% and 95%. Many external and internal glass markers have been tested experimentally, some showing no effect and some showing strong deterrent effects (Klem 1989, 1990, 2009, 2011; Klem and Saenger 2013; Rössler et al. 2015).

Following up on the results of Johnson and Hudson (1976), I decided to mark windows of my home, where I have documented 5 bird collision fatalities between the time I moved in and 6 years later. I marked my windows with decals delivered to me via US Postal Service from a commercial vendor. I have documented no fatalities at my windows during the 8 years hence. In my assessment, markers can be effective in some situations.

(2) Siting and Designing to minimize impacts
(2A) Deciding on location of structure
(2B) Deciding on façade and orientation
(2C) Selecting type and sizes of windows
(2D) Designing to minimize transparency through two parallel façades
(2E) Designing to minimize views of interior plants
(2F) Landscaping to increase distances between windows and trees and shrubs

(3) Monitoring for adaptive management to reduce impacts
(3A) Systematic monitoring for fatalities to identify seasonal and spatial patterns

(3B) Adjust light management, window marking and other measures as needed.

3A-11 (Cont'd)

HOUSE CATS

The DEIR neglects analysis of impacts to wildlife that would be caused by house cats. House cats would be introduced to the project site by residents of the proposed residential units. However, the DEIR does not address the impacts of house cats on wildlife. House cats serve as one of the largest sources of avian mortality in North America (Dauphiné and Cooper 2009, Blancher 2013, Loss et al. 2013, Loyd et al. 2017). Loss et al. (2013) estimated 139 million cats in the USA in 2013 (range 114 to 164 million), which killed an estimated 16.95 billion vertebrate wildlife annually (range 7.6 to 26.3 billion). In 2012 there were 0.44 house cats per human, and 122 vertebrate animals were killed per cat, free-ranging members of which killed disproportionately larger numbers of vertebrate wildlife. According to the DEIR, the proposed project would add 4,386 new residents. The above rates applied to this number of new residents **would add 1,930 cats, which would kill 235,460 vertebrate wildlife per year**. The DEIR makes no mention of this type of impact, nor its magnitude.

3A-12

House cats also contribute to downstream loading of *Toxoplasma gondii*. According to a UC Davis wildlife health research program, "*Toxoplasma gondii is a parasite that can infect virtually all warm-blooded animals, but the only known definitive hosts are cats – domesticated and feral house cats included. Cats catch the parasite through hunting rodents and birds and they offload it into the environment through their feces... and ...rain that falls on cement creates more runoff than rain that falls on natural earth, which contributes to increased runoff that can carry fecal pathogens to the sea*" (http://www.evotis.org/ toxoplasma-gondii- sea-otters/). The DEIR needs to be revised to address the impacts of house cats to wildlife.

ENERGY DEMAND IMPACTS TO WILDLIFE

According to DEIR (p. 3.5-29), the project would need 27,518,700 kWh/year. This energy demand would require 3.15 MW of generation capacity. Also according to the DEIR, all dwelling units would be pre-wired for use of photo-voltaic panels, but there is no promise to install PV. In lieu of an assurance PV would be installed, I assume most of the electrical energy would need to be generated offsite. To comply with Senate Bill (SB) 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045, the project would need to purchase energy from renewable sources, if not immediately, then eventually. Because we know the magnitudes of impacts to wildlife caused by renewable energy projects, it is possible to predict the project's impacts to wildlife caused indirectly by the project's demand for 3.15 MW of electricity. This mortality is caused by collisions of volant wildlife with wind turbines and utility-scale solar PV panels and associated infrastructure (fences, distribution lines, transmission lines). Assuming the electricity would be purchased in proportion to the scheduled renewable energy portfolio standards noted above, the proportional energy source can be linked to current estimates of wildlife mortality caused by that source.

3A-13

Wind projects in Contra Costa and Alameda Counties are averaging 17.8 bird fatalities/MW/year (Smallwood 2021 using data from H.T. Harvey & Associates 2020 and Great Basin Bird Observatory and H. T. Harvey and Associates 2020), which applied to the project's energy demand would result in 18, 34, and 56 bird fatalities per year in 2022, 2030, and 2045, respectively. Wind projects in Contra Costa and Alameda Counties are averaging 22.8 bat fatalities/MW/year, which applied to the project's energy demand would result in 24, 43, and 72 bat fatalities per year in 2022, 2030, and 2045, respectively.

In a review of fatality monitoring at 14 of California's utility-scale solar projects (Smallwood 2020), I estimated 18.90 birds/MW/year and 0.806 bats/MW/year. Applying these rates to the 3.15 MW energy demand would predict annual fatalities of 20 birds and 1 bat in 2022, 36 birds and 2 bats in 2030, and 60 birds and 3 bats in 2045.

Without even considering the effects of habitat loss from renewable energy generation other than on the rooftop and blacktop, and depending on the offsite source of the renewable energy, the indirect impacts from the 3.15-MW energy demand would result in an annual death toll of wildlife that would add to tolls from on-site habitat loss, window collisions, traffic impacts, and house cats. These potential impacts warrant the revision of the DEIR.

3A-13 (Cont'd)

CUMULATIVE IMPACTS

The DEIR essentially relies on the Yolo County HCP as an excuse to bypass analysis of potential cumulative impacts. This approach poses multiple shortfalls to the required cumulative impacts analysis. One flaw derives from the many special-status species that would be affected by the project but which are not covered by the HCP. The HCP only covers 10 species of vertebrate wildlife, only 6 of which face substantial direct interface with potential development projects. Most of the species in Table 2 lack coverage under the HCP, and are undergoing substantial declines that could soon result in extirpation. One example is yellow-billed magpie, which underwent a >90% decline within only a few years due to West Nile Virus (Smallwood and Nakamoto 2009). The yellow-billed magpie has continued to decline in Yolo County since 2009 (Smallwood unpublished data) and could be nearing extirpation. Potential cumulative impacts to these non-covered species need to be analyzed in a revised DEIR.

3A-14

Another shortfall derives from the absence of any monitoring reports associated with the HCP. I could not locate any documentation of the performance of the HCP to date. The HCP provides no information about the trends of the species it covers, nor about whether and to what degree mitigation has conserved any of its covered species.

Burrowing owl, in particular, is in need of an emergency assessment of cumulative impacts in Yolo County. I have monitored burrowing owls in and around Davis for 25 years. The last known pair of burrowing owls to successfully breed in the Davis area was last year. No burrowing owl breeding attempts were detected this year. I am aware of

only one burrowing owl sighting in all of Yolo County this year. Throughout the month of June – the height of the breeding season – not a single sighting of burrowing owls was reported to eBird this year. This outcome is significant because the burrowing owl is one of the most -- if not *the* most -- popular bird species among bird enthusiasts in Yolo County. 'Birders' drive around searching for this species, and when it is found word travels fast about where burrowing owls are located and other attributes of the discovery. But this year none were found. The year 2021 might be the first year of the species' extirpation from Yolo County, despite whatever it is that the HCP is accomplishing.

Another species in need of an emergency cumulative impacts assessment is white-tailed kite. Last year I repeated the surveys for this species that were performed 27 years earlier, in 1993, within 10 miles of Davis (Erichsen et al. 1995). I confirmed 7 breeding pairs of white-tailed kites in the same study area where 22 were documented in 1993. This 67% decline has happened despite whatever mitigation was provided by the Yolo County HCP. 3A-14 (Cont'd)

A factor that diminishes the HCP as a buffer against significant cumulative impacts is its conservation goals, which are so meager that they look to me more like guarantors of extirpation. One of the HCP's conservation goals is to preserve 2 pairs of burrowing owls. Two pairs in the entire County would have been last year's situation, which one year later looks like extirpation. Another HCP goal is to protect 2 nest sites of white-tailed kite. Such a small number all but assures extirpation. Similarly, a goal is to protect 20 nest trees of Swainson's hawks in a County that recently supported 300 nest sites. The HCP's goals are empty conservation goals; they cannot prevent significant cumulative impacts to its covered species, let alone to the many special-status species that the HCP does not cover.

MITIGATION

Mitigation Measure 3.4-1a: Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite

Whereas I agree that preconstruction surveys would be appropriate, I must point out that such surveys should not be performed without first having performed detection surveys. Preconstruction surveys are no substitute for detection surveys. Prior to certification of the DEIR, species detection surveys are needed to (1) support negative findings of species when appropriate, (2) inform preconstruction surveys to improve their efficacy, (3) estimate project impacts, and (4) inform compensatory mitigation and other forms of mitigation. Also, it must be kept in mind that white-tailed kites often shift locations of their nest sites. 3A-15

I must also note that preconstruction surveys do not prevent the project's impacts to nest sites beyond the year of the preconstruction surveys. Habitat loss would bee permanent, along with the productive capacities of the birds that used the nest sites lost to the project.

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Mitigation Measure 3.4-1b: Comply with Yolo HCP/NCCP Requirements for Compensation for Loss of Swainson's Hawk Foraging Habitat

In advance of the certification of the EIR, the project proponent ought to be required to identify lands where the Swainson's hawk mitigation fee would be applied. Members of the public, including myself, ought to be given the opportunity to assess the benefits that would be gained from the proposed mitigation. Where and how the mitigation fee is applied is of critical importance to its efficacy. 3A-16

The DEIR ought also be revised to demonstrate the efficacy of the HCP mitigation fee. It should point out where funds have been spent, property protected, and the animals counted on protected habitat. I tried to learn of the effectiveness of the Yolo County HCP by visiting the HCP Conservancy website (https://www.yolohabitatconservancy.org/), but I could not find evidence of actual conservation success. The DEIR needs to demonstrate that payment of the HCP mitigation fee translates into actual conservation, or otherwise it ought to formulate a separate mitigation plan.

Mitigation Measure 3.4-1c: Minimize Take and Adverse Effects on Western Burrowing Owl 3A-17

Again, preconstruction surveys are no substitutes for detection surveys. The proposed measure would be inconsistent with the standards of the burrowing owl survey and mitigation guidelines (CDFW 2012).

Mitigation Measure 3.4-2a: Avoid Direct Loss of Protected Bird Nests

It should be understood that preconstruction surveys, although warranted, actually achieve very little. Birds are very capable of hiding nest sites, and bats are very capable of hiding roost sites. Most bird nests and bat roost sites would be missed by preconstruction surveys. For this reason, compensatory mitigation is needed for those bird nests and roosting bats that will be missed by preconstruction surveys. Additionally, preconstruction surveys accomplish nothing in terms of mitigating mortality caused by collisions with windows and automobiles, predation by house cats, and by habitat loss. Compensatory mitigation is needed for these types of project impacts to wildlife. 3A-18

Mitigation Measure 3.4-4: Avoid Direct Loss of Bat Roosts and Special-status Bats 3A-19

Again, preconstruction surveys are no substitutes for detection surveys. I recommend that acoustic surveys with Sonobat be performed to identify which species of bats occur on site. The DEIR should be revised so that it can inform the public about bat use of the project site.

RECOMMENDED MITIGATION

Habitat Protection

(Note: The second and third paragraphs of this recommendation were prepared principally by Noriko Smallwood, who is a wildlife biologist pursuing a Master's Degree at California State University Los Angeles, but I am familiar with the cited sources and I concur entirely with all of her conclusions.)

Habitat should be permanently protected in the form of fee title or conservation easement, or a combination thereof. I recommend an approach similar to that of the Spring Lake Settlement Agreement in Yolo County, in which the mitigation ratios graded from low to high depending on where land was protected and whether the protected land was composed of agriculture or natural vegetation cover. I also recommend that 15 years of monitoring be performed for targeted special-status species on and around the protected lands to further assess cumulative impacts.

Habitat impacts should also be mitigated internal to the project footprint. For example, California native plant landscaping, such as chaparral, grassland, and oak woodland plants, should be planted in residential yards, as street-scaping, and as cover in parks, as opposed to landscaping with lawn and exotic shrubs. Native plants offer more structure, cover, food resources, and nesting substrate for wildlife than landscaping with lawn. Native plant landscaping has been shown to increase the abundance of arthropods, which act as important sources of food for wildlife and are crucial for pollination and plant reproduction (Narango et al. 2017, Adams et al. 2020, Smallwood and Wood in prep.). Further, many endangered and threatened insects require native host plants for reproduction and for forage and refugia during migration (e.g. El Segundo blue butterfly, monarch butterfly). Landscaping with native plants over exotic plants increases the abundance and diversity of birds, and is particularly valuable to native birds (Lerman and Warren 2011, Burghardt et al. 2008, Berthon et al. 2021, Smallwood and Wood in prep.). Landscaping with native plants brings back some of the natural habitat and lessens the footprint of urbanization by acting as interconnected patches of habitat for wildlife (Goddard et al. 2009, Tallamy 2020). Lastly, not only does native plant landscaping benefit wildlife, it requires less water and lower maintenance than does traditional landscaping with lawn and hedges, and it improves the quality of life for human users of the space.

I recommend planting native trees such as oaks *(Quercus sp.)*, California sycamore *Platanus racemose)*, and willows *(Chilopsis sp.)*, as well as native shrubs such as buckwheat *(Eriogonum sp.)*, sage *(Salvia sp.)*, toyon *(Heteromeles sp.)*, and sumac *(Rhus sp.)* (Wood and Easian 2020, Smallwood and Wood in prep). Plants that contribute to high shrub and tree cover provide universal benefits to native birds regardless of which plants are used for ground cover. Further resources on native plant landscaping can be found at California Native Plant Society (CNPS.org) and Theodore Payne Foundation (theodorepayne.org).

3A-20

Road Mortality

I recommend funding wildlife crossings at strategic locations along roads used by the project, especially where large trucks would be anticipated to cross sensitive areas likely traveled by special-status species. I also recommend funding research into wildlife mortality caused by car and truck traffic. Traffic-calming measures would also help. 3A-21

Guidelines on Building Design to Minimize Bird-Window Collisions

If the project goes forward, it should at a minimum adhere to available Bird-Safe Guidelines, such as those prepared by American Bird Conservancy and New York and San Francisco. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced. 3A-22

Fatality monitoring and the use of compensatory mitigation should be incorporated at any new building project because the measures recommended in the available guidelines remain of uncertain efficacy, and even if these measures are effective, they will not reduce collision fatalities to zero. The only way to assess mitigation efficacy and to quantify post-construction fatalities is to monitor the project for fatalities, including at residential dwelling units.

House Cats

If the project goes forward, a fund should be established for long-term management of house cats in the project. Management could include public education about the environmental effects of outdoor and free-ranging cats. It could also include a program to spade and neuter cats, especially free-ranging cats. It could also involve some removals of feral cats. 3A-23

Energy Impacts

The impacts of renewable energy generation for the project should be mitigated by promotion of energy conservation and of distributed generation. No evidence has yet come to bear on collision mortality caused by rooftop PV solar arrays. If the project goes forward, all of the project's homes and nonresidential buildings should include solar 3A-24

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panels. I also recommend fatality monitoring of rooftop solar to establish whether collision mortality does or does not occur on roof-mounted solar panels.

3A-24 (Cont'd)

Measures to Rectify Impacts

Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that would be delivered to these facilities for care. Most of the injuries likely would be caused by collisions with windows and automobiles, and by attacks by house cats. Many of these animals would need treatment by wildlife rehabilitation facilities – treatment which the Yolo County HCP does not support.

3A-25

Thank you for your attention,



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Photo 28. *A Say's phoebe snatches another insect intended for its fledglings hanging out amid the sunflowers on the project site, 30 June 2021.*



EXHIBIT B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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July 2, 2021

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Subject: Comments on the Woodland Research & Technology Park Specific Plan (SCH No. 2017062042)

Dear Mr. Lozeau,

We have reviewed the May 2021 Draft Environmental Impact Report ("DEIR") for the Woodland Research & Technology Park Specific Plan ("Project") located in the City of Woodland ("City"). The Project proposes a land use plan that is estimated to result in the development of approximately 1,600 new dwelling units, 2,200,000-SF of non-residential building space, and 21.8-acres of parks and other types of open space on the 350-acre site. 3B-1

Our review concludes that the DEIR fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. 3.3-16).[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes 3B-2

[1] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.

be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Criteria Air Pollutant and Greenhouse Gas Emissions, and Energy Use ("AQ & GHG Report") as Appendix B to the DEIR, we found that several model inputs were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. As a result, an updated EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

3B-2 (Cont'd)

Use of Underestimated Land Use Sizes

According to the DEIR, the Project proposes a land use plan that is estimated to develop 2,200,000-SF of non-residential building space (p. 2-7). However, review of the CalEEMod output files demonstrates that the "WRTP Specific Plan Operations" and "WRTP Specific Plan Operations - No Wood-Burning Fireplaces" models include only 2,172,169-SF of non-residential building space[2] (see excerpt below) (Appendix B, pp. 214, 239, 255, 271, 297, 314).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Research & Development	742.96	1000sqft	42.70	742,960.00
Industrial Park	1,211.84	1000sqft	69.60	1,211,839.00
City Park	25.30	Acre	25.30	1,145,628.00
Apartments Mid Rise	519.00	Dwelling Unit	24.70	519,000.00
Condo/Townhouse	626.00	Dwelling Unit	52.20	626,000.00
Single Family Housing	528.00	Dwelling Unit	87.90	950,400.00
Regional Shopping Center	217.37	1000sqft	12.60	217,370.00

3B-3

As you can see in the excerpt above, the proposed non-residential building space is underestimated by 27,831-SF. This underestimation presents an issue, as the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations. The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).[3] Thus, by underestimating the size of the proposed non-residential building space, the models underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

Failure to Model Parking

According to the DEIR, the Project would include parking (p. 2-11). However, the DEIR fails to specify the amount of parking that would be included in the proposed Project. Furthermore, review of the

3B-4

[2] Calculated: 742,960-SF of "Research & Development" + 1,211,839-SF of "Industrial Park" + 217,370-SF of "Regional Shopping Center" = 2,172,169-SF of non-residential building space.
[3] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 28.

CalEEMod output files demonstrates that the "WRTP Specific Plan EIR," "WRTP Specific Plan Operations," and "WRTP Specific Plan Operations - No Wood-Burning Fireplaces" models fail to include any amount of parking (Appendix B, pp. 2, 34, 66, 106, 138, 170, 214, 239, 255, 271, 297, 314). This omission presents an issue, as CalEEMod includes 63 different land use types that are each assigned a distinctive set of energy usage emission factors.[4] Furthermore, the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations. The square footage of parking land uses is used for certain calculations such as determining the area to be painted and stripped (i.e., VOC emissions from architectural coatings) and volume to be ventilated (i.e., energy impacts).[5] Thus, by failing to include the proposed parking space, the models underestimate the Project's construction-related and operational emissions and should not be relied upon to determine Project significance.

3B-4 (Cont'd)

Unsubstantiated Changes to Road Percent Paved Values

Review of the CalEEMod output files demonstrates that the "WRTP Specific Plan EIR" model includes several manual increases to the default percent paved values for the Project's hauling, vendor, and worker trips (see excerpt below) (Appendix B, pp. 7, 39, 71, 111, 143, 175).

Table Name	Column Name	Default Value	New Value
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	HaulingPercentPave	94.00	99.00
tblOnRoadDust	VendorPercentPave	94.00	99.00
tblOnRoadDust	VendorPercentPave	94.00	99.00
tblOnRoadDust	VendorPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00
tblOnRoadDust	WorkerPercentPave	94.00	99.00

3B-5

In addition, review of the CalEEMod output files demonstrates that the "WRTP Specific Plan Operations" and "WRTP Specific Plan Operations - No Wood-Burning Fireplaces" models include a manual increase to the default percent paved value for the Project's operational vehicle trips (see excerpt below) (Appendix B, pp. 216, 241, 257, 273, 299, 316).

Table Name	Column Name	Default Value	New Value
tblRoadDust	RoadPercentPave	94	100

[4] "CalEEMod User's Guide, Appendix D." CAPCOA, September 2016, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2.
[5] "CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2.

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[6] According to the "User Entered Comments & Non-Default Data" table, the justifications provided for the revised construction-related and operational percent paved values are:

- "Travel primarily on paved roads due to proximity to major roadways surrounding Specific Plan Area," and
- "Operational mobile trips would occur on paved roadways," respectively (Appendix B, pp. 3, 35, 67, 107, 139, 171, 215, 240, 256, 272, 298, 315).

3B-5 (Cont'd)

However, the changes remain unsupported. Simply stating that construction trips would occur on primarily paved roads and operational mobile trips would occur on paved roadways does not justify the revised road percent paved values. According to the CalEEMod User's Guide:

> "[T]he user can override the defaults if data specific to the project is known. Local jurisdictions can also provide guidance to users as to what default properly reflects known regional road dust parameters."[7]

Here, however, the DEIR and associated documents do not provide "data specific to the project" or a source that reflects these changes. Rather, the DEIR fails to mention or justify these changes whatsoever. As a result, the revised road percent paved values are unsubstantiated.

These unsubstantiated changes present an issue, as CalEEMod uses the percentage of paved roads to determine the fugitive dust emissions from on-road vehicles.[8] As a result, by including unsubstantiated changes to the default percent paved values for the Project's construction-related and operational trips, the Project's construction-related and operational emissions may be underestimated, and the models should not be relied upon to determine Project significance.

Unsubstantiated Changes to Energy Use Values

Review of the CalEEMod output files demonstrates that the "WRTP Specific Plan Operations" and "WRTP Specific Plan Operations - No Wood-Burning Fireplaces" models include several reductions to the default energy use values (see excerpt below) (Appendix B, pp. 215, 240, 256, 272, 298, 315).

3B-6

[6] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9
[7] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 39
[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 35

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	3,795.01	3,759.01
tblEnergyUse	T24E	700.71	329.33
tblEnergyUse	T24E	711.99	334.64
tblEnergyUse	T24E	2.52	1.83
tblEnergyUse	T24E	2.14	1.50
tblEnergyUse	T24E	1.96	1.37
tblEnergyUse	T24E	985.93	468.09
tblEnergyUse	T24NG	8,454.86	7,863.02
tblEnergyUse	T24NG	14,242.58	13,245.60
tblEnergyUse	T24NG	12.77	8.94
tblEnergyUse	T24NG	8.62	6.03
tblEnergyUse	T24NG	17.03	11.92
tblEnergyUse	T24NG	22,422.24	20,852.66

3B-6 (Cont'd)

As you can see in the excerpt above, the non-Title 24 electricity energy intensity ("NT24E"), Title 24 electricity energy intensity ("T24E"), and Title 24 natural gas energy intensity ("T24NG") were each manually reduced. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[9] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "Title-24 energy intensity adjusted to reflect 2019 standards" (Appendix B, pp. 215, 240, 256, 272, 298, 315). Furthermore, regarding the changes to the default energy use values, the DEIR states:

> "In order to account for 2019 Title 24, Part 6 standards, the Title 24 energy intensity factors in CalEEMod were adjusted to account for an estimated 7-percent energy reduction in new-construction nonresidential buildings and 53-percent energy reduction in new-construction residential buildings compared to the 2016 Title 24, Part 6 standards that were in place at the time of the CalEEMod Version 2016.3.2 model release (CEC 2020)" (p. 3.3-17).

However, these justifications remain insufficient. Simply because the 2019 Title 24 standards *expect* a reduction in building energy consumption does not *guarantee* that these reductions would be implemented locally on the Project site. Absent additional information demonstrating that these reductions would be achieved through the implementation, monitoring, and enforcement of energy-related mitigation measures, we are unable to verify the revised energy use values inputted into the model.

These unsubstantiated reductions present an issue, as CalEEMod uses the energy use values to calculate the Project's emissions associated with building electricity and non-hearth natural gas usage.[10] By including unsubstantiated reductions to the default energy use values, the models may underestimate

[9] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9
[10] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 43

the Project's energy-source operational emissions and should not be relied upon to determine Project significance.

3B-6 (Cont'd)

Incorrect Application of Tier 4 Final Mitigation

Review of the CalEEMod output files demonstrates that the "WRTP Specific Plan EIR" model assumes that the Project's off-road construction equipment fleet would meet Tier 4 Final emissions standards (see excerpts below) (Appendix B, pp. 3-4, 35-36, 67-68, 108, 140, 172).

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

3B-7

As you can see in the excerpt above, the model assumes that 30 pieces of off-road construction equipment would meet Tier 4 Final emission standards. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[11] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is:

> "Construction mitigation of equipment that meets Tier 3 or better emissions standards, water exposed areas at least twice daily, reduced vehicle speed to 15mph, and clean paved roadways" (Appendix B, pp. 3, 35, 67, 107, 139, 171).

[11] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

Furthermore, the DEIR incorporates Mitigation Measure ("MM") 3.3-2b, which states:

> "Construction contractors shall adhere to the following requirements:
>
> a. Maintain all construction equipment properly according to manufacturer's specifications.
> b. Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
> c. Comply with the State On-Road Regulation by using on-road heavy-duty equipment that meet or exceed CARB's *Tier 4* standard for *on-road* heavy-duty diesel engines" (emphasis added) (p. 0-12).

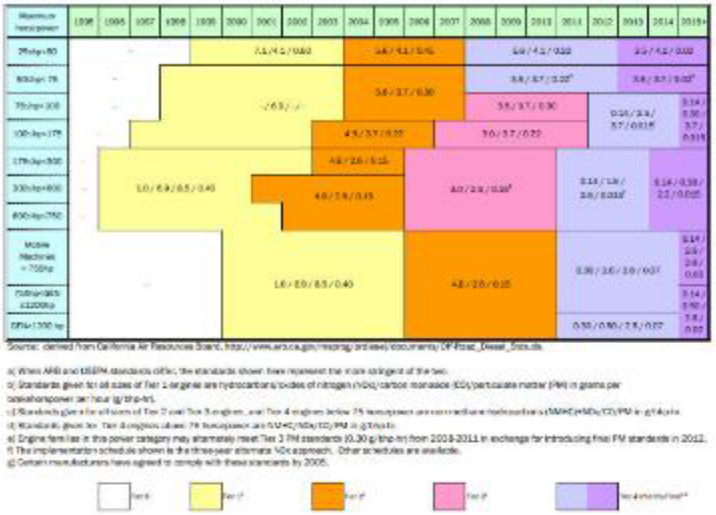
313-7 (Cont'd)

However, the inclusion of Tier 4 Final emission standards remain unsupported for two reasons.

First, MM 3.3-2b requires only *on-road* heavy-duty diesel engines to meet or exceed Tier 4 emissions standards. As such, the model's assumption that the Project's *off-road* construction equipment fleet would meet Tier 4 Final emissions standards is incorrect.

Second, MM 3.3-2b fails to specify that the Project would require the more efficient Tier 4 *Final* emission standards. The United States Environmental Protection Agency ("U.S. EPA") has slowly adopted more stringent standards to lower the emissions from off-road construction equipment. Since 1994, Tier 1, Tier 2, Tier 3, Tier 4 *Interim*, and Tier 4 *Final* construction equipment have been phased in over time. Tier 4 *Final* represents the *cleanest* burning equipment and therefore has the lowest emissions compared to other tiers, including Tier 4 *Interim* equipment (see excerpt below):[12]

[12] "San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, *available at:* https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf, p. 6



3B-7 (Cont'd)

As demonstrated in the figure above, Tier 4 *Interim* equipment has higher emission levels than Tier 4 *Final* equipment. Therefore, by modeling construction emissions assuming a full Tier 4 *Final* equipment fleet, the DEIR fails to account for higher emissions that may occur as a result of the use of Tier 4 *Interim* equipment. Since MM 3.3-2b fails to specify whether the Project would use Tier 4 *Interim* or Tier 4 *Final* equipment, it is incorrect to model emissions assuming that the more efficient Tier 4 *Final* equipment would be implemented. Until the DEIR demonstrates that the Project requires all *off-road* construction equipment to meet or exceed Tier 4 *Final* emissions standards, the DEIR's modeling should not be relied upon to determine Project significance.

Failure to Implement All Feasible Mitigation to Reduce Emissions

As discussed above, the DEIR's air quality analysis relies upon an incorrect and unsubstantiated air model to determine the significance of the Project's criteria air pollutant emissions. However, despite the DEIR's reliance upon a flawed air model, the Project's construction-related and operational criteria air pollutant emissions estimates indicate a significant air quality impact. Specifically, the DEIR concludes that the Project's construction-related PM_{10}, as well as operational ROG, NO_x, and PM_{10}, emissions would exceed the applicable YSAQMD thresholds (see excerpts below) (p. 3.3-29, Table 3.3-4; p. 3.3-30, Table 3.3-5).

3B-8

Table 3.3-4. Mitigated Maximum Criteria Air Pollutant and Precursor Construction-Related Emissions[1]

Emissions Source and Threshold Consideration	ROG Emissions (tons per year)	NO_x Emissions (tons per year)	ROG Emissions (pounds per day)	NO_x Emissions (pounds per day)	$PM_{2.5}$ Emissions (pounds per day)	PM_{10} Emissions (pounds per day)
WRTP Specific Plan Area + Off-site South Regional Pond Development in the Year 2021 [2]	2	5	14	41	23	135.0
Caltrans Off-site Improvement Area	0.3	0.6	5	52	12	37
YSAQMD Threshold of Significance	10	10	-	-	-	80
Exceeds Threshold?	No	No	NA	NA	NA	Yes

Table 3.3-5. Mitigated Maximum Criteria Air Pollutant and Precursor Operations-Related Emissions[1]

Emissions Source and Threshold Consideration	ROG Emissions (tons per year)	NO_x Emissions (tons per year)	ROG Emissions (pounds per day)	NO_x Emissions (pounds per day)	$PM_{2.5}$ Emissions (pounds per day)	PM_{10} Emissions (pounds per day)
Area	22	1	163	29	76	76
Energy	0.3	3	2	14	1	1
Mobile	5	52	37	340	49	179
Total Operational Emissions [2]	27	56	202	383	126	256
YSAQMD Threshold of Significance	10	10	-	-	-	80
Exceeds Threshold?	Yes	Yes	NA	NA	NA	Yes

3B-8 (Cont'd)

As a result, the DEIR concludes that the Project's construction-related and operational criteria air pollutant emissions would be significant-and-unavoidable (p. 3.3-30 - 3.3-31). However, while we agree that the Project's operational criteria air pollutant emissions would result in a significant air quality impact, the DEIR's conclusion that these impacts are "significant and unavoidable" is incorrect. According to CEQA Guidelines § 15096(g)(2):

> "When an EIR has been prepared for a project, the Responsible Agency shall not approve the project as proposed if the agency finds any feasible alternative or feasible mitigation measures within its powers that would substantially lessen or avoid any significant effect the project would have on the environment."

As you can see, an impact can only be labeled as significant and unavoidable after *all available, feasible mitigation* is considered. Here, while the DEIR includes Mitigation Measures ("MM(s)") 3.3-2a through 3.3-2d, the DEIR fails to implement *all feasible* mitigation (p. 0-11 – 0-12). Therefore, the DEIR's conclusion that the Project's air quality impacts are significant-and-unavoidable is unsubstantiated. To reduce the Project's air quality impacts to the maximum extent possible, additional feasible mitigation measures should be incorporated, such as those suggested in the section of this letter titled "Feasible Mitigation Measures Available to Reduce Emissions." Thus, the Project should not be approved until an updated EIR is prepared, including updated, accurate air modeling, as well as incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

Updated Analysis Indicates Additional Significant Air Quality Impact

In an effort to more accurately estimate the Project's construction-related emissions, we prepared an updated CalEEMod model, using the Project-specific information provided by the DEIR. In our updated model, we omitted the unsubstantiated changes to the default percent paved values and excluded the Tier 4 Final off-road equipment mitigation.

Our updated analysis estimates that the Project's construction-related NO_x emissions exceed the applicable YSAQMD threshold of 10 tons per year ("tons/year"), as referenced by the DEIR (see table below) (p. 3.3-29).

Model	NO_x
DEIR Construction	5
SWAPE Construction	40.50
% Increase	710%
YSAQMD Threshold (tons/year)	**10**
Threshold Exceeded?	***Yes***

As you can see in the excerpt above, the Project's construction-related NO_x emissions, as estimated by SWAPE, increase by approximately 710% and exceed the applicable YSAQMD significance threshold. Thus, our model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the DEIR. As a result, an updated EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the surrounding environment.

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Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

Regarding the potential health risk impacts associated with construction and operation of the Specific Plan, the DEIR implements Mitigation Measure ("MM") 3.3-3c, which states:

> "For projects with the potential to generate substantial TAC emissions or expose sensitive receptors to substantial TAC pollutant concentrations, the City will require a site-specific analysis for construction and/or operational activities, and appropriate mitigation, as necessary, to ensure that sensitive receptors are not exposed to substantial pollutant concentrations" (p. 3.3-41).

As demonstrated in the excerpt above, MM 3.3-3c requires future projects with the potential of generating substantial toxic air contaminant ("TAC") emissions to conduct construction and operational health risk analyses ("HRA(s)"). As a result, the DEIR states:

> "Implementation of Mitigation Measure 3.3-3c would ensure that future development that could generate TAC emissions during operations would evaluate and mitigate TAC emissions to ensure that sensitive receptors are not exposed to substantial TAC concentrations. This evaluation and mitigation design is only possible once project-specific details for the TAC-generating use and the sensitive receptors are known. With the feasible actions outlined that

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have been demonstrated to substantially reduce exposure to TAC emissions and the clear performance standards included in this mitigation, with implementation of mitigation, this impact would be reduced to a **less-than-significant** level" (p. 3.3-43).

3B-10 (Cont'd)

However, the DEIR's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is insufficient, as the DEIR fails to define the criteria that requires future development to prepare construction and operational HRAs. Rather, the DEIR vaguely claims that "projects with the potential to generate substantial TAC emissions" will be required to prepare site-specific analyses. However, without defining the Project conditions that would result in substantial TACs, the DEIR fails to ensure that all future development would make a reasonable effort to connect Project-generated TAC emissions to the potential health risks posed to nearby, sensitive receptors. As such, we cannot verify that the DEIR is consistent with CEQA's requirement to correlate the increase in emissions generated by construction and operation of the Specific Plan with the potential adverse impacts on human health.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Emissions

The DEIR relies upon the Project's consistency with the City's Climate Action Plan ("CAP") in order to conclude that the Project would result in a less-than-significant greenhouse gas ("GHG") impact (p. 3.5-26). Specifically, the DEIR states:

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> "The WRTP Specific Plan is consistent with the City's 2035 CAP, and the CAP identifies reduction measures that would achieve reductions that would, based on substantial evidence, avoid a cumulatively considerable contribution to the significant cumulative impact of global climate change. Therefore, as provided by CEQA Guidelines section 15183.5(b), the WRTP Specific Plan would not result in an incremental contribution to a cumulative effect and no additional CEQA review is required" (p. 3.5-26).

However, review of the City's CAP reveals that the Project is inconsistent with numerous measures, including but not limited to those listed below:

City of Woodland Hills CAP Compliance Checklist[13]	
Measure	**Consistency**
Energy	
E-1 Lighting Efficiency Upgrades *Require that new construction include LED lights, solar tubes or skylights in windowless internal rooms, and consideration of room orientation to maximize the use of natural lighting.*	Here, the Compliance Checklist states: "Per the Design Standards and Design Guidelines contained in WRTP Specific Plan Section 3.5.12 for all residential district zones, standard D.4. states that home and building design and placement should take advantage of passive solar opportunities. In addition, standard B.1. of the Design Standards and Design Guidelines contained

[13] "Final 2035 Climate Action Plan." City of Woodland, May 2017, *available at:* https://www.cityofwoodland.org/DocumentCenter/View/834/Climate-Action-Plan-PDF, p. 5-4.

in WRTP Specific Plan Section 3.5.3, for all zones within the Research and Technology Park District, states that "[a] comprehensive approach to energy conservation should be employed in individual projects (new construction and/or expansion), in ongoing operations and use, as well as in collaboration with other campus-wide initiatives that may be developed, including the following strategies:" and goes on to identify suggested strategies including the design of work places to support direct access to natural light for as many occupants as possible and the use of energy-efficient appliances and lighting that meet, at a minimum, CalGreen Code Tier 1 standards." (p. 3.5-22, Table 3.5-2).

However, this response is insufficient. According to the City's CAP:

> "To be determined consistent with the CAP, a project must demonstrate that it is included in the growth projections upon which the CAP modeling is based and that *it incorporates applicable strategies and measures from the CAP as binding and enforceable components of the project*. Symbols used in the listings of actions in Chapters 4A-4F are intended to help identify applicable strategies and actions" (emphasis added).[14]

Thus, the applicable strategies included in the City's CAP should be binding and enforceable components of the Project. However, while the Compliance Checklist states that the Project would "take advantage of passive solar opportunities," apply a comprehensive approach to energy conservation, and meet CalGreen Code Tier 1 standards, the DEIR fails to include these actions as mitigation measures. As a result, these actions are not binding and enforceable components of the Project. According to the AEP *CEQA Portal Topic Paper* on mitigation measures:

> "While not "mitigation", a good practice is *to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP)*. Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, *it is easy for someone not involved in the original environmental process to approve a change to the*

3B-11 (Cont'd)

[14] "Final 2035 Climate Action Plan." City of Woodland, May 2017, *available at:* https://www.cityofwoodland.org/DocumentCenter/View/834/Climate-Action-Plan-PDF, p. 5-4.

	project that could eliminate one or more of the design features without understanding the resulting environmental impact" (emphasis added).[15] As you can see in the excerpt above, project design features are not mitigation measures and *may be eliminated from the Project's design*. Here, as the DEIR fails to require these actions via mitigation, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
E-2 Appliance/Equipment Upgrades *Support/promote group purchasing programs for discounted energy-efficient appliance and equipment replacements. Promote residential programs such as PG&E's Energy Savings Assistance Program to help low-income homeowners and renters manage energy use and energy costs through free or low-cost upgrades to more energy-efficient appliances, lighting, and building features. Conduct education and outreach to promote rebates, incentives, and other programs as they become available, and use available information on rebates used by consumers to determine where to focus education and outreach. Provide information on equipment upgrade benefits, rebates, and energy-efficiency assistance from Yolo Energy Watch and other programs as part of the business license renewal process.*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
E-3 Comprehensive Building Efficiency *Promote sustainable construction and development practices contained in the CalGreen Code, such as using cool roofs, vegetation, and permeable or other special pavements where appropriate to reduce heat-island effects on and around buildings.*	Here, the Compliance Checklist states: "See consistency discussion for CAP Strategy E-1. An additional energy conservation strategy provided in Section 3.5.3 of the WRTP Specific Plan includes the use of street trees, shading devices, cool pavements in parking lots, and cool roofs for all zones within the Research and Technology Park District, to reduce heat gain and reduce the urban heat island effect. Similarly, standard D.1. of WRTP Specific Plan Section 3.5.12 for all residential district zones encourages '[e]nergy conservation strategies including window shading devices, selection of colors to reduce heat gain, energy efficient case windows, cool roofs, high-quality insulation and radiant

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[15] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.

	barriers, solar panels, and other features'" (p. 3.5-22, Table 3.5-2). However, this response is insufficient. As previously discussed, in order to determine consistency with the City's CAP, the applicable strategies and measures included in the City's CAP must be binding and enforceable components of the Project. However, while the Compliance Checklist claims that the Project includes the use of street trees, shading devices, cool pavements in parking lots, and cool roofs, as well as encourages energy conservation strategies, the DEIR fails to include these actions as mitigation measures. As previously discussed, project design features are not mitigation measures and *may be eliminated from the Project's design*. As the DEIR fails to require these actions via mitigation, these actions are not binding and enforceable components of the Project. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
E-4 Improved Building Temperature Controls *Encourage innovative site designs and building orientations for new construction that incorporate passive and active solar designs and natural cooling techniques. Require that natural temperature-control factors, such as cross ventilation, wind protection, and shade, be considered in site and building design for new construction.*	Here, the Compliance Checklist states: "See consistency discussion for CAP Strategy E-3" (p. 3.5-22, Table 3.5-2). However, this response is insufficient. As previously discussed, in order to determine consistency with the City's CAP, the applicable strategies and measures included in the City's CAP must be binding and enforceable components of the Project. However, while the Compliance Checklist claims that the Project includes the use of street trees, shading devices, cool pavements in parking lots, and cool roofs, as well as encourages energy conservation strategies, the DEIR fails to include these actions as mitigation measures. As previously discussed, project design features are not mitigation measures and *may be eliminated from the Project's design*. As the DEIR fails to require these actions via mitigation, these actions are not binding and enforceable components of the Project. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
E-5 Energy Conservation Education *Conduct or promote competitions and rewards for reducing household energy use. Promote recognition programs for energy-efficient businesses. Provide information on energy conservation, the benefits of energy-efficiency upgrades, rebates, and energy-*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.

3B-11 (Cont'd)

efficiency assistance from Yolo Energy Watch and other programs as part of the business license renewal process. Provide information to educate the public on the connection between water conservation and energy conservation. Work with PG&E and other organizations as appropriate to establish a pilot program that provides customers with access to real-time data on energy use and uses analytical software that provides information about different energy loads, "vampire" appliances, and anomalies in energy use. Partner with Yolo Energy Watch, PG&E, and other organizations to conduct public outreach and education campaigns to encourage energy conservation.	
E-6 Renewable Energy Generation and Procurement *Encourage initial residential sizing of solar installations at 3 kW or larger to accommodate EV charging and achieve net zero carbon footprint without future need to increase inverter. Increase the percentage of homes in new development that are solar ready and/or that have solar water heaters, up to 100% by 2020.*	Here, the Compliance Checklist states: "WRTP Specific Plan standard D.1 of Section 3.5.12 states that "[a]ll housing unites shall be pre-wired for electric vehicle and solar PV systems." In addition, Specific Plan Policy 2.2.3(3) requires all residential development provide EV-capable facilities in all garages and parking facilities. In addition, Chapter 3 of the WRTP Specific Plan contains sustainable design standards and design guidelines, including requiring that all development strives to meet net zero energy consumption through incorporation of conservation measures above Title 24 standards" (p. 3.5-22, Table 3.5-2). However, this response is insufficient. As previously discussed, in order to determine consistency with the City's CAP, the applicable strategies and measures included in the City's CAP must be binding and enforceable components of the Project. However, while the Compliance Checklist claims that "[a]ll housing unites shall be pre-wired for electric vehicle and solar PV systems," "Specific Plan Policy 2.2.3(3) requires all residential development provide EV-capable facilities in all garages and parking facilities," and "the WRTP Specific Plan contains sustainable design standards and design guidelines," the DEIR fails to include these actions as mitigation measures. As previously discussed, project design features are not mitigation measures and *may be eliminated from the Project's design*. As the DEIR fails to require these actions via mitigation, these actions are not binding and enforceable components of the Project. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
Transportation and Land Use	

3B-11 (Cont'd)

T/LU-4 Reduced Motor Vehicle Trips *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. Promote the Department of Housing and Urban Development Location Efficient Mortgage (LEM) program and similar programs that assist home buyers in purchasing homes that meet criteria for proximity to services and transit systems. 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. 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.*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
T/LU-5 Increased Mass Transit Use, Walking, and Bicycling *Provide a reduction of parking requirements to employers who effectively plan for and implement programs for alternative commute transportation. Require new multi-family developments to provide secure bicycle storage options and/or bicycle-share programs.*	Here, the Compliance Checklist states: "Standard G.6 of WRTP Specific Plan Section 3.5.3 provides for reduced parking demand, stating that "Projects shall demonstrate that parking reduction strategies have been incorporated to reduce on-site parking demand through Transportation Demand Management strategies such as but not limited to the following: Parking cash-out for employees; Subsidized transit passes or car sharing programs; dedicated parking spaces near building entrances for rideshare and carpools; guaranteed ride home program; alternative work week and flex-time schedules; telecommuting or work-at-home programs; dedicated employee housing; compliance with City VMT/TDM ordinance, as available; and participation in City VMT fee program, as available" (p. 3.5-23, Table 3.5-2). However, this response is insufficient. As previously discussed, in order to determine consistency with the City's CAP, the applicable strategies and measures included in the City's CAP must be binding and enforceable components of the Project. However, while the Compliance Checklist claims that "Standard G.6 of WRTP Specific Plan Section 3.5.3 provides for reduced parking demand," the DEIR fails to include this action as a mitigation measure. As previously discussed, project design features are not mitigation measures and *may be eliminated from the Project's design*. As the DEIR fails to require this action via

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	mitigation, this action is not a binding and enforceable component of the Project. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
T/LU-6 Reduced Vehicle Idling and Other Equipment Emissions *Promote Yolo-Solano Air Quality Management District rebates for reducing the use of gas-powered landscape equipment. Identify businesses with fleet vehicles that are subject to state idling restrictions and provide information to promote compliance with these requirements. Publicize information on idling-time regulations to promote citizen awareness and assistance in advocating for compliance. Conduct a study and prepare an implementation plan as appropriate for installing roundabouts at intersections or using other traffic control mechanisms that maintain or improve traffic safety while reducing idling time for vehicles. Encourage drive-through restaurants, pharmacies, and other drive-through services to post requests or requirements for vehicle engines to be shut off during extended waiting times.*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
T/LU-7 Increased Use Of Alternative-Fuel Vehicles *Encourage developers to include EV charging infrastructure in new residential developments.*	Here, the Compliance Checklist states: "WRTP Specific Plan standard D.1 of Section 3.5.12 states that "[a]ll housing units shall be pre-wired for electric vehicle and solar PV systems." In addition, Specific Plan Policy 2.2.3(3) requires that all residential development provide EV-capable facilities in all garages and parking facilities" (p. 3.5-23, Table 3.5-2). However, this response is insufficient. As previously discussed, in order to determine consistency with the City's CAP, the applicable strategies and measures included in the City's CAP must be binding and enforceable components of the Project. However, while the Compliance Checklist claims that "[a]ll housing units shall be pre-wired for electric vehicle and solar PV systems," and "Policy 2.2.3(3) requires that all residential development provide EV-capable facilities in all garages and parking facilities," the DEIR fails to include these actions as mitigation measures. As previously discussed, project design features are not mitigation measures and *may be eliminated from the Project's design*. As the DEIR fails to require these actions via mitigation, these actions are not binding and enforceable components of the Project.

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	As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
Urban Forestry and Open Space	
UF-2 Increased Tree Planting *Require home construction in new developments to include two shade trees per home on the east, west, or south face of the home to provide energy savings, with trees located to prevent interference with solar Photo-Voltaic production.*	Here, the Compliance Checklist states: "WRTP Specific Plan Policy E.4 of Section 3.5.12 states that "[t]he design and location of trees and landscaping for homes should consider opportunities for solar access and solar panels, as well as, shading and ventilation on hot summer months" (p. 3.5-23, Table 3.5-2). However, this response is insufficient. As previously discussed, in order to determine consistency with the City's CAP, the applicable strategies and measures included in the City's CAP must be binding and enforceable components of the Project. However, while the Compliance Checklist indicates that, per WRTP Specific Plan Policy E.4 of Section 3.5.12, "[t]he design and location of trees and landscaping for homes should consider opportunities for solar access and solar panels, as well as, shading and ventilation on hot summer months," the DEIR fails to include this action as a mitigation measure. As previously discussed, project design features are not mitigation measures and *may be eliminated from the Project's design*. As the DEIR fails to require this action via mitigation, this action is not a binding and enforceable component of the Project. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
UF-3 Maintenance of Existing Trees *Make proper tree maintenance a focus of public outreach efforts for property owners, renters, and landscaping professionals to ensure awareness of City tree maintenance guidelines and best management practices for tree care. Provide business property owners with information on tree benefits and tree maintenance through the Chamber of Commerce and other community organizations. Prioritize maintenance of mature trees that already provide the highest energy- and GHG-reduction benefits. Adopt and implement a policy of no net loss of City-maintained trees: Every City tree removed or lost due to disease or other cause must be replaced within one year, either on the basis of trunk diameter or based on offsetting the canopy area of any tree removed with the aggregate canopy area of the*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.

33-11 (Cont'd)

replacement tree(s), estimated at two years following planting. Support code enforcement efforts where needed for ensuring the maintenance of trees and other landscaping in commercial developments. Update the City of Woodland Heritage Tree Ordinance to incorporate best practices and national standards for care of Woodland's heritage trees.	
Water and Solid Waste	
W/W-1 Increased Water Conservation *Continue to promote water conservation through targeted leakdetection assistance, education on indoor water-conserving devices and practices, landscape water reduction guidance, web and printed materials, and workshops. Provide information on water use patterns and comparative water use in utility bills to help water users understand consumption patterns and adjust water use. Encourage the conversion of turf to lowwater plantings in residential and commercial landscapes through workshops, tours, demonstrations, and literature. Work with real estate agents to provide new homeowners with information on energy and water efficiency tips and assistance programs and to promote using voluntary water audits that can be used in marketing properties. Demonstrate the use of attractive, drought-tolerant native landscaping at City-owned properties, including transitioning street plantings from grass to water-efficient ground covers or other drought-resistant plants. Work with Yolo Energy Watch and other programs to educate the public about the connection between water use and energy use.*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.
W/W-2 Solid Waste Reduction and Waste Processing Improvements *Work with multifamily complex managers to educate tenants about recycling, significantly increase multifamily waste diversion, and reduce contamination of recyclables. Continue to actively promote backyard composting. Encourage consumers to consider product life cycles when purchasing goods and to select those that will not eventually contribute to landfill waste. 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. Continue to promote a high level of recycling of construction and demolition debris. Establish residential and commercial programs for the collection of food waste for largescale processing as*	Here, the Compliance Checklist fails to mention or address this measure whatsoever. As a result, we are unable to verify the Project's consistency with the City's CAP, and the less-than-significant impact conclusion should not be relied upon.

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compost or into biofuels. 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. Support policies to require reductions in packaging materials used for consumer products. Explore opportunities to assist Yolo County in pursuing project implementation financing (e.g., federal/state grants) of pilot project opportunities to test advanced methane capture technology and/or landfill waste operational practices.	

3B-11 (Cont'd)

As the above table indicates, the DEIR fails to provide sufficient information and analysis to determine Project consistency with all the measures required by the City's CAP. As a result, we cannot verify that the Project is consistent with the City's CAP, and the DEIR's less-than-significant GHG impact conclusion should not be relied upon. We recommend that an updated EIR include further information and analysis demonstrating the Project's consistency with the City's CAP.

Feasible Mitigation Measures Available to Reduce Emissions

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Our analysis demonstrates that the Project would result in potentially significant air quality, health risk, and GHG impacts that should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in the Department of Justice Warehouse Project Best Practices document.[15] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier 4 *Final* engines, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
- Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.

[15] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at*: https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf, p. 6.

- Forbidding idling of heavy equipment for more than two minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Providing information on transit and ridesharing programs and services to construction employees. Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.

Examples of measures to mitigate air quality and greenhouse gas impacts from operation include:

- Requiring that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.
- Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the air district, and the building manager.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Constructing electric truck charging stations proportional to the number of dock doors at the project.
- Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
- Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.

3B-12 (Cont'd)

- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building's projected energy needs.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Achieving certification of compliance with LEED green building standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARBapproved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants to use carriers that are SmartWay carriers.
- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

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These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An updated EIR should be prepared to include all feasible mitigation measures, as well as include updated air quality, health risk, and GHG analyses to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or

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otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

3B-13 (Cont'd)

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

Attachment A: CalEEMod Output Files
Attachment B: Matt Hagemann C.V.
Attachment C: Paul E. Rosenfeld C.V.

WRTP Specific Plan EIR (Construction Only)

Yolo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	320.25	1000sqft	1.00	320,250.00	0
Research & Development	185.74	1000sqft	10.68	185,740.00	0
Industrial Park	302.96	1000sqft	17.40	302,960.00	0
City Park	6.58	Acre	6.58	286,407.00	0
Apartments Mid Rise	130.00	Dwelling Unit	6.40	130,000.00	372
Condo/Townhouse	157.00	Dwelling Unit	13.05	157,000.00	449
Single Family Housing	132.00	Dwelling Unit	21.98	237,600.00	378
Regional Shopping Center	17.88	1000sqft	2.05	17,880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.6	**Precipitation Freq (Days)**	51
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Consistent with DEIR's model.

Construction Phase - Consistent with DEIR's model.

On-road Fugitive Dust - See SWAPE comment about percent paved values.

Grading -

Architectural Coating - Consistent with DEIR's model.

Vehicle Trips - Construction only.

Road Dust -

Woodstoves - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - See SWAPE comment regarding Tier 4 emission standards. Fugitive dust construction-related mitigation consistent with DEIR's model.

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WRTP Specific Plan EIR (Construction Only) - Yolo County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	10.00
tblArchitecturalCoating	EF_Parking	150.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	10.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	14
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	110.00	260.00
tblConstructionPhase	NumDays	1,550.00	260.00
tblConstructionPhase	NumDays	155.00	260.00
tblConstructionPhase	NumDays	110.00	260.00
tblConstructionPhase	NumDays	50.00	250.00
tblLandUse	LandUseSquareFeet	286,624.80	286,407.00
tblLandUse	LotAcreage	7.35	1.00
tblLandUse	LotAcreage	4.26	10.68
tblLandUse	LotAcreage	6.96	17.40
tblLandUse	LotAcreage	3.42	6.40
tblLandUse	LotAcreage	9.81	13.05
tblLandUse	LotAcreage	42.86	21.98
tblLandUse	LotAcreage	0.41	2.05

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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.6449	18.7822	14.0583	0.0355	103.9986	0.7611	104.4577	11.9232	0.7040	12.6272	0.0000	3,190.150 9	3,190.150 9	0.5816	0.0000	3,204.690 4
Maximum	2.6449	18.7822	14.0583	0.0355	103.9986	0.7611	104.4577	11.9232	0.7040	12.6272	0.0000	3,190.150 9	3,190.150 9	0.5816	0.0000	3,204.690 4

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	2.6449	18.7822	14.0583	0.0355	65.0957	0.7611	65.8568	8.0470	0.7040	8.7510	0.0000	3,190.148 8	3,190.148 8	0.5816	0.0000	3,204.688 3
Maximum	2.6449	18.7822	14.0583	0.0355	65.0957	0.7611	65.8568	8.0470	0.7040	8.7510	0.0000	3,190.148 8	3,190.148 8	0.5816	0.0000	3,204.688 3

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.22	0.00	36.85	32.51	0.00	30.70	0.00	0.00	0.00	0.00	0.00	0.00

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WRTP Specific Plan EIR (Construction Only) - Yolo County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	5.3099	5.3099
2	4-1-2021	6-30-2021	5.3531	5.3531
3	7-1-2021	9-30-2021	5.4120	5.4120
		Highest	5.4120	5.4120

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	34.2347	0.6305	39.0684	0.0659		4.9279	4.9279		4.9279	4.9279	470.8869	128.4274	600.2883	0.4812	0.0349	622.7197
Energy	0.1249	1.1128	0.7647	6.8200e-003		0.0863	0.0863		0.0863	0.0863	0.0000	4,403.604 3	4,403.604 3	0.1689	0.0523	4,423.361 9
Mobile	2.6087	19.5585	27.1454	0.1114	488.1068	0.0925	488.1993	49.9373	0.0869	50.0243	0.0000	10,293.84 52	10,293.84 52	0.4523	0.0000	10,305.15 16
Waste						0.0000	0.0000		0.0000	0.0000	197.5263	0.0000	197.5263	11.6971	0.0000	490.3541
Water						0.0000	0.0000		0.0000	0.0000	79.3395	450.5511	529.8905	8.0688	0.1942	798.4279
Total	36.9683	21.2027	65.9985	0.1821	488.1068	5.1066	493.2134	49.9373	5.1011	55.0384	747.1317	15,277.42 79	16,024.55 96	20.8641	0.2814	16,630.01 41

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(Cont'd)

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	34.2347	0.5305	38.0694	0.0839		4.9279	4.9279		4.9279	4.9279	470.0859	129.4274	600.2985	0.4812	0.0349	622.7107
Energy	0.1248	1.1129	0.7947	6.8200e-003		0.0863	0.0863		0.0863	0.0863	0.0000	4,403.6043	4,403.6043	0.1889	0.0823	4,423.3619
Mobile	2.8097	19.5585	27.1454	0.1114	466.1069	0.0925	466.1995	49.9873	0.0869	50.0743	0.0000	10,283.8402	10,283.8402	0.4523	0.0000	10,305.1516
Waste						0.0000	0.0000		0.0000	0.0000	197.9263	0.0000	197.9263	11.6971	0.0000	490.3541
Water						0.0000	0.0000		0.0000	0.0000	78.3395	450.5511	528.8906	8.0666	0.1942	788.4279
Total	36.9693	21.2027	65.9985	0.1821	466.1068	5.1066	471.2134	49.9873	5.1011	55.0884	747.1317	15,277.4279	16,024.5596	20.3841	0.2814	16,830.0141

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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3.0 Construction Detail

Construction Phase

WRTP Specific Plan EIR (Construction Only) - Yolo County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	12/30/2021	5	260	
2	Grading	Grading	1/1/2021	12/30/2021	5	260	
3	Building Construction	Building Construction	1/1/2021	12/30/2021	5	260	
4	Paving	Paving	1/1/2021	12/30/2021	5	260	
5	Architectural Coating	Architectural Coating	1/1/2021	12/30/2021	5	260	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 650

Acres of Paving: 0

Residential Indoor: 1,062,315; Residential Outdoor: 354,105; Non-Residential Indoor: 1,240,245; Non-Residential Outdoor: 413,415; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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WRTP Specific Plan EIR (Construction Only) - Yolo County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

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Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	669.00	227.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	134.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3486	0.0000	2.3486	1.2910	0.0000	1.2910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5055	5.2646	2.7501	4.9400e-003		0.2658	0.2658		0.2445	0.2445	0.0000	434.6643	434.6643	0.1406	0.0000	438.1788
Total	0.5055	5.2646	2.7501	4.9400e-003	2.3486	0.2658	2.6144	1.2910	0.2445	1.5355	0.0000	434.6643	434.6643	0.1406	0.0000	438.1788

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(Cont'd)

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6800e-003	4.9500e-003	0.0520	1.6000e-004	1.7769	1.1000e-004	1.7770	0.1800	1.0000e-004	0.1801	0.0000	14.5998	14.5998	3.4000e-004	0.0000	14.6083
Total	**7.6800e-003**	**4.9500e-003**	**0.0520**	**1.6000e-004**	**1.7769**	**1.1000e-004**	**1.7770**	**0.1800**	**1.0000e-004**	**0.1801**	**0.0000**	**14.5998**	**14.5998**	**3.4000e-004**	**0.0000**	**14.6083**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3486	0.0000	2.3486	1.2910	0.0000	1.2910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5055	5.2646	2.7501	4.9400e-003		0.2658	0.2658		0.2445	0.2445	0.0000	434.6639	434.6639	0.1406	0.0000	438.1785
Total	**0.5055**	**5.2646**	**2.7501**	**4.9400e-003**	**2.3486**	**0.2658**	**2.6144**	**1.2910**	**0.2445**	**1.5355**	**0.0000**	**434.6638**	**434.6638**	**0.1406**	**0.0000**	**438.1783**

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3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.6800e-003	4.9500e-003	0.0520	1.6000e-004	1.0923	1.1000e-004	1.0924	0.1113	1.0000e-004	0.1114	0.0000	14.5998	14.5998	3.4000e-004	0.0000	14.6083
Total	7.6800e-003	4.9500e-003	0.0520	1.6000e-004	1.0923	1.1000e-004	1.0924	0.1113	1.0000e-004	0.1114	0.0000	14.5998	14.5998	3.4000e-004	0.0000	14.6083

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1275	0.0000	1.1275	0.4676	0.0000	0.4676	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5449	6.0320	4.0142	8.0600e-003		0.2501	0.2501		0.2375	0.2375	0.0000	708.4348	708.4348	0.2291	0.0000	714.1628
Total	0.5449	6.0320	4.0142	8.0600e-003	1.1275	0.2501	1.3856	0.4676	0.2375	0.7050	0.0000	708.4348	708.4348	0.2291	0.0000	714.1628

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3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5300e-003	5.5000e-003	0.0577	1.8000e-004	1.9743	1.2000e-004	1.9744	0.2001	1.1000e-004	0.2002	0.0000	16.2220	16.2220	3.8000e-004	0.0000	16.2314
Total	**5.5300e-003**	**5.5000e-003**	**0.0577**	**1.8000e-004**	**1.9743**	**1.2000e-004**	**1.9744**	**0.2001**	**1.1000e-004**	**0.2002**	**0.0000**	**16.2220**	**16.2220**	**3.8000e-004**	**0.0000**	**16.2314**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1275	0.0000	1.1275	0.4675	0.0000	0.4675	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5449	6.0320	4.0142	8.0600e-003		0.2581	0.2581		0.2375	0.2375	0.0000	708.4339	708.4339	0.2291	0.0000	714.1820
Total	**0.5449**	**6.0320**	**4.0142**	**8.0600e-003**	**1.1275**	**0.2581**	**1.3856**	**0.4675**	**0.2375**	**0.7050**	**0.0000**	**708.4339**	**708.4339**	**0.2291**	**0.0000**	**714.1820**

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3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5300e-003	5.5000e-003	0.0577	1.8000e-004	1.2138	1.2000e-004	1.2138	0.1237	1.1000e-004	0.1238	0.0000	16.2220	16.2220	3.8000e-004	0.0000	16.2314
Total	**8.5300e-003**	**5.5000e-003**	**0.0577**	**1.8000e-004**	**1.2138**	**1.2000e-004**	**1.2138**	**0.1237**	**1.1000e-004**	**0.1238**	**0.0000**	**16.2220**	**16.2220**	**3.8000e-004**	**0.0000**	**16.2314**

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3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2682	2.1548	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.1285	301.1285	0.0727	0.0000	302.9447
Total	**0.2471**	**2.2682**	**2.1548**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.1285**	**301.1285**	**0.0727**	**0.0000**	**302.9447**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0783	3.1080	0.5277	7.9800e-003	16.7199	7.0000e-003	16.7269	1.6027	6.7000e-003	1.6094	0.0000	758.1268	758.1268	0.0365	0.0000	759.0383
Worker	0.2853	0.1840	1.9307	6.0000e-003	66.0408	4.1100e-003	66.0449	6.6916	3.7800e-003	6.6954	0.0000	542.6246	542.6246	0.0127	0.0000	542.9417
Total	**0.3646**	**3.2900**	**2.4584**	**0.0140**	**81.7606**	**0.0111**	**81.7717**	**0.2942**	**0.0105**	**0.3047**	**0.0000**	**1,300.7504**	**1,300.7504**	**0.0492**	**0.0000**	**1,301.9810**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2471	2.2682	2.1548	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.1281	301.1281	0.0727	0.0000	302.9443
Total	**0.2471**	**2.2682**	**2.1548**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.1281**	**301.1281**	**0.0727**	**0.0000**	**302.9443**

3B-14 (Cont'd)

3B-14 (Cont'd)

3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0783	3.1060	0.6277	7.9800e-003	9.6762	7.0000e-003	9.6832	0.9608	6.7000e-003	1.0026	0.0000	758.1268	758.1268	0.0365	0.0000	759.0393
Worker	0.2863	0.1840	1.9307	6.0000e-003	40.5859	4.1100e-003	40.6000	4.1365	3.7800e-003	4.1403	0.0000	542.6248	542.6248	0.0127	0.0000	542.9417
Total	0.3646	3.2900	2.4584	0.0140	50.2721	0.0111	50.2832	5.1323	0.0105	5.1427	0.0000	1,300.7504	1,300.7504	0.0492	0.0000	1,301.9810

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1832	1.6795	1.9049	2.9600e-003		0.0861	0.0861		0.0811	0.0811	0.0000	260.3052	260.3052	0.0842	0.0000	262.4099
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1832	1.6795	1.9049	2.9600e-003		0.0861	0.0861		0.0811	0.0811	0.0000	260.3052	260.3052	0.0842	0.0000	262.4099

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-005	4.1300e-003	0.0433	1.3000e-004	1.4607	9.0000e-005	1.4608	0.1500	8.0000e-005	0.1501	0.0000	12.1665	12.1665	2.6000e-004	0.0000	12.1738
Total	8.4000e-003	4.1300e-003	0.0433	1.3000e-004	1.4607	9.0000e-005	1.4608	0.1500	8.0000e-005	0.1501	0.0000	12.1665	12.1665	2.6000e-004	0.0000	12.1738

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1632	1.6795	1.9049	2.9600e-003		0.0881	0.0881		0.0811	0.0811	0.0000	260.3049	260.3049	0.0842	0.0000	262.4096
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1632	1.6795	1.9049	2.9600e-003		0.0881	0.0881		0.0811	0.0811	0.0000	260.3049	260.3049	0.0842	0.0000	262.4096

3B-14 (Cont'd)

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-003	4.1300e-003	0.0433	1.3000e-004	0.9102	8.0000e-005	0.9103	0.0828	8.0000e-005	0.0828	0.0000	12.1665	12.1665	2.8000e-004	0.0000	12.1736
Total	**8.4000e-003**	**4.1300e-003**	**0.0433**	**1.3000e-004**	**0.9102**	**8.0000e-005**	**0.9103**	**0.0828**	**8.0000e-005**	**0.0828**	**0.0000**	**12.1665**	**12.1665**	**2.8000e-004**	**0.0000**	**12.1736**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0285	0.1995	0.2363	3.9000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	33.1923	33.1923	2.2800e-003	0.0000	33.2492
Total	**0.7400**	**0.1995**	**0.2363**	**3.9000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**33.1923**	**33.1923**	**2.2800e-003**	**0.0000**	**33.2492**

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(Cont'd)

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0571	0.0389	0.3867	1.2000e-003	13.2279	8.2000e-004	13.2287	1.3403	7.6000e-004	1.3411	0.0000	108.6871	108.6871	2.5400e-003	0.0000	108.7507
Total	**0.0571**	**0.0389**	**0.3867**	**1.2000e-003**	**13.2279**	**8.2000e-004**	**13.2287**	**1.3403**	**7.6000e-004**	**1.3411**	**0.0000**	**108.6871**	**108.6871**	**2.5400e-003**	**0.0000**	**108.7507**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.7115					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0285	0.1985	0.2363	3.9000e-004		0.0122	0.0122		0.0122	0.0122	0.0000	33.1923	33.1923	2.2800e-003	0.0000	33.2492
Total	**0.7400**	**0.1985**	**0.2363**	**3.9000e-004**		**0.0122**	**0.0122**		**0.0122**	**0.0122**	**0.0000**	**33.1923**	**33.1923**	**2.2800e-003**	**0.0000**	**33.2492**

3B-14 (Cont'd)

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0571	0.0369	0.3867	1.2000e-003	8.1313	8.2000e-004	8.1321	0.8285	7.6000e-004	0.8293	0.0000	108.6871	108.6871	2.5400e-003	0.0000	108.7507
Total	**0.0571**	**0.0369**	**0.3867**	**1.2000e-003**	**8.1313**	**8.2000e-004**	**8.1321**	**0.8285**	**7.6000e-004**	**0.8293**	**0.0000**	**108.6871**	**108.6871**	**2.5400e-003**	**0.0000**	**108.7507**

3B-14 (Cont'd)

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.8087	19.5595	27.1454	0.1114	466.1098	0.0825	466.1923	49.9375	0.0669	50.0243	0.0000	10,293.84 52	10,293.84 52	0.4523	0.0000	10,305.15 15
Unmitigated	2.8087	19.5595	27.1454	0.1114	466.1098	0.0825	466.1923	49.9375	0.0669	50.0243	0.0000	10,293.84 52	10,293.84 52	0.4523	0.0000	10,305.15 15

3B-14 (Cont'd)

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	864.50	830.70	761.80	2,217,498	2,217,498
City Park	12.44	149.72	110.15	86,036	86,036
Condo/Townhouse	912.17	890.19	759.86	2,328,437	2,328,437
Industrial Park	2,089.22	754.37	221.16	4,049,170	4,049,170
Office Park	3,657.26	525.21	243.39	5,976,060	5,976,060
Regional Shopping Center	763.48	893.48	451.29	1,046,441	1,046,441
Research & Development	1,506.35	352.91	206.17	2,537,477	2,537,477
Single Family Housing	1,256.64	1,308.12	1137.84	3,272,510	3,272,510
Total	11,042.05	5,704.66	3,891.68	21,513,629	21,513,629

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
City Park	10.00	5.00	7.00	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Industrial Park	10.00	5.00	7.00	59.00	28.00	13.00	79	19	2
Office Park	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	54	35	11
Research & Development	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Single Family Housing	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3

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(Cont'd)

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
City Park	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
Condo/Townhouse	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
Industrial Park	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
Office Park	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
Regional Shopping Center	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
Research & Development	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791
Single Family Housing	0.492305	0.039568	0.209718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000759	0.000791

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

WRTP Specific Plan EIR (Construction Only) - Yolo County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,167.0836	3,167.0836	0.1432	0.0296	3,179.4932
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,167.0836	3,167.0836	0.1432	0.0296	3,179.4932
NaturalGas Mitigated	0.1249	1.1128	0.7847	6.6200e-003		0.0863	0.0863		0.0863	0.0863	0.0000	1,236.5207	1,236.5207	0.0237	0.0227	1,243.8867
NaturalGas Unmitigated	0.1249	1.1129	0.7847	6.6200e-003		0.0863	0.0863		0.0863	0.0863	0.0000	1,236.5207	1,236.5207	0.0237	0.0227	1,243.8867

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.69312e+006	8.5400e-003	0.0730	0.0310	4.7000e-004		5.9000e-003	5.9000e-003		5.9000e-003	5.9000e-003	0.0000	84.4814	84.4814	1.6200e-003	1.5500e-003	84.9834
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.8208e+006	0.0152	0.1300	0.0553	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.5178	150.5178	2.8800e-003	2.7600e-003	151.4122
Industrial Park	3.95383e+006	0.0213	0.1938	0.1629	1.1800e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.9807	210.9807	4.0400e-003	3.9700e-003	212.2344
Office Park	7.2953e+006	0.0393	0.3578	0.3004	2.1500e-003		0.0272	0.0272		0.0272	0.0272	0.0000	389.3047	389.3047	7.4600e-003	7.1400e-003	391.6192
Regional Shopping Center	191316	1.0300e-003	9.3600e-003	7.8600e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.2094	10.2094	2.0000e-004	1.9000e-004	10.2700
Research & Development	3.87839e+006	0.0200	0.1800	0.1596	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.8591	206.8591	3.9600e-003	3.7900e-003	208.0864
Single Family Housing	3.45117e+006	0.0186	0.1590	0.0677	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	184.1677	184.1677	3.5500e-003	3.3900e-003	185.2621
Total		**0.1250**	**1.1128**	**0.7847**	**6.8300e-003**		**0.0863**	**0.0863**		**0.0863**	**0.0863**	**0.0000**	**1,236.520 7**	**1,236.520 7**	**0.0237**	**0.0227**	**1,243.808 7**

5.2 Energy by Land Use - NaturalGas

Mitigated

318-14 (Cont'd)

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.58512e+006	8.5400e-003	0.0730	0.0310	4.7000e-004		5.9000e-003	5.9000e-003		5.9000e-003	5.9000e-003	0.0000	84.4914	84.4914	1.6200e-003	1.5500e-003	84.9954
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	2.6208e+006	0.0152	0.1300	0.0553	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.5176	150.5176	2.8800e-003	2.7600e-003	151.4122
Industrial Park	3.95363e+006	0.0213	0.1938	0.1628	1.1600e-003		0.0147	0.0147		0.0147	0.0147	0.0000	210.9807	210.9807	4.0400e-003	3.8700e-003	212.2344
Office Park	7.2953e+006	0.0393	0.3576	0.3004	2.1500e-003		0.0272	0.0272		0.0272	0.0272	0.0000	369.5047	369.5047	7.4600e-003	7.1400e-003	371.6182
Regional Shopping Center	191316	1.0000e-003	9.3800e-003	7.9800e-003	6.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	10.2394	10.2394	2.0000e-004	1.9000e-004	10.2703
Research & Development	3.87859e+006	0.0209	0.1900	0.1596	1.1400e-003		0.0144	0.0144		0.0144	0.0144	0.0000	206.8591	206.8591	3.9600e-003	3.7900e-003	208.0884
Single Family Housing	3.46117e+006	0.0186	0.1680	0.0877	1.0200e-003		0.0129	0.0129		0.0129	0.0129	0.0000	184.1677	184.1677	3.5300e-003	3.3800e-003	185.2621
Total		0.1250	1.1128	0.7847	6.8300e-003		0.0863	0.0863		0.0863	0.0863	0.0000	1,236.520 7	1,236.520 7	0.0237	0.0227	1,243.868 7

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	594513	170.0414	7.6900e-003	1.5800e-003	170.7077
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	984772	281.5720	0.0114	2.3500e-003	282.5677
Industrial Park	2.763e+006	903.7670	0.0365	7.5200e-003	906.9365
Office Park	3.73412e+006	1,086.2869	0.0481	0.0102	1,090.6553
Regional Shopping Center	145722	42.3922	1.9200e-003	4.0000e-004	42.5585
Research & Development	1.63623e+006	476.5790	0.0216	4.4600e-003	478.4463
Single Family Housing	1.15842e+006	336.4162	0.0152	3.1500e-003	337.7353
Total		**3,167.083 6**	**0.1432**	**0.0296**	**3,179.493 2**

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(Cont'd)

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	584513	170.0414	7.6900e-003	1.5900e-003	170.7077
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	864772	251.5720	0.0114	2.3500e-003	252.5577
Industrial Park	2.783e+006	803.7870	0.0363	7.5200e-003	806.9385
Office Park	3.73412e+006	1,086.2569	0.0491	0.0102	1,090.5533
Regional Shopping Center	145722	42.3922	1.9200e-003	4.0000e-004	42.5583
Research & Development	1.65825e+006	476.5790	0.0216	4.4600e-003	478.4483
Single Family Housing	1.15642e+006	336.4152	0.0152	3.1500e-003	337.7333
Total		3,167.0836	0.1432	0.0296	3,179.4932

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(Cont'd)

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	34.2347	0.5305	38.0684	0.0639		4.9278	4.9278		4.9278	4.9278	470.8659	129.4274	600.2933	0.4912	0.0349	622.7187
Unmitigated	34.2347	0.5305	38.0684	0.0639		4.9278	4.9278		4.9278	4.9278	470.8659	129.4274	600.2933	0.4912	0.0349	622.7187

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(Cont'd)

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.9031					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.2607					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	27.9661	0.4845	34.9462	0.0637		4.9106	4.9106		4.9106	4.9106	470.8659	124.3306	595.1964	0.4763	0.0349	617.4985
Landscaping	0.0948	0.0360	3.1221	1.6000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	5.0969	5.0969	4.8400e-003	0.0000	5.2204
Total	34.2347	0.5305	38.0684	0.0639		4.9278	4.9278		4.9278	4.9278	470.8659	129.4274	600.2933	0.4812	0.0349	622.7187

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8031					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	5.2807					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	27.8661	0.4945	34.9482	0.0657		4.9108	4.9108		4.9108	4.9108	470.9659	124.3305	595.1864	0.4765	0.0349	617.4993
Landscaping	0.0848	0.0360	3.1221	1.8000e-004		0.0172	0.0172		0.0172	0.0172	0.0000	5.0969	5.0969	4.9400e-003	0.0000	5.2204
Total	34.2347	0.5305	38.0684	0.0659		4.9278	4.9278		4.9278	4.9278	470.9659	129.4274	600.2933	0.4812	0.0349	622.7197

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(Cont'd)

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	528.8905	8.0866	0.1942	788.4279
Unmitigated	528.8905	8.0866	0.1942	788.4279

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(Cont'd)

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.47002 / 6.5398	21.4689	0.2769	6.6800e-003	30.3724
City Park	0 / 7.83895	7.9826	3.6000e-004	7.0000e-005	8.0138
Condo/Townhouse	10.2292 / 6.44093	25.9134	0.3343	8.0600e-003	36.6805
Industrial Park	70.0595 / 0	152.5088	2.2979	0.0549	208.0786
Office Park	66.9192 / 34.886	143.1762	1.9804	0.0450	203.0848
Regional Shopping Center	1.32442 / 0.811739	3.3315	0.0433	1.0500e-003	4.7255
Research & Development	91.3272 / 0	172.7341	2.9924	0.0716	266.6346
Single Family Housing	9.60033 / 6.42195	21.7070	0.2911	6.9000e-003	30.8397
Total		**528.8905**	**8.0566**	**0.1942**	**788.4279**

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(Cont'd)

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	9.47002 / 5.3599	21.4569	0.2768	6.6900e-003	30.3724
City Park	0 / 7.83895	7.8826	3.6000e-004	7.0000e-005	8.0138
Condo/Townhouse	10.2292 / 6.44883	25.8134	0.3343	8.0800e-003	36.6905
Industrial Park	70.0695 / 0	132.5088	2.2875	0.0548	205.0766
Office Park	56.9192 / 34.998	143.1762	1.8604	0.0450	203.0649
Regional Shopping Center	1.32442 / 0.811739	3.3315	0.0433	1.0500e-003	4.7256
Research & Development	91.3272 / 0	172.7341	2.9824	0.0716	269.6346
Single Family Housing	8.60053 / 5.42195	21.7870	0.2811	6.8000e-003	30.8397
Total		528.8905	8.0666	0.1942	788.4279

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(Cont'd)

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	197.9263	11.6971	0.0000	490.3541
Unmitigated	197.9263	11.6971	0.0000	490.3541

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(Cont'd)

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	59.9	12.1389	0.7174	0.0000	30.0736
City Park	0.67	0.1167	6.8400e-003	0.0000	0.2867
Condo/Townhouse	72.22	14.6600	0.8664	0.0000	36.3196
Industrial Park	375.67	76.2576	4.5067	0.0000	188.9250
Office Park	297.83	60.4568	3.5729	0.0000	149.7792
Regional Shopping Center	18.77	3.8101	0.2252	0.0000	9.4396
Research & Development	14.11	2.8642	0.1693	0.0000	7.0959
Single Family Housing	136.09	27.6230	1.6325	0.0000	68.4348
Total		**197.8263**	**11.6971**	**0.0000**	**490.3541**

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(Cont'd)

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	59.8	12.1389	0.7174	0.0000	30.0735
City Park	0.67	0.1157	6.8400e-003	0.0000	0.2867
Condo/Townhouse	72.22	14.6600	0.8664	0.0000	36.3198
Industrial Park	375.67	76.2576	4.5067	0.0000	188.9253
Office Park	297.83	60.4568	3.5729	0.0000	149.7792
Regional Shopping Center	18.77	3.8101	0.2252	0.0000	9.4395
Research & Development	14.11	2.8642	0.1693	0.0000	7.0959
Single Family Housing	136.08	27.6230	1.6325	0.0000	68.4348
Total		197.9263	11.6971	0.0000	490.3541

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9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

WRTP Specific Plan EIR (Construction Only) - Yolo County, Annual

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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(Cont'd)

WRTP Specific Plan EIR (Construction Only)

Yolo County, Summer

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(Cont'd)

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	320.25	1000sqft	1.00	320,250.00	0
Research & Development	165.74	1000sqft	10.66	165,740.00	0
Industrial Park	302.96	1000sqft	17.40	302,960.00	0
City Park	6.58	Acre	6.58	286,407.00	0
Apartments Mid Rise	130.00	Dwelling Unit	6.40	130,000.00	372
Condo/Townhouse	157.00	Dwelling Unit	13.05	157,000.00	449
Single Family Housing	132.00	Dwelling Unit	21.96	237,600.00	378
Regional Shopping Center	17.88	1000sqft	2.05	17,880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	6.8	**Precipitation Freq (Days)**	54
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

WRTP Specific Plan EIR (Construction Only) - Yolo County, Summer

Project Characteristics -

Land Use - Consistent with DEIR's model.

Construction Phase - Consistent with DEIR's model.

On-road Fugitive Dust - See SWAPE comment about percent paved values.

Grading -

Architectural Coating - Consistent with DEIR's model.

Vehicle Trips - Construction only.

Road Dust -

Woodstoves - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - See SWAPE comment regarding Tier 4 emission standards. Fugitive dust construction-related mitigation consistent with DEIR's model.

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WRTP Specific Plan EIR (Construction Only) - Yolo County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	10.00
tblArchitecturalCoating	EF_Parking	150.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	10.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	14
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	110.00	280.00
tblConstructionPhase	NumDays	1,550.00	280.00
tblConstructionPhase	NumDays	155.00	250.00
tblConstructionPhase	NumDays	110.00	250.00
tblConstructionPhase	NumDays	80.00	280.00
tblLandUse	LandUseSquareFeet	288,624.80	288,407.00
tblLandUse	LotAcreage	7.35	1.00
tblLandUse	LotAcreage	4.26	10.69
tblLandUse	LotAcreage	6.96	17.40
tblLandUse	LotAcreage	3.42	8.40
tblLandUse	LotAcreage	9.81	13.05
tblLandUse	LotAcreage	42.86	21.98
tblLandUse	LotAcreage	0.41	2.00

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2.0 Emissions Summary

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(Cont'd)

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	20.7584	143.9537	110.9166	0.2800	930.4823	5.8533	936.3356	105.0043	5.4139	110.4182	0.0000	27,726.4314	27,726.4314	4.9303	0.0000	27,849.8900
Maximum	20.7584	143.9537	110.9166	0.2800	930.4823	5.8533	936.3356	105.0043	5.4139	110.4182	0.0000	27,726.4314	27,726.4314	4.9303	0.0000	27,849.8900

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	20.7584	143.9536	110.9166	0.2800	582.1107	5.8533	587.9640	70.0387	5.4139	75.4526	0.0000	27,726.4314	27,726.4314	4.9303	0.0000	27,849.8699
Maximum	20.7584	143.9536	110.9166	0.2800	582.1107	5.8533	587.9640	70.0387	5.4139	75.4526	0.0000	27,726.4314	27,726.4314	4.9303	0.0000	27,849.8699

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.44	0.00	37.21	33.30	0.00	31.67	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	716.7923	12.4815	687.0371	1.5568		119.9620	119.9620		119.9620	119.9620	12,859.5310	3,405.1317	16,084.6627	12.8659	0.9376	16,665.7779
Energy	0.6846	6.0873	4.2967	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6815	7,468.6815	0.1452	0.1389	7,513.0440
Mobile	21.6556	127.9721	198.5427	0.7929	3,262.7101	0.6145	3,263.3243	334.0385	0.5775	334.6159		80,679.0421	80,679.0421	3.3561		80,782.9437
Total	739.1325	146.5409	1,089.8796	2.3868	3,262.7101	121.0492	3,383.7593	334.0385	121.0124	455.0509	12,859.5310	91,552.8053	104,212.3663	16.3051	1.0747	104,961.7656

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	716.7923	12.4815	687.0371	1.5568		119.9620	119.9620		119.9620	119.9620	12,859.5310	3,405.1317	16,084.6627	12.8659	0.9376	16,665.7779
Energy	0.6846	6.0873	4.2967	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6815	7,468.6815	0.1452	0.1389	7,513.0440
Mobile	21.6556	127.9721	198.5427	0.7929	3,262.7101	0.6145	3,263.3243	334.0385	0.5775	334.6159		80,679.0421	80,679.0421	3.3561		80,782.9437
Total	739.1325	146.5409	1,089.8796	2.3868	3,262.7101	121.0492	3,383.7593	334.0385	121.0124	455.0509	12,859.5310	91,552.8053	104,212.3663	16.3051	1.0747	104,961.7656

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(Cont'd)

WRTP Specific Plan EIR (Construction Only) - Yolo County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	12/30/2021	5	260	
2	Grading	Grading	1/1/2021	12/30/2021	5	260	
3	Building Construction	Building Construction	1/1/2021	12/30/2021	5	260	
4	Paving	Paving	1/1/2021	12/30/2021	5	260	
5	Architectural Coating	Architectural Coating	1/1/2021	12/30/2021	5	260	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 650

Acres of Paving: 0

Residential Indoor: 1,062,315; Residential Outdoor: 354,105; Non-Residential Indoor: 1,240,245; Non-Residential Outdoor: 413,415; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

WRTP Specific Plan EIR (Construction Only) - Yolo County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	669.00	227.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	134.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

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(Cont'd)

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0963	0.0000	18.0963	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0963	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

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3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0680	0.0345	0.4646	1.3700e-003	16.0239	9.5000e-004	16.0248	1.6206	7.8000e-004	1.6214		136.3748	136.3748	3.2100e-003		136.4551
Total	0.0680	0.0345	0.4646	1.3700e-003	16.0239	9.5000e-004	16.0248	1.6206	7.8000e-004	1.6214		136.3748	136.3748	3.2100e-003		136.4551

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0863	0.0000	18.0863	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.6882	40.4871	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4871	21.1543	0.0380	18.0863	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0680	0.0345	0.4648	1.3700e-003	9.8453	8.5000e-004	9.8461	1.0005	7.8000e-004	1.0012		136.3748	136.3748	3.2100e-003		136.4551
Total	0.0680	0.0345	0.4648	1.3700e-003	9.8453	8.5000e-004	9.8461	1.0005	7.8000e-004	1.0012		136.3748	136.3748	3.2100e-003		136.4551

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5865	0.0000	3.5865			0.0000			0.0000
Off-Road	4.1912	40.3998	30.8785	0.0620		1.9863	1.9863		1.8286	1.8286		6,007.0434	6,007.0434	1.9428		6,055.8134
Total	4.1912	40.3998	30.8785	0.0620	8.6733	1.9863	10.6597	3.5865	1.8286	5.4230		6,007.0434	6,007.0434	1.9428		6,055.8134

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(Cont'd)

3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0755	0.0383	0.5162	1.5200e-003	17.8044	9.4000e-004	17.8053	1.8007	8.7000e-004	1.8015		151.5275	151.5275	3.5700e-003		151.6167
Total	0.0755	0.0383	0.5162	1.5200e-003	17.8044	9.4000e-004	17.8053	1.8007	8.7000e-004	1.8015		151.5275	151.5275	3.5700e-003		151.6167

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8733	0.0000	8.8733	3.5985	0.0000	3.5985			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8266	1.8266	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	4.1912	46.3998	30.8785	0.0620	8.8733	1.9853	10.8587	3.5985	1.8266	5.4250	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4

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3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0755	0.0383	0.5162	1.5200e-003	10.9392	9.4000e-004	10.9402	1.1116	8.7000e-004	1.1125		151.5275	151.5275	3.5700e-003		151.6167
Total	**0.0755**	**0.0383**	**0.5162**	**1.5200e-003**	**10.9392**	**9.4000e-004**	**10.9402**	**1.1116**	**8.7000e-004**	**1.1125**		**151.5275**	**151.5275**	**3.5700e-003**		**151.6167**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0289		0.9586	0.9586		0.9013	0.9013		2,553.383 9	2,553.383 9	0.8180		2,569.784 3
Total	**1.9009**	**17.4321**	**16.5752**	**0.0289**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.383 9**	**2,553.383 9**	**0.8180**		**2,569.784 3**

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5977	23.5403	3.7458	0.0621	141.7186	0.0526	141.7693	14.4085	0.0504	14.4589		6,506.331 2	6,506.331 2	0.2936		6,513.670 6
Worker	2.5267	1.2804	17.2859	0.0508	595.5555	0.0816	595.5670	60.2323	0.0291	60.2614		5,068.586 0	5,068.586 0	0.1194		5,071.579 8
Total	3.1244	24.8208	21.0317	0.1130	737.2721	0.0842	737.3363	74.6408	0.0795	74.7203		11,574.92 61	11,574.92 61	0.4130		11,585.25 03

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3

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3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5877	23.6403	3.7468	0.0621	87.1751	0.0626	87.2377	8.9340	0.0604	8.9944		6,606.331 2	6,606.331 2	0.2856		6,613.670 6
Worker	2.5267	1.2804	17.2659	0.0509	365.9184	0.0316	365.9460	37.1838	0.0291	37.2129		5,068.595 0	5,068.595 0	0.1194		5,071.579 9
Total	3.1244	24.9208	21.0127	0.1130	453.0895	0.0942	453.1737	46.1178	0.0795	46.1973		11,674.92 61	11,674.92 61	0.4130		11,585.25 03

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(Cont'd)

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0226		0.6777	0.6777		0.6235	0.6235		2,207.210 9	2,207.210 9	0.7139		2,225.057 3
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2556	12.9191	14.6532	0.0226		0.6777	0.6777		0.6235	0.6235		2,207.210 9	2,207.210 9	0.7139		2,225.057 3

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3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0567	0.0287	0.3871	1.1400e-003	13.3533	7.1000e-004	13.3540	1.3505	6.5000e-004	1.3512		113.6456	113.6456	2.6800e-003		113.7126
Total	**0.0567**	**0.0287**	**0.3871**	**1.1400e-003**	**13.3533**	**7.1000e-004**	**13.3540**	**1.3505**	**6.5000e-004**	**1.3512**		**113.6456**	**113.6456**	**2.6800e-003**		**113.7126**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6632	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6632**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0567	0.0287	0.3871	1.1400e-003	8.2044	7.1000e-004	8.2051	0.8337	6.5000e-004	0.8344		113.6456	113.6456	2.6800e-003		113.7126
Total	**0.0567**	**0.0287**	**0.3871**	**1.1400e-003**	**8.2044**	**7.1000e-004**	**8.2051**	**0.8337**	**6.5000e-004**	**0.8344**		**113.6456**	**113.6456**	**2.6800e-003**		**113.7126**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.4730					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.6919**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3B-14 (Cont'd)

3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5061	0.2585	3.4583	0.0102	119.2891	8.3300e-003	119.2955	12.0645	5.8300e-003	12.0703		1,015.2343	1,015.2343	0.0239		1,015.8321
Total	**0.5061**	**0.2585**	**3.4583**	**0.0102**	**119.2891**	**8.3300e-003**	**119.2955**	**12.0645**	**5.8300e-003**	**12.0703**		**1,015.2343**	**1,015.2343**	**0.0239**		**1,015.8321**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.4730					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5258	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	291.4481	291.4481	0.0193		291.9309
Total	**5.6919**	**1.5258**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**291.4481**	**291.4481**	**0.0193**		**291.9309**

3B-14 (Cont'd)

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5061	0.2565	3.4583	0.0102	73.2927	6.3300e-003	73.2990	7.4479	5.8300e-003	7.4537		1,015.2343	1,015.2343	0.0239		1,015.8321
Total	0.5061	0.2565	3.4583	0.0102	73.2927	6.3300e-003	73.2990	7.4479	5.8300e-003	7.4537		1,015.2343	1,015.2343	0.0239		1,015.8321

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	21.6656	127.8721	199.5427	0.7929	3,262.7101	0.6145	3,263.3243	334.0385	0.5775	334.6159		80,679.0421	80,679.0421	3.3581		80,762.9437
Unmitigated	21.6656	127.8721	199.5427	0.7929	3,262.7101	0.6145	3,263.3243	334.0385	0.5775	334.6159		80,679.0421	80,679.0421	3.3581		80,762.9437

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4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	864.50	830.70	761.60	2,217,458	2,217,458
City Park	12.44	149.70	110.15	86,035	86,035
Condo/Townhouse	912.17	890.19	758.88	2,328,437	2,328,437
Industrial Park	2,089.22	754.37	221.16	4,049,170	4,049,170
Office Park	3,657.26	525.21	243.39	5,976,080	5,976,080
Regional Shopping Center	783.48	893.46	451.29	1,046,441	1,046,441
Research & Development	1,506.35	352.91	205.17	2,537,477	2,537,477
Single Family Housing	1,256.64	1,308.12	1137.84	3,272,510	3,272,510
Total	11,042.05	5,704.66	3,691.68	21,513,629	21,513,629

4.3 Trip Type Information

WRTP Specific Plan EIR (Construction Only) - Yolo County, Summer

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
City Park	10.00	5.00	7.00	33.00	48.00	19.00	68	28	6
Condo/Townhouse	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Industrial Park	10.00	5.00	7.00	59.00	28.00	13.00	79	19	2
Office Park	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	54	35	11
Research & Development	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Single Family Housing	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
City Park	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
Condo/Townhouse	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
Industrial Park	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
Office Park	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
Regional Shopping Center	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
Research & Development	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791
Single Family Housing	0.492305	0.039568	0.208718	0.119283	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005789	0.000759	0.000791

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

3B-14
(Cont'd)

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6846	6.0973	4.2997	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6615	7,468.6615	0.1432	0.1369	7,513.0440
NaturalGas Unmitigated	0.6846	6.0973	4.2997	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6616	7,468.6615	0.1432	0.1369	7,513.0440

3B-14 (Cont'd)

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4337.32	0.0488	0.3967	0.1701	2.5600e-003		0.0323	0.0323		0.0323	0.0323		610.2729	610.2729	9.7900e-003	9.3600e-003	615.3062
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	7727.86	0.0933	0.7122	0.3031	4.5600e-003		0.0576	0.0576		0.0576	0.0576		909.1386	909.1386	0.0174	0.0167	914.6391
Industrial Park	10691.9	0.1168	1.0820	0.6820	6.3700e-003		0.0907	0.0907		0.0907	0.0907		1,274.336 2	1,274.336 2	0.0244	0.0234	1,281.909 9
Office Park	19887.1	0.2166	1.9686	1.6460	0.0118		0.1499	0.1499		0.1499	0.1499		2,361.424 7	2,361.424 7	0.0451	0.0431	2,375.399 0
Regional Shopping Center	524.155	5.6500e-003	0.0514	0.0432	3.1000e-004		3.9100e-003	3.9100e-003		3.9100e-003	3.9100e-003		61.6851	61.6851	1.1900e-003	1.1300e-003	62.0516
Research & Development	10620.3	0.1145	1.0412	0.6746	6.2500e-003		0.0791	0.0791		0.0791	0.0791		1,249.442 0	1,249.442 0	0.0240	0.0229	1,256.666 6
Single Family Housing	9456.26	0.1020	0.9714	0.3709	5.5800e-003		0.0705	0.0705		0.0705	0.0705		1,112.384 1	1,112.384 1	0.0213	0.0204	1,119.004 5
Total		**0.6846**	**6.0973**	**4.2998**	**0.0374**		**0.4730**	**0.4730**		**0.4730**	**0.4730**		**7,468.661 5**	**7,468.661 5**	**0.1432**	**0.1369**	**7,513.044 0**

318-14 (Cont'd)

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day											lb/day				
Apartments Mid Rise	4.33732	0.0468	0.3997	0.1701	2.5500e-003		0.0323	0.0323		0.0323	0.0323		510.2729	510.2729	9.7800e-003	9.3600e-003	513.3052
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	7.72766	0.0833	0.7122	0.3031	4.5500e-003		0.0576	0.0576		0.0576	0.0576		909.1365	909.1365	0.0174	0.0167	914.5391
Industrial Park	10.9319	0.1180	1.0020	0.8920	6.3700e-003		0.0807	0.0807		0.0807	0.0807		1,274.336 2	1,274.336 2	0.0244	0.0254	1,291.809 9
Office Park	19.9971	0.2156	1.8595	1.6460	0.0118		0.1499	0.1499		0.1499	0.1499		2,361.424 7	2,361.424 7	0.0451	0.0451	2,385.388 3
Regional Shopping Center	0.524153	5.6500e-003	0.0514	0.0432	3.1000e-004		3.9100e-003	3.9100e-003		3.9100e-003	3.9100e-003		61.6651	61.6651	1.1800e-003	1.1300e-003	62.0316
Research & Development	10.6203	0.1145	1.0412	0.8746	6.2500e-003		0.0791	0.0791		0.0791	0.0791		1,249.442 0	1,249.442 0	0.0240	0.0229	1,256.866 8
Single Family Housing	9.45526	0.1020	0.9714	0.3709	5.5800e-003		0.0705	0.0705		0.0705	0.0705		1,112.584 1	1,112.584 1	0.0213	0.0204	1,119.884 5
Total		**0.5840**	**6.0873**	**4.2998**	**0.0374**		**0.4730**	**0.4730**		**0.4730**	**0.4730**		**7,468.661 5**	**7,468.661 5**	**0.1432**	**0.1369**	**7,513.044 0**

6.0 Area Detail

6.1 Mitigation Measures Area

318-14 (Cont'd)

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	718.7923	12.4615	887.0371	1.5588		119.9620	119.9620		119.9620	119.9620	12,859.5310	3,405.1317	16,084.8627	12.8859	0.9378	16,865.7779
Unmitigated	718.7923	12.4615	887.0371	1.5588		119.9620	119.9620		119.9620	119.9620	12,859.5310	3,405.1317	16,084.8627	12.8859	0.9378	16,865.7779

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(Cont'd)

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.8495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	28.8354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	681.9562	12.0616	852.3487	1.5547		119.7704	119.7704		119.7704	119.7704	12,859.5310	3,342.7059	16,002.2369	12.8064	0.9378	16,801.9388
Landscaping	1.0532	0.3999	34.6905	1.8300e-003		0.1916	0.1916		0.1916	0.1916		62.4258	62.4258	0.0595		63.9391
Total	718.7923	12.4615	887.0371	1.5588		119.9620	119.9620		119.9620	119.9620	12,859.5310	3,405.1317	16,084.8627	12.8859	0.9378	16,865.7779

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.9495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	28.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	661.6552	12.0816	652.3487	1.5547		119.7704	119.7704		119.7704	119.7704	12,659.5310	3,342.7058	16,002.2369	12.6054	0.9378	16,601.6398
Landscaping	1.0532	0.3999	34.6935	1.8300e-003		0.1915	0.1915		0.1915	0.1915		62.4258	62.4258	0.0605		63.9381
Total	716.7923	12.4815	887.0371	1.5566		119.9620	119.9620		119.9620	119.9620	12,659.5310	3,405.1317	16,064.6627	12.6659	0.9378	16,665.7779

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7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

3B-14
(Cont'd)

WRTP Specific Plan EIR (Construction Only)

Yolo County, Winter

3B-14 (Cont'd)

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	320.25	1000sqft	1.00	320,250.00	0
Research & Development	185.74	1000sqft	10.69	185,740.00	0
Industrial Park	302.96	1000sqft	17.40	302,960.00	0
City Park	6.58	Acre	6.58	286,407.00	0
Apartments Mid Rise	130.00	Dwelling Unit	6.40	130,000.00	372
Condo/Townhouse	157.00	Dwelling Unit	13.05	157,000.00	449
Single Family Housing	132.00	Dwelling Unit	21.98	237,600.00	378
Regional Shopping Center	17.88	1000sqft	2.05	17,880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	5.8	**Precipitation Freq (Days)**	54
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Consistent with DEIR's model.

Construction Phase - Consistent with DEIR's model.

On-road Fugitive Dust - See SWAPE comment about percent paved values.

Grading -

Architectural Coating - Consistent with DEIR's model.

Vehicle Trips - Construction only.

Road Dust -

Woodstoves - Construction only.

Area Coating - Construction only.

Energy Use - Construction only.

Water And Wastewater - Construction only.

Solid Waste - Construction only.

Construction Off-road Equipment Mitigation - See SWAPE comment regarding Tier 4 emission standards. Fugitive dust construction-related mitigation consistent with DEIR's model.

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(Cont'd)

WRTP Specific Plan EIR (Construction Only) - Yolo County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	10.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	10.00
tblArchitecturalCoating	EF_Parking	150.00	10.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	10.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	10.00
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	14
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	110.00	280.00
tblConstructionPhase	NumDays	1,550.00	280.00
tblConstructionPhase	NumDays	155.00	280.00
tblConstructionPhase	NumDays	110.00	280.00
tblConstructionPhase	NumDays	60.00	280.00
tblLandUse	LandUseSquareFeet	286,824.80	286,407.00
tblLandUse	LotAcreage	7.35	1.00
tblLandUse	LotAcreage	4.26	10.68
tblLandUse	LotAcreage	6.96	17.40
tblLandUse	LotAcreage	3.42	5.40
tblLandUse	LotAcreage	9.91	13.05
tblLandUse	LotAcreage	42.86	21.98
tblLandUse	LotAcreage	0.41	2.05

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(Cont'd)

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	20.5565	144.6396	108.9626	0.2705	930.4823	5.8562	936.3385	105.0043	5.4167	110.4209	0.0000	26,780.2468	26,780.2468	4.9530	0.0000	26,904.0708
Maximum	20.5565	144.6396	108.9626	0.2705	930.4823	5.8562	936.3385	105.0043	5.4167	110.4209	0.0000	26,780.2468	26,780.2468	4.9530	0.0000	26,904.0708

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	20.5565	144.6396	108.9626	0.2705	582.1107	5.8562	587.9668	70.0387	5.4167	75.4553	0.0000	26,780.2468	26,780.2468	4.9530	0.0000	26,904.0707
Maximum	20.5565	144.6396	108.9626	0.2705	582.1107	5.8562	587.9668	70.0387	5.4167	75.4553	0.0000	26,780.2468	26,780.2468	4.9530	0.0000	26,904.0707

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	37.44	0.00	37.21	33.30	0.00	31.67	0.00	0.00	0.00	0.00	0.00	0.00

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2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	716.7923	12.4615	887.0371	1.5568		119.9820	119.9820		119.9820	119.9820	12,659.5310	3,405.1317	16,064.6627	12.8659	0.9376	16,885.7779
Energy	0.6846	6.0873	4.2997	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6615	7,468.6615	0.1432	0.1369	7,513.0440
Mobile	16.7259	133.2997	191.9189	0.7297	3,262.7101	0.8258	3,263.3360	334.0385	0.5886	334.6271		74,320.6681	74,320.6681	3.4680		74,407.3653
Total	**734.2027**	**151.8585**	**1,083.2558**	**2.3236**	**3,262.7101**	**121.0609**	**3,383.7710**	**334.0385**	**121.0236**	**455.0621**	**12,659.5310**	**85,194.4594**	**97,853.9904**	**16.4770**	**1.0747**	**98,586.1872**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	716.7923	12.4615	887.0371	1.5568		119.9820	119.9820		119.9820	119.9820	12,659.5310	3,405.1317	16,064.6627	12.8659	0.9376	16,885.7779
Energy	0.6846	6.0873	4.2997	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6615	7,468.6615	0.1432	0.1369	7,513.0440
Mobile	16.7259	133.2997	191.9189	0.7297	3,262.7101	0.8258	3,263.3360	334.0385	0.5886	334.6271		74,320.6681	74,320.6681	3.4680		74,407.3653
Total	**734.2027**	**151.8585**	**1,083.2558**	**2.3236**	**3,262.7101**	**121.0609**	**3,383.7710**	**334.0385**	**121.0236**	**455.0621**	**12,659.5310**	**85,194.4594**	**97,853.9904**	**16.4770**	**1.0747**	**98,586.1872**

3B-14 (Cont'd)

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	12/30/2021	5	260	
2	Grading	Grading	1/1/2021	12/30/2021	5	260	
3	Building Construction	Building Construction	1/1/2021	12/30/2021	5	260	
4	Paving	Paving	1/1/2021	12/30/2021	5	260	
5	Architectural Coating	Architectural Coating	1/1/2021	12/30/2021	5	260	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 650

Acres of Paving: 0

Residential Indoor: 1,062,315; Residential Outdoor: 354,105; Non-Residential Indoor: 1,240,245; Non-Residential Outdoor: 413,415; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

WRTP Specific Plan EIR (Construction Only) - Yolo County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	669.00	227.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	134.00	0.00	0.00	10.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

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(Cont'd)

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3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

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(Cont'd)

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.0429	0.4074	1.2100e-003	16.0239	8.5000e-004	16.0248	1.6206	7.8000e-004	1.6214		120.3798	120.3798	2.8700e-003		120.4516
Total	**0.0830**	**0.0429**	**0.4074**	**1.2100e-003**	**16.0239**	**8.5000e-004**	**16.0248**	**1.6206**	**7.8000e-004**	**1.6214**		**120.3798**	**120.3798**	**2.8700e-003**		**120.4516**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					16.0863	0.0000	16.0863	9.9907	0.0000	9.9907			0.0000			0.0000
Off-Road	3.9882	40.4971	21.1043	0.0380		2.0446	2.0446		1.8809	1.8809	0.0000	3,690.606 9	3,690.606 9	1.1920		3,715.457 3
Total	**3.9882**	**40.4971**	**21.1043**	**0.0380**	**16.0863**	**2.0446**	**20.1107**	**9.9907**	**1.8809**	**11.8716**	**0.0000**	**3,690.606 9**	**3,690.606 9**	**1.1920**		**3,715.457 3**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0630	0.0429	0.4074	1.2100e-003	9.8453	8.5000e-004	9.8461	1.0005	7.8000e-004	1.0012		120.3798	120.3798	2.9700e-003		120.4516
Total	**0.0630**	**0.0429**	**0.4074**	**1.2100e-003**	**9.8453**	**8.5000e-004**	**9.8461**	**1.0005**	**7.8000e-004**	**1.0012**		**120.3798**	**120.3798**	**2.9700e-003**		**120.4516**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3988	30.8785	0.0620		1.9853	1.9853		1.9265	1.9265		6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	**4.1912**	**46.3988**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.9265**	**5.4230**		**6,007.043 4**	**6,007.043 4**	**1.9428**		**6,055.613 4**

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3.3 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0700	0.0476	0.4626	1.3400e-003	17.9044	9.4000e-004	17.9053	1.8007	8.7000e-004	1.8015		133.7563	133.7563	3.1900e-003		133.8351
Total	**0.0700**	**0.0476**	**0.4626**	**1.3400e-003**	**17.9044**	**9.4000e-004**	**17.9053**	**1.8007**	**8.7000e-004**	**1.8015**		**133.7563**	**133.7563**	**3.1900e-003**		**133.8351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.043 4	6,007.043 4	1.9428		6,055.613 4
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.043 4**	**6,007.043 4**	**1.9428**		**6,055.613 4**

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3.3 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0700	0.0476	0.4526	1.3400e-003	10.9392	9.4000e-004	10.9402	1.1116	8.7000e-004	1.1125		133.7553	133.7553	3.1900e-003		133.8351
Total	**0.0700**	**0.0476**	**0.4526**	**1.3400e-003**	**10.9392**	**9.4000e-004**	**10.9402**	**1.1116**	**8.7000e-004**	**1.1125**		**133.7553**	**133.7553**	**3.1900e-003**		**133.8351**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

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3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6327	23.8255	4.5116	0.0604	141.7166	0.0655	141.7821	14.4085	0.0631	14.4616		6,320.795 5	6,320.795 5	0.3325		6,329.107 2
Worker	2.3416	1.5936	15.1403	0.0449	595.5666	0.0316	595.5870	60.2323	0.0291	60.2614		4,474.115 8	4,474.115 8	0.1067		4,476.782 6
Total	**2.9743**	**25.4192**	**19.6519**	**0.1053**	**737.2721**	**0.0971**	**737.3592**	**74.6408**	**0.0922**	**74.7230**		**10,794.91 13**	**10,794.91 13**	**0.4391**		**10,805.89 98**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.363 9**	**2,553.363 9**	**0.6160**		**2,568.764 3**

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3.4 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6327	23.8255	4.5116	0.0604	87.1731	0.0555	87.2286	8.9340	0.0531	8.9871		6,320.795 5	6,320.795 5	0.3325		6,329.107 2
Worker	2.3416	1.5836	15.1403	0.0445	365.9184	0.0316	365.9480	37.1836	0.0291	37.2129		4,474.115 8	4,474.115 8	0.1067		4,476.762 6
Total	2.9743	25.4192	19.6519	0.1053	453.0895	0.0871	453.1766	46.1178	0.0822	46.2000		10,794.91 13	10,794.91 13	0.4391		10,805.88 98

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.210 9	2,207.210 9	0.7139		2,225.057 3
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.210 9	2,207.210 9	0.7139		2,225.057 3

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3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0525	0.0357	0.3385	1.0100e-003	13.3533	7.1000e-004	13.3540	1.3505	6.5000e-004	1.3512		100.3165	100.3165	2.3900e-003		100.3763
Total	0.0525	0.0357	0.3385	1.0100e-003	13.3533	7.1000e-004	13.3540	1.3505	6.5000e-004	1.3512		100.3165	100.3165	2.3900e-003		100.3763

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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3.5 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0525	0.0357	0.3395	1.0100e-003	8.2044	7.1000e-004	8.2051	0.8337	6.5000e-004	0.8344		100.3165	100.3165	2.3900e-003		100.3763
Total	**0.0525**	**0.0357**	**0.3395**	**1.0100e-003**	**8.2044**	**7.1000e-004**	**8.2051**	**0.8337**	**6.5000e-004**	**0.8344**		**100.3165**	**100.3165**	**2.3900e-003**		**100.3763**

3.6 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.4730					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2199	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**5.6929**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

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3.6 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4690	0.3192	3.0326	8.9900e-003	119.2891	6.3300e-003	119.2955	12.0645	5.8300e-003	12.0703		896.1607	896.1607	0.0214		896.6949
Total	**0.4690**	**0.3192**	**3.0326**	**8.9900e-003**	**119.2891**	**6.3300e-003**	**119.2955**	**12.0645**	**5.8300e-003**	**12.0703**		**896.1607**	**896.1607**	**0.0214**		**896.6949**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.4730					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2199	1.5288	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**5.6929**	**1.5288**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.6 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.4690	0.3192	3.0326	8.9900e-003	73.2927	6.3300e-003	73.2990	7.4479	5.8300e-003	7.4537		896.1607	896.1607	0.0214		896.6949
Total	**0.4690**	**0.3192**	**3.0326**	**8.9900e-003**	**73.2927**	**6.3300e-003**	**73.2990**	**7.4479**	**5.8300e-003**	**7.4537**		**896.1607**	**896.1607**	**0.0214**		**896.6949**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.7256	133.2997	181.9189	0.7297	3,262.710 1	0.6259	3,263.336 0	334.0385	0.5886	334.6271		74,320.66 61	74,320.66 61	3.4680		74,407.36 53
Unmitigated	16.7256	133.2997	181.9189	0.7297	3,262.710 1	0.6259	3,263.336 0	334.0385	0.5886	334.6271		74,320.66 61	74,320.66 61	3.4680		74,407.36 53

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4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	864.50	830.70	761.80	2,217,498	2,217,498
City Park	12.44	149.70	110.15	86,036	86,036
Condo/Townhouse	912.17	890.18	759.88	2,328,437	2,328,437
Industrial Park	2,059.22	754.37	221.16	4,049,170	4,049,170
Office Park	3,657.26	525.21	243.39	5,976,060	5,976,060
Regional Shopping Center	763.48	893.48	451.29	1,046,441	1,046,441
Research & Development	1,506.35	352.91	206.17	2,537,477	2,537,477
Single Family Housing	1,256.64	1,308.12	1137.84	3,272,510	3,272,510
Total	11,042.05	5,704.66	3,891.68	21,513,629	21,513,629

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
City Park	10.00	5.00	7.00	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3
Industrial Park	10.00	5.00	7.00	59.00	28.00	13.00	79	19	2
Office Park	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Regional Shopping Center	10.00	5.00	7.00	16.30	64.70	19.00	54	35	11
Research & Development	10.00	5.00	7.00	33.00	48.00	19.00	82	15	3
Single Family Housing	10.00	5.00	7.00	46.00	13.00	41.00	86	11	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
City Park	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
Condo/Townhouse	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
Industrial Park	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
Office Park	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
Regional Shopping Center	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
Research & Development	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791
Single Family Housing	0.492305	0.038568	0.208718	0.119263	0.022760	0.005403	0.060505	0.041350	0.001014	0.001744	0.005799	0.000758	0.000791

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

WRTP Specific Plan EIR (Construction Only) - Yolo County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.6846	6.0973	4.2997	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6615	7,468.6615	0.1432	0.1369	7,513.0440
NaturalGas Unmitigated	0.6846	6.0973	4.2997	0.0373		0.4730	0.4730		0.4730	0.4730		7,468.6615	7,468.6615	0.1432	0.1369	7,513.0440

3B-14
(Cont'd)

5.2 Energy by Land Use - NaturalGas

Unmitigated

3B-14
(Cont'd)

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day											lb/day				
Apartments Mid Rise	4337.32	0.0468	0.3997	0.1701	2.5600e-003		0.0323	0.0323		0.0323	0.0323		510.2729	510.2729	9.7800e-003	9.3600e-003	513.3052
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	7727.68	0.0833	0.7122	0.3031	4.5500e-003		0.0576	0.0576		0.0576	0.0576		909.1365	909.1365	0.0174	0.0167	914.5391
Industrial Park	10831.9	0.1169	1.0020	0.8420	6.3700e-003		0.0807	0.0807		0.0807	0.0807		1,274.336 2	1,274.336 2	0.0244	0.0234	1,281.909 9
Office Park	19987.1	0.2156	1.9595	1.6460	0.0119		0.1499	0.1499		0.1499	0.1499		2,351.424 7	2,351.424 7	0.0451	0.0431	2,365.399 0
Regional Shopping Center	524.163	5.6500e-003	0.0514	0.0432	3.1000e-004		3.9100e-003	3.9100e-003		3.9100e-003	3.9100e-003		61.6651	61.6651	1.1800e-003	1.1300e-003	62.0316
Research & Development	10620.3	0.1145	1.0412	0.8746	6.2500e-003		0.0791	0.0791		0.0791	0.0791		1,249.442 0	1,249.442 0	0.0240	0.0228	1,256.668 6
Single Family Housing	9455.28	0.1020	0.8714	0.3708	5.5600e-003		0.0705	0.0705		0.0705	0.0705		1,112.384 1	1,112.384 1	0.0213	0.0204	1,119.994 6
Total		**0.6846**	**6.0373**	**4.2998**	**0.0374**		**0.4730**	**0.4730**		**0.4730**	**0.4730**		**7,468.661 5**	**7,468.661 5**	**0.1432**	**0.1369**	**7,513.044 0**

5.2 Energy by Land Use - NaturalGas

Mitigated

3B-14
(Cont'd)

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4.33732	0.0468	0.3997	0.1701	2.0500e-003		0.0323	0.0323		0.0323	0.0323		510.2729	510.2729	9.7900e-003	9.3600e-003	513.3052
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	7.72766	0.0833	0.7122	0.3031	4.5500e-003		0.0576	0.0576		0.0576	0.0576		909.1365	909.1365	0.0174	0.0167	914.5591
Industrial Park	10.8319	0.1168	1.0620	0.8920	6.3700e-003		0.0807	0.0807		0.0807	0.0807		1,274.336 2	1,274.336 2	0.0244	0.0234	1,281.906 9
Office Park	19.8671	0.2158	1.9595	1.6460	0.0116		0.1489	0.1489		0.1489	0.1489		2,351.424 7	2,351.424 7	0.0451	0.0431	2,365.386 0
Regional Shopping Center	0.524165	5.6000e-003	0.0514	0.0432	3.1000e-004		3.9100e-003	3.9100e-003		3.9100e-003	3.9100e-003		61.6651	61.6651	1.1900e-003	1.1300e-003	62.0318
Research & Development	10.6206	0.1145	1.0412	0.8746	6.2500e-003		0.0791	0.0791		0.0791	0.0791		1,249.442 0	1,249.442 0	0.0240	0.0229	1,256.886 8
Single Family Housing	9.45526	0.1020	0.8714	0.3708	5.5600e-003		0.0705	0.0705		0.0705	0.0705		1,112.384 1	1,112.384 1	0.0213	0.0204	1,119.004 6
Total		**0.6846**	**6.0973**	**4.2998**	**0.0374**		**0.4730**	**0.4730**		**0.4730**	**0.4730**		**7,468.661 5**	**7,468.661 5**	**0.1432**	**0.1369**	**7,513.044 0**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	716.7923	12.4615	897.0371	1.5566		119.9620	119.9620		119.9620	119.9620	12,659.53 10	3,405.131 7	16,064.66 27	12.8659	0.9378	16,665.77 79
Unmitigated	716.7923	12.4615	897.0371	1.5566		119.9620	119.9620		119.9620	119.9620	12,659.53 10	3,405.131 7	16,064.66 27	12.8659	0.9378	16,665.77 79

3B-14
(Cont'd)

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.9485					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	28.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	681.8562	12.0816	852.3467	1.5547		119.7704	119.7704		119.7704	119.7704	12,659.53 10	3,342.705 9	16,002.23 68	12.8054	0.9378	16,601.83 66
Landscaping	1.0532	0.3898	31.6905	1.6300e-003		0.1915	0.1915		0.1915	0.1915		62.4258	62.4258	0.0605		63.9591
Total	716.7923	12.4615	897.0371	1.5566		119.9620	119.9620		119.9620	119.9620	12,659.53 10	3,405.131 7	16,064.66 27	12.8659	0.9378	16,665.77 79

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.9495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	28.9354					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	861.8552	12.0816	652.3497	1.5547		118.7704	118.7704		118.7704	118.7704	12,659.5310	3,342.7058	16,002.2369	12.6054	0.9378	16,801.6398
Landscaping	1.0532	0.3899	34.6935	1.8300e-003		0.1915	0.1915		0.1915	0.1915		62.4258	62.4258	0.0605		63.9381
Total	716.7923	12.4615	887.0371	1.5566		118.9620	118.9620		118.9620	118.9620	12,659.5310	3,405.1317	16,064.6627	12.6659	0.9378	16,865.7779

3B-14 (Cont'd)

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

3B-14
(Cont'd)

Attachment B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 100 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

SOIL WATER AIR PROTECTION ENTERPRISE
2656 29th Street, Suite 201
Santa Monica, California 90405
Attn: Paul Rosenfeld, Ph.D.
Mobil: (310) 795-2335
Office: (310) 452-5555
Fax: (310) 452-5550
Email: prosenfeld@swape.com

Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, industrial, military and agricultural sources, unconventional oil drilling operations, and locomotive and construction engines. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities. Dr. Rosenfeld has also successfully modeled exposure to contaminants distributed by water systems and via vapor intrusion.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, creosote, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at sites and has testified as an expert witness on numerous cases involving exposure to soil, water and air contaminants from industrial, railroad, agricultural, and military sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18.48

Simons, R.A., Seo, Y. **Rosenfeld, P.**, (2015) Modeling the Effect of Refinery Emission On Residential Property Value. Journal of Real Estate Research. 27(3):321-342

Chen, J. A. Zapata A. R., Sutherland A. J., Molmen, D.R., Chow, B. S., Wu, L. E., **Rosenfeld, P. E.,** Hesse, R. C., (2012) Sulfur Dioxide and Volatile Organic Compound Exposure To A Community In Texas City Texas Evaluated Using Aermod and Empirical Data. *American Journal of Environmental Science,* 8(6), 622-632.

Rosenfeld, P.E. & Feng, L. (2011). *The Risks of Hazardous Waste.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2011). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Agrochemical Industry*, Amsterdam: Elsevier Publishing.

Gonzalez, J., Feng, L., Sutherland, A., Waller, C., Sok, H., Hesse, R., **Rosenfeld, P.** (2010). PCBs and Dioxins/Furans in Attic Dust Collected Near Former PCB Production and Secondary Copper Facilities in Sauget, IL. *Procedia Environmental Sciences.* 113–125.

Feng, L., Wu, C., Tam, L., Sutherland, A.J., Clark, J.J., **Rosenfeld, P.E.** (2010). Dioxin and Furan Blood Lipid and Attic Dust Concentrations in Populations Living Near Four Wood Treatment Facilities in the United States. *Journal of Environmental Health.* 73(6), 34-46.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2010). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Wood and Paper Industries.* Amsterdam: Elsevier Publishing.

Cheremisinoff, N.P., & **Rosenfeld, P.E.** (2009). *Handbook of Pollution Prevention and Cleaner Production: Best Practices in the Petroleum Industry.* Amsterdam: Elsevier Publishing.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. *WIT Transactions on Ecology and the Environment, Air Pollution*, 123 (17), 319-327.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. *Organohalogen Compounds*, 70, 002252-002255.

Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008). Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. *Organohalogen Compounds*, 70, 000527-000530.

Hensley, A.R. A. Scott, J. J. J. Clark, **Rosenfeld, P.E.** (2007). Attic Dust and Human Blood Samples Collected near a Former Wood Treatment Facility. *Environmental Research*. 105, 194-197.

Rosenfeld, P.E., J. J. J. Clark, A. R. Hensley, M. Suffet. (2007). The Use of an Odor Wheel Classification for Evaluation of Human Health Risk Criteria for Compost Facilities. *Water Science & Technology* 55(5), 345-357.

Rosenfeld, P. E., M. Suffet. (2007). The Anatomy Of Odour Wheels For Odours Of Drinking Water, Wastewater, Compost And The Urban Environment. *Water Science & Technology* 55(5), 335-344.

Sullivan, P. J. Clark, J.J.J., Agardy, F. J., **Rosenfeld, P.E.** (2007). *Toxic Legacy, Synthetic Toxins in the Food, Water, and Air in American Cities*. Boston Massachusetts: Elsevier Publishing

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash. *Water Science and Technology*. 49(9),171-178.

Rosenfeld P. E., J.J. Clark, I.H. (Mel) Suffet (2004). The Value of An Odor-Quality-Wheel Classification Scheme For The Urban Environment. *Water Environment Federation's Technical Exhibition and Conference (WEFTEC) 2004*. New Orleans, October 2-6, 2004.

Rosenfeld, P.E., and Suffet, I.H. (2004). Understanding Odorants Associated With Compost, Biomass Facilities, and the Land Application of Biosolids. *Water Science and Technology*. 49(9), 193-199.

Rosenfeld, P.E., and Suffet I.H. (2004). Control of Compost Odor Using High Carbon Wood Ash, *Water Science and Technology*, 49(9), 171-178.

Rosenfeld, P. E., Grey, M. A., Sellew, P. (2004). Measurement of Biosolids Odor and Odorant Emissions from Windrows, Static Pile and Biofilter. *Water Environment Research*. 76(4), 310-315.

Rosenfeld, P.E., Grey, M and Suffet, M. (2002). Compost Demonstration Project, Sacramento California Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Integrated Waste Management Board Public Affairs Office*, Publications Clearinghouse (MS–6), Sacramento, CA Publication #442-02-008.

Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

Rosenfeld, P.E., and Henry C. L., (2000). Wood ash control of odor emissions from biosolids application. *Journal of Environmental Quality*. 29, 1662-1668.

Rosenfeld, P.E., C.L. Henry and D. Bennett. (2001). Wastewater dewatering polymer affect on biosolids odor emissions and microbial activity. *Water Environment Research*. 73(4), 363-367.

Rosenfeld, P.E., and C.L. Henry. (2001). Activated Carbon and Wood Ash Sorption of Wastewater, Compost, and Biosolids Odorants. *Water Environment Research*, 73, 388-393.

Rosenfeld, P.E., and Henry C. L., (2001). High carbon wood ash effect on biosolids microbial activity and odor. *Water Environment Research*. 131(1-4), 247-262.

Chollack, T. and **P. Rosenfeld.** (1998). Compost Amendment Handbook For Landscaping. Prepared for and distributed by the City of Redmond, Washington State.

Rosenfeld, P. E. (1992). The Mount Liamuiga Crater Trail. *Heritage Magazine of St. Kitts*, 3(2).

Rosenfeld, P. E. (1993). High School Biogas Project to Prevent Deforestation On St. Kitts. *Biomass Users Network*, 7(1).

Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

Rosenfeld, P. E. (1994). Potential Utilization of Small Diameter Trees on Sierra County Public Land. Masters thesis reprinted by the Sierra County Economic Council. Sierra County, California.

Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., Sutherland, A, Hesse, R., Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society*. Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J., Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T., Sahai, R.K., La, M., Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution*. Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

Wu, C., Tam, L., Clark, J., **Rosenfeld, P**. (20-22 July, 2009). Dioxin and furan blood lipid concentrations in populations living near four wood treatment facilities in the United States. Brebbia, C.A. and Popov, V., eds., *Air Pollution XVII: Proceedings of the Seventeenth International Conference on Modeling, Monitoring and Management of Air Pollution*. Lecture conducted from Tallinn, Estonia.

Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International*

Conferences on Soils Sediment and Water. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.,** Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants.*. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference*. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation*. Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest*. Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell*. Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association, Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson. Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: March 25, 2021

In the Superior Court of the State of California, County of San Bernardino
Gary Garner, Personal Representative for the Estate of Melvin Garner vs. BNSF Railway Company.
Case No. 1720288
Rosenfeld Deposition 2-23-2021

In the Superior Court of the State of California, County of Los Angeles, Spring Street Courthouse
Benny M Rodriguez vs. Union Pacific Railroad, A Corporation, et al.
Case No. 18STCV01162
Rosenfeld Deposition 12-23-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff*, vs. Marathon Petroleum, LP, *Defendant.*
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs*, vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case No.: 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District

Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No.: 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warm Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs*, vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant.*
Civil Action Number 2:09-cv-232-WHA-TFM
Rosenfeld Deposition: July 2010, June 2011

In the Circuit Court of Jefferson County Alabama
Jaeanette Moss Anthony, et al., *Plaintiffs*, vs. Drummond Company Inc., et al., *Defendants*
Civil Action No. CV 2008-2076
Rosenfeld Deposition: September 2010

In the United States District Court for Eastern District of Arkansas, Eastern District of Arkansas
Harry Stephens Farms, Inc, and Harry Stephens, individual and as managing partner of Stephens Partnership, *Plaintiffs*, vs. Helena Chemical Company, and Exxon Mobil Corp., successor to Mobil Chemical Co., *Defendants.*
Case Number 2:06-CV-00166 JMM (Consolidated with case number 4:07CV00278 JMM)
Rosenfeld Deposition: July 2010

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants.*
Case Number 2:07CV1052
Rosenfeld Deposition: July 2009

In the United States District Court for the Southern District of Ohio
Carolyn Baker, et al., *Plaintiffs*, vs. Chevron Oil Company, et al., *Defendants.*
Case Number 1:05 CV 227
Rosenfeld Deposition: July 2008

In the Ninth Judicial District Court, Parish of Rapides, State of Louisiana
Roger Price, et al., *Plaintiffs*, vs. Roy O. Martin, L.P., et al., *Defendants.*
Civil Suit Number 224,041 Division G
Rosenfeld Deposition: September 2008

In the Superior Court of the State of California in and for the County of Los Angeles
Leslie Hensley and Rick Hensley, *Plaintiffs*, vs. Peter T. Hoss, as trustee on behalf of the Cone Fee Trust; Plains Exploration & Production Company, a Delaware corporation; Rayne Water Conditioning, Inc., a California Corporation; and DOES 1 through 100, *Defendants.*
Case Number SC094173
Rosenfeld Deposition: September 2008, October 2008

EXHIBIT C

Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act

In carrying out its duty to enforce laws across California, the California Attorney General's Bureau of Environmental Justice (Bureau)[1] regularly reviews proposed warehouse projects for compliance with the California Environmental Quality Act (CEQA) and other laws. When necessary, the Bureau submits comment letters to lead agencies, and in rare cases the Bureau has filed litigation to enforce CEQA.[2] This document builds upon the Bureau's comment letters, collecting knowledge gained from the Bureau's review of hundreds of warehouse projects across the state. It is meant to help lead agencies pursue CEQA compliance and promote environmentally-just development as they confront warehouse project proposals.[3] While CEQA analysis is necessarily project-specific, this document provides information on feasible best practices and mitigation measures, the overwhelming majority of which have been adapted from actual warehouse projects in California.

I. Background

In recent years, the proliferation of e-commerce and rising consumer expectations of rapid shipping have contributed to a boom in warehouse development.[4] California, with its ports, population centers, and transportation network, has found itself at the center of this trend. For example, in 2014, 40 percent of national container cargo flowed through Southern California, which was home to nearly 1.2 billion square feet of warehouse facilities.[5] In the Inland Empire alone, 150 million square feet of new industrial space was built over the last decade,[6] and 21 of the largest 100 logistics leases signed in 2019 nationwide were in the Inland

[1] https://oag.ca.gov/environment/justice.
[2] https://oag.ca.gov/environment/ceqa/letters; *South Central Neighbors United et al. v. City of Fresno et al.* (Super. Ct. Fresno County, No. 18CECG00690).
[3] Anyone reviewing this document to determine CEQA compliance responsibilities should consult their own attorney for legal advice.
[4] As used in this document, "warehouse" or "logistics facility" is defined as a facility consisting of one or more buildings that stores cargo, goods, or products on a short or long term basis for later distribution to businesses and/or retail customers.
[5] Industrial Warehousing in the SCAG Region, Task 2. Inventory of Warehousing Facilities (April 2018), http://www.scag.ca.gov/Documents/Task2_FacilityInventory.pdf at 1-1, 2-11.
[6] Los Angeles Times, *When your house is surrounded by massive warehouses*, October 27, 2019, https://www.latimes.com/california/story/2019-10-27/fontana-california-warehouses-inland-empire-pollution.

II. Proactive Planning: General Plans, Local Ordinances, and Good Neighbor Policies

To systematically address warehouse development, we encourage governing bodies to proactively plan for logistics projects in their jurisdictions. Proactive planning allows jurisdictions to prevent land use conflicts before they materialize and guide sustainable development. Benefits also include providing a predictable business environment, protecting residents from environmental harm, and setting consistent expectations jurisdiction-wide.

Proactive planning can take any number of forms. Land use designation and zoning decisions should channel development into appropriate areas. For example, establishing industrial districts near major highway and rail corridors but away from sensitive receptors can help avoid conflicts between warehouse facilities and residential communities.

In addition, general plan policies, local ordinances, and good neighbor policies should set minimum standards for logistics projects. General plan policies can be incorporated into existing economic development, land use, circulation, or other related elements. Many jurisdictions alternatively choose to consolidate policies in a separate environmental justice element. Adopting general plan policies to guide warehouse development may also help jurisdictions comply with their obligations under SB 1000, which requires local government general plans to identify objectives and policies to reduce health risks in disadvantaged communities, promote civil engagement in the public decision making process, and prioritize improvements and programs that address the needs of disadvantaged communities.[12]

The Bureau is aware of four good neighbor policies in California: Riverside County, the City of Riverside, the City of Moreno Valley, and the Western Riverside Council of Governments.[13] These policies provide minimum standards that all warehouses in the jurisdiction must meet. For example, the Western Riverside Council of Governments policy sets a minimum buffer zone of 300 meters between warehouses and sensitive receptors, and it requires a number of design features to reduce truck impacts on nearby sensitive receptors. The Riverside County policy requires vehicles entering sites during both construction and operation to meet certain California Air Resources Board (CARB) guidelines, and it requires community benefits agreements and supplemental funding contributions toward additional pollution offsets.

The Bureau encourages jurisdictions to adopt their own local ordinances and/or good neighbor policies that combine the most robust policies from those models with measures discussed in the remainder of this document.

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[12] For more information about SB 1000, *see* https://oag.ca.gov/environment/sb1000.

[13] https://www.rivcocob.org/wp-content/uploads/2020/01/Good-Neighbor-Policy-F-3-Final-Adopted.pdf (Riverside County); https://riversideca.gov/planning/pdf/good-neighbor-guidelines.pdf (City of Riverside); http://qcode.us/codes/morenovalley/view.php?topic=9-9_05-9_05_050&frames=on (City of Moreno Valley); http://www.wrcog.cog.ca.us/DocumentCenter/View/318/Good-Neighbor-Guidelines-for-Siting-Warehouse-Distribution-Facilities-PDF?bidId= (Western Riverside Council of Governments).

Empire, comprising 17.5 million square feet.[7] This trend has not slowed, even with the economic downturn caused by COVID-19, as e-commerce has continued to grow.[8] Forecasts predict that the Central Valley is where a new wave of warehouse development will go.[9]

When done properly, these activities can contribute to the economy and consumer welfare. However, imprudent warehouse development can harm local communities and the environment. Among other pollutants, diesel trucks visiting warehouses emit nitrogen oxide (NO_x)—a primary precursor to smog formation and a significant factor in the development of respiratory problems like asthma, bronchitis, and lung irritation—and diesel particulate matter (a subset of fine particular matter that is smaller than 2.5 micrometers)—a contributor to cancer, heart disease, respiratory illnesses, and premature death.[10] Trucks and on-site loading activities can also be loud, bringing disruptive noise levels during 24/7 operation that can cause hearing damage after prolonged exposure.[11] The hundreds, and sometimes thousands, of daily truck and passenger car trips that warehouses generate contribute to traffic jams, deterioration of road surfaces, and traffic accidents. These environmental impacts also tend to be concentrated in neighborhoods already suffering from disproportionate health impacts.

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[7] CBRE, *Dealmakers: E-Commerce & Logistics Firms Drive Demand for Large Warehouses in 2019* (January 23, 2020), https://www.cbre.us/research-and-reports/US-MarketFlash-Dealmakers-E-Commerce-Logistics-Firms-Drive-Demand-for-Large-Warehouses-in-2019; *see also* CBRE, *E-Commerce and Logistics Companies Expand Share Of Largest US Warehouse Leases, CBRE Analysis Finds* (Feb. 25, 2019), https://www.cbre.us/about/media-center/inland-empire-largest-us-warehouse-leases (20 of the largest 100 warehousing leases in 2018 were in the Inland Empire, comprising nearly 20 million square feet).

[8] CBRE, 2021 U.S. Real Estate Market Outlook, Industrial & Logistics, https://www.cbre.us/research-and-reports/2021-US-Real-Estate-Market-Outlook-Industrial-Logistics; Kaleigh Moore, *As Online Sales Grow During COVID-19, Retailers Like Montce Swim Adapt And Find Success*, FORBES (June 24, 2020), *available at* https://www.forbes.com/sites/kaleighmoore/2020/06/24/as-online-sales-grow-during-covid-19-retailers-like-montce-swim-adapt-and-find-success/.

[9] New York Times, *Warehouses Are Headed to the Central Valley, Too* (Jul. 22, 2020), *available* at https://www.nytimes.com/2020/07/22/us/coronavirus-ca-warehouse-workers.html.

[10] California Air Resources Board, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health (NOx); California Air Resources Board, Summary: Diesel Particular Matter Health Impacts, https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts; Office of Environmental Health Hazard Assessment and American Lung Association of California, Health Effects of Diesel Exhaust, https://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf (DPM).

[11] Noise Sources and Their Effects, https://www.chem.purdue.edu/chemsafety/Training/PPETrain/dblevels.htm (a diesel truck moving 40 miles per hour, 50 feet away, produces 84 decibels of sound).

communities. The suggested best practices for siting and design of warehouse facilities does not relieve lead agencies' responsibility under CEQA to conduct a project-specific analysis of the project's impacts and evaluation of feasible mitigation measures and alternatives; lead agencies' incorporation of the best practices must be part of the impact, mitigation and alternatives analyses to meet the requirements of CEQA. Examples of best practices when siting and designing warehouse facilities include:

- Per CARB guidance, siting warehouse facilities so that their property lines are at least 1,000 feet from the property lines of the nearest sensitive receptors.[14]
- Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility.
- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors, e.g., placing these dock doors on the north side of the facility if sensitive receptors are adjacent to the south side of the facility.
- Screening dock doors and onsite areas with significant truck traffic with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

V. Air Quality and Greenhouse Gas Emissions Analysis and Mitigation

Emissions of air pollutants and greenhouse gases are often among the most substantial environmental impacts from new warehouse facilities. CEQA compliance demands a proper accounting of the full air quality and greenhouse gas impacts of logistics facilities and adoption of all feasible mitigation of significant impacts. Although efforts by CARB and other authorities to regulate the heavy-duty truck and off-road diesel fleets have made excellent progress in reducing the air quality impacts of logistics facilities, the opportunity remains for local jurisdictions to further mitigate these impacts at the project level. Lead agencies and developers

[14] California Air Resources Board (CARB), Air Quality and Land Use Handbook: A Community Health Perspective (April 2005), at ES-1. CARB staff has released draft updates to this siting and design guidance which suggests a greater distance may be warranted under varying scenarios; this document may be found on CARB's website and is entitled: "California Sustainable Freight Initiative: Concept Paper for the Freight Handbook" (December 2019).

III. Community Engagement

Early and consistent community engagement is central to establishing good relationships between communities, lead agencies, and warehouse developers and tenants. Robust community engagement can give lead agencies access to community residents' on-the-ground knowledge and information about their concerns, build community support for projects, and develop creative solutions to ensure new logistics facilities are mutually beneficial. Examples of best practices for community engagement include:

- Holding a series of community meetings at times and locations convenient to members of the affected community and incorporating suggestions into the project design.
- Posting information in hard copy in public gathering spaces and on a website about the project. The information should include a complete, accurate project description, maps and drawings of the project design, and information about how the public can provide input and be involved in the project approval process. The information should be in a format that is easy to navigate and understand for members of the affected community.
- Providing notice by mail to residents and schools within a certain radius of the project and along transportation corridors to be used by vehicles visiting the project, and by posting a prominent sign on the project site. The notice should include a brief project description and directions for accessing complete information about the project and for providing input on the project.
- Providing translation or interpretation in residents' native language, where appropriate.
- For public meetings broadcast online or otherwise held remotely, providing for access and public comment by telephone and supplying instructions for access and public comment with ample lead time prior to the meeting.
- Partnering with local community-based organizations to solicit feedback, leverage local networks, co-host meetings, and build support.
- Considering adoption of a community benefits agreement, negotiated with input from affected residents and businesses, by which the developer provides benefits to the community.
- Creating a community advisory board made up of local residents to review and provide feedback on project proposals in early planning stages.
- Identifying a person to act as a community liaison concerning on-site construction activity and operations, and providing contact information for the community relations officer to the surrounding community.

IV. Warehouse Siting and Design Considerations

The most important consideration when planning a logistics facility is its location. Warehouses located in residential neighborhoods or near other sensitive receptors expose community residents and those using or visiting sensitive receptor sites to the air pollution, noise, traffic, and other environmental impacts they generate. Therefore, placing facilities away from sensitive receptors significantly reduces their environmental and quality of life harms on local

should also consider designing projects with their long-term viability in mind. Constructing the necessary infrastructure to prepare for the zero-emission future of goods movement not only reduces a facility's emissions and local impact now, but it can also save money as regulations tighten and demand for zero-emission infrastructure grows. In planning new logistics facilities, the Bureau strongly encourages developers to consider the local, statewide, and global impacts of their projects' emissions.

Examples of best practices when studying air quality and greenhouse gas impacts include:

- Fully analyzing all reasonably foreseeable project impacts, including cumulative impacts. In general, new warehouse developments are not ministerial under CEQA because they involve public officials' personal judgment as to the wisdom or manner of carrying out the project, even when warehouses are permitted by a site's applicable zoning and/or general plan land use designation. CEQA Guidelines § 15369.
- When analyzing cumulative impacts, thoroughly considering the project's incremental impact in combination with past, present, and reasonably foreseeable future projects, even if the project's individual impacts alone do not exceed the applicable significance thresholds.
- Preparing a quantitative air quality study in accordance with local air district guidelines.
- Preparing a quantitative health risk assessment in accordance with California Office of Environmental Health Hazard Assessment and local air district guidelines.
- Refraining from labeling compliance with CARB or air district regulations as a mitigation measure—compliance with applicable regulations is a baseline expectation.
- Fully analyzing impacts from truck trips. CEQA requires full public disclosure of a project's anticipated truck trips, which entails calculating truck trip length based on likely truck trip destinations, rather than the distance from the facility to the edge of the air basin. Emissions beyond the air basin are not speculative, and, because air pollution is not static, may contribute to air basin pollution. Moreover, any contributions to air pollution outside the local air basin should be quantified and their significance should be considered.
- Accounting for all reasonably foreseeable greenhouse gas emissions from the project, without discounting projected emissions based on participation in California's Cap-and-Trade Program.

Examples of measures to mitigate air quality and greenhouse gas impacts from construction are below. To ensure mitigation measures are enforceable and effective, they should be imposed as permit conditions on the project where applicable.

- Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable

bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.
- Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Forbidding idling of heavy equipment for more than two minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.
- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Providing information on transit and ridesharing programs and services to construction employees.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.

Examples of measures to mitigate air quality and greenhouse gas impacts from operation include:

- Requiring that all facility-owned and operated fleet equipment with a gross vehicle weight rating greater than 14,000 pounds accessing the site meet or exceed 2010 model-year emissions equivalent engine standards as currently defined in California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025. Facility operators shall maintain records on-site demonstrating compliance with this requirement and shall make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring all heavy-duty vehicles entering or operated on the project site to be zero-emission beginning in 2030.
- Requiring on-site equipment, such as forklifts and yard trucks, to be electric with the necessary electrical charging stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.
- Posting both interior- and exterior-facing signs, including signs directed at all

dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the air district, and the building manager.

- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Constructing electric truck charging stations proportional to the number of dock doors at the project.
- Constructing electric plugs for electric transport refrigeration units at every dock door, if the warehouse use could include refrigeration.
- Constructing electric light-duty vehicle charging stations proportional to the number of parking spaces at the project.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity, such as equal to the building's projected energy needs.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Achieving certification of compliance with LEED green building standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants to use carriers that are SmartWay carriers.

- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

VI. Noise Impacts Analysis and Mitigation

The noise associated with logistics facilities can be among their most intrusive impacts to nearby sensitive receptors. Various sources, such as unloading activity, diesel truck movement, and rooftop air conditioning units, can contribute substantial noise pollution. These impacts are exacerbated by logistics facilities' typical 24-hour, seven-days-per-week operation. Construction noise is often even greater than operational noise, so if a project site is near sensitive receptors, developers and lead agencies should adopt measures to reduce the noise generated by both construction and operation activities.

Examples of best practices when studying noise impacts include:

- Preparing a noise impact analysis that considers all reasonably foreseeable project noise impacts, including to nearby sensitive receptors. All reasonably foreseeable project noise impacts encompasses noise from both construction and operations, including stationary, on-site, and off-site noise sources.
- Adopting a lower significance threshold for incremental noise increases when baseline noise already exceeds total noise significance thresholds, to account for the cumulative impact of additional noise and the fact that, as noise moves up the decibel scale, each decibel increase is a progressively greater increase in sound pressure than the last. For example, 70 dBA is ten times more sound pressure than 60 dBA.

Examples of measures to mitigate noise impacts include:

- Constructing physical, structural, or vegetative noise barriers on and/or off the project site.
- Locating or parking all stationary construction equipment as far from sensitive receptors as possible, and directing emitted noise away from sensitive receptors.
- Verifying that construction equipment has properly operating and maintained mufflers.
- Requiring all combustion-powered construction equipment to be surrounded by a noise protection barrier
- Limiting operation hours to daytime hours on weekdays.
- Paving roads where truck traffic is anticipated with low noise asphalt.
- Orienting any public address systems onsite away from sensitive receptors and setting system volume at a level not readily audible past the property line.

VII. Traffic Impacts Analysis and Mitigation

Warehouse facilities inevitably bring truck and passenger car traffic. Truck traffic can present substantial safety issues. Collisions with heavy-duty trucks are especially dangerous for passenger cars, motorcycles, bicycles, and pedestrians. These concerns can be even greater if

truck traffic passes through residential areas, school zones, or other places where pedestrians are common and extra caution is warranted.

Examples of measures to mitigate traffic impacts include:

- Designing, clearly marking, and enforcing truck routes that keep trucks out of residential neighborhoods and away from other sensitive receptors.
- Installing signs in residential areas noting that truck and employee parking is prohibited.
- Constructing new or improved transit stops, sidewalks, bicycle lanes, and crosswalks, with special attention to ensuring safe routes to schools.
- Consulting with the local public transit agency and securing increased public transit service to the project area.
- Designating areas for employee pickup and drop-off.
- Implementing traffic control and safety measures, such as speed bumps, speed limits, or new traffic signs or signals.
- Placing facility entry and exit points on major streets that do not have adjacent sensitive receptors.
- Restricting the turns trucks can make entering and exiting the facility to route trucks away from sensitive receptors.
- Constructing roadway improvements to improve traffic flow.
- Preparing a construction traffic control plan prior to grading, detailing the locations of equipment staging areas, material stockpiles, proposed road closures, and hours of construction operations, and designing the plan to minimize impacts to roads frequented by passenger cars, pedestrians, bicyclists, and other non-truck traffic.

VIII. Other Significant Environmental Impacts Analysis and Mitigation

Warehouse projects may result in significant environmental impacts to other resources, such as to aesthetics, cultural resources, energy, geology, or hazardous materials. All significant adverse environmental impacts must be evaluated, disclosed and mitigated to the extent feasible under CEQA. Examples of best practices and mitigation measures to reduce environmental impacts that do not fall under any of the above categories include:

- Appointing a compliance officer who is responsible for implementing all mitigation measures, and providing contact information for the compliance officer to the lead agency, to be updated annually.
- Creating a fund to mitigate impacts on affected residents, schools, places of worship, and other community institutions by retrofitting their property. For example, retaining a contractor to retrofit/install HVAC and/or air filtration systems, doors, dual-paned windows, and sound- and vibration-deadening insulation and curtains.
- Sweeping surrounding streets on a daily basis during construction to remove any construction-related debris and dirt.
- Directing all lighting at the facility into the interior of the site.

- Using full cut-off light shields and/or anti-glare lighting.
- Using cool pavement to reduce heat island effects.
- Installing climate control in the warehouse facility to promote worker well-being.
- Installing air filtration in the warehouse facility to promote worker well-being.

IX. Conclusion

California's world-class economy, ports, and transportation network position it at the center of the e-commerce and logistics industry boom. At the same time, California is a global leader in environmental protection and environmentally just development. The guidance in this document furthers these dual strengths, ensuring that all can access the benefits of economic development. The Bureau will continue to monitor proposed projects for compliance with CEQA and other laws. Lead agencies, developers, community advocates, and other interested parties should feel free to reach out to us as they consider how to guide warehouse development in their area.

Please do not hesitate to contact the Environmental Justice Bureau at ej@doj.ca.gov if you have any questions.

RESPONSE TO COMMENT LETTER 3

Comment 3-1 Summary of Comment: The commenter introduces the letter and provides a summary of the WRTP Specific Plan and the Draft EIR. The commenter states that the Draft EIR suggests streamlining future development projects and would not reevaluate public comments or reconsider whether additional mitigation strategies are necessary for future projects. The commenter states that LIUNA believes this is in violation of CEQA and limits the City and residents to ensure that signification impacts are assessed for future projects, and if feasible, can become less than significant through mitigation.

Response: The parts of this comment that introduce the comment letter and summarize the Draft Specific Plan do not raise any topics related to the veracity of the Draft EIR. Regarding future environmental review of projects developed under the Specific Plan, as noted on page 1-2 of the Draft EIR, the City will evaluate future projects within the Specific Plan Area for consistency with the Specific Plan and the EIR, will evaluate whether additional CEQA analysis is necessary, complying with CEQA in all respects.

Comment 3-2 Summary of Comment: The commenter states that the City "must" include the requirement that future projects be required to obtain a discretionary conditional use permit, to allowing the City's discretion to adopt specific mitigation measures for future development. The commenter states that this is a feasible mitigation measure required by CEQA to address the significant and unavoidable impacts of the WRTP Specific Plan. The commenter also asserts that the City will be required to "revisit" its finding of significant and unavoidable impacts when it conducts CEQA review of future development projects under *Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98 122-125.

Response: Chapters 3, Environmental Impact Analysis, and 5, Other CEQA Considerations [including Cumulative Impacts Analysis], of the Draft EIR provides analysis of potential impacts and identification of relevant mitigation to address future projects within the WRTP Specific Plan takes into consideration the allowed and anticipated land uses, and the zoning and development standards contained in the WRTP Specific Plan and as detailed in Chapter 2, Project Description, of the Draft EIR. As explained in Chapter 1, Introduction, of this Final EIR, identified in the Final EIR, the Final EIR, once certified with an adopted Mitigation Monitoring and Reporting Program will serve as the environmental document for future projects consistent with, and proposed under the Specific Plan. Future projects will be required to incorporate development standards and other guidance included in the Specific Plan and to implement appropriate mitigation measures included as a part of the Mitigation Monitoring and Reporting Program. Mitigation measures recommended in the Draft EIR for adoption by the City, should it approve the WRTP Specific Plan, will be imposed as conditions of approval for any development under the Specific Plan and thus will apply to future projects, in accordance with the Mitigation and Monitoring Plan provided as Appendix A to this Final EIR. No provision of *Communities for a Better Environment v. Cal. Resources Agency* (2002) 103 Cal.App.4th 98 concerns the City requiring future development projects to receive conditional use permit, nor is a requirement for a discretionary permit a form of mitigation, as a discretionary permit does not, per se, constitute mitigation. (Public Resources Code §§21002.1(a), 21100(b)(3); CEQA Guidelines §15126.4(a)(1).) There is no need to revise the Specific Plan or the Draft EIR in response to any part of this comment.

Comment 3-3 Summary of Comment: The commenter states the City has an obligation to include one or more alternatives that would require Conditional Use Permits (CUPs) and not permit certain uses by right in the WRTP Specific Plan. The commenter states that this will reduce the significant impacts of the WRTP Specific Plan since additional feasible mitigation measures for future developments would be considered and ensure public review of these projects.

Response: In compliance with CEQA the EIR identifies and evaluates a range of alternatives consistent with criteria in CEQA Guidelines Section 15126.6, including (1) the ability of the alternative to attain most of the basic project objectives, (2) the potential feasibility of an alternative, and (3) ability of the alternative to avoid or substantially reduce one or more significant environmental effects of the proposed project. The alternatives were developed to consider permutations under which the City could reduce the significant impacts of the WRTP Specific Plan through their different range and distribution of land uses, as well as, in some cases, via implementation of siting restrictions to avoid sensitive land uses or minimize impacts to sensitive receptors. The alternatives analysis presented in Chapter 4 of the Draft EIR does assess and contrast the potential impacts of the alternatives and the proposed WRTP Specific Plan to identify in what way an alternative may be able to avoid or reduce the potentially significant impacts of the proposed WRTP Specific Plan, consistent with guidance in the CEQA statutes and Guidelines. Please see also the response to comment 3-2 related to the WRTP Specific Plan's direction for future projects under current CEQA Guidelines, which was accounted for in the identification of feasible alternatives. Please see also response to comment 3-1.

Changes related to the future administrative process for future developments within the Specific Plan Area would not change the impact analysis or mitigation presented in the Draft EIR since the analysis makes specific assumptions regarding land uses anticipated under the Specific Plan regardless of the nature of the future approval process. As explained in Chapter 1, Introduction, of this Final EIR, mitigation imposed by the Draft EIR become conditions of approval for the Specific Plan as a whole and will apply to future projects regardless of whether future projects are approved by right or through an administrative zoning approval or through a conditional use permit process. The Mitigation and Monitoring Plan, which is provided as Attachment A to this Draft EIR, identifies the timing and responsibility of mitigation to ensure enforcement. To the extent that any uses that were not anticipated by the Specific Plan and EIR are proposed in the future, the City will comply with CEQA in evaluating such proposals. As such, commenter's proposed alternative is not considered as considerably different than those analyzed. No changes to the Draft EIR are needed.

Comment 3-4 Summary of Comment: The commenter states that wildlife biologist Shawn Smallwood, Ph.D., and environmental consulting firm Soil/Water/Air Protection Enterprise ("SWAPE") provided review of the Draft EIR and contributed to the comments contained in this comment letter from LIUNA and that comments from and curriculum vitae of these parties are attached to the letter and incorporated into the letter by reference.

Response: The fact that Dr. Smallwood and SWAPE have contributed to the comments is noted. Specific responses to comments provided by LIUNA, including those incorporating comments from the above noted parties are provided in the responses to comments 3-5 through 3-28.

Comment 3-5 Summary of Comment: The commenter provides a summary of legal concepts related to CEQA.

Response: The information provided by the commenter is noted. The Draft and Final EIR incorporate all relevant statutory, regulatory, and case law guidance. No revision to the Draft EIR in response to this general recitation of legal concepts is needed, nor would it be appropriate.

Comment 3-6 Summary of Comment: The commenter states that the Draft EIR fails to discuss all potentially feasible mitigation measures available to address the project's significant air quality impacts resulting from its operation. The commenter states that all mitigation measures concerning air pollution impacts, besides one, only address impacts during construction. The commenter provides a list of additional feasible mitigation measures identified as example measures to mitigate air quality and greenhouse gas impacts from operations of warehouse projects in the California Attorney General's *Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act*, and asserts that the Draft EIR must be recirculated in order to evaluate, consider, and, where feasible, adopt these measures. The comment goes on to assert that all 19 example measures are feasible for future development within the Research and Technology Park of the Specific Plan Area and therefore should be adopted and made enforceable in order for the City to make a finding of overriding considerations.

Response: As noted by the California Attorney General's Bureau of Environmental Justice in its *Warehouse Projects: Best Practices and Mitigation Measures to* Comply *with the California Environmental Quality Act*, the document "is meant to help lead agencies pursue CEQA compliance and promote environmentally-just development as they confront warehouse project proposals." The document acknowledges that CEQA analysis is "necessarily project-specific" but that the document "provides information on feasible best management practices and mitigation measures, the overwhelming majority of which have been adapted from actual warehouse projects in California." This guidance from the Attorney General is not presented as mandatory mitigation, nor does it assert that the example mitigation measures are feasible for all projects.

The estimating of mass emissions was done at a detailed level for the purposes of analysis and to the extent feasible to represent anticipated future development and related operational uses within the WRTP Specific Plan Area. However, the emissions estimates presented in Tables 3.3-3 and 3.3-5 of the Draft EIR are not presumed to demonstrate all possible future operational uses and are instead intended to present a worst-case scenario, including conservative estimates with regard to mobile source emissions, as explained on pages 3.3-23 and 3.3-30 of the Draft EIR. It is true that the Specific Plan may be developed with a range of uses that have emissions and impacts that are lower than outlined in the Draft EIR.

The WRTP Specific Plan allows for a range of land uses within the Research and Technology Park designation, one of which in the Draft WRTP Specific Plan was warehouse, storage, and distribution/logistics. The intent of the Draft WRTP Specific Plan to include "Warehouse, Storage and Distribution / Logistics" as a permitted use was to provide for this use only as an ancillary use to support other related uses. Notes 10 and 11 of Table 3.1 of the Draft WRTP Specific Plan provided specific constraints to the warehouse, storage, and distribution/logistics permitted and ancillary uses. Note 10 indicated that "commercial and/or private 'mini-

storage'/'self-storage' is prohibited," and Note 11 indicated that this use was "only permitted as incidental/ancillary to primary business/company operations; not more than 50 percent of primary building square footage." The WRTP Specific Plan has since been updated to eliminate "Warehouse, Storage and Distribution / Logistics" use type from Table 3.1 of the WRTP Specific Plan; it is not provided as a permitted use under the Final Specific Plan. In addition, the WRTP Specific Plan includes development standards to address sustainability requirements and implementation of future development, including measures to achieve the Specific Plan's goal to strive for zero net energy consumption, as outlined in the City's 2035 Climate Action Plan. These measures include energy efficient building design and mobility features, consistent with measures recommended in the Attorney General's guidance for warehouse projects. As noted in Section 3.3.1 of the Specific Plan, all uses in the WRTP Specific Plan Area are required to adhere to Performance Standards in Section 3.3.2 of the WRTP Specific Plan and are also required to demonstrate consistency with the City's 2035 Climate Action Plan, which includes reduction strategies that would further reduce indirect emissions related to energy efficient lighting, building energy efficiency, temperature controls, renewable energy generation, transit service, bicycling and pedestrian access, electric vehicle charging stations, and tree planting. A "Truck Trips" Performance Standard has been added to Section 3.3.2 of the WRTP Specific Plan in order to limit daily truck trips to no more than 50 one-way diesel-powered truck trips per day. This proposed limit is one-fourth of the truck trip rate that California Air Resources Board includes in its reference to the siting of a "distribution center" with respect to sensitive receptors in the California Air Resources Board Air Quality and Land Use Handbook (ARB 2005), which is also considered conservative because this guidance was published in 2005 based on emissions standards that have since been substantially.

Furthermore, as described on page 3.3-24 of the Draft EIR, consistent with General Plan Policy 2.L.2, the WRTP Specific Plan is intended to be implemented in a manner that encourages "sustainable development through the use of renewable energy sources and water conservation tools with the goal of striving to achieve zero net energy at the building and neighborhood level to the extent feasible." Section 2.2.3 of the WRTP Specific Plan outlines the WRTP Specific Plan's sustainability principles and consistency with related policies of the 2035 General Plan and Climate Action Plan that implement this goal. In particular, these policies require new development be consistent with the City's Climate Action Plan, including the goal of achieving zero net energy at the building and neighborhood level, using trees for cooling and related energy conservation, providing for alternative fueling and electric vehicle charging throughout residential and non-residential garages and parking lots, incorporation of Transportation Demand Management tools and programs to reduce total vehicle miles travelled (VMT) generated by operations within the WRTP Specific Plan Area. Applying these policies to implementation of the WRTP Specific Plan would result in a reduction of long-term emissions of criteria air pollutants, particularly from energy and mobile sources. These policies and approach to development within the WRTP Specific Plan Area is relevant for all future development projects and operations, not only potential warehouse land uses, but is also consistent with the intent of the Attorney General's guidance that is specific to warehousing operations.

The mitigation imposed through the Draft EIR is designed to apply to a range of future uses that are allowed under the Specific Plan and anticipated for development under the Specific Plan, with appropriate performance standards. For example, Mitigation Measure 3.3-3c requires future projects to achieve less than 10.0 in a million excess cancer cases for the Maximally Exposed Individual and less than a 1.0 Hazard Index (chronic or acute) non-cancer risk (Draft EIR, page 3.3-41). Mitigation measures imposed by the EIR will be required regardless of whether future projects are approved by right, through a zoning administrator approval, through the conditional use permit process, or by other means.

Site plan and design review for non-residential uses that require a zoning administrator approval or conditional use permit will be considered in conjunction with the review of required permits, which would generally be considered discretionary for the purposes of CEQA. Development allowed by right is only allowed as permitted by law and future environmental approvals. If uses that were not anticipated by the Specific Plan and EIR are proposed in the future, or if uses that propose development beyond the amounts allowed under the Specific Plan are proposed, or if the circumstances or conditions changed as provided in CEQA Guidelines Section 15162, the City will follow relevant guidance related to supplemental or subsequent environmental review, including consideration of feasible mitigation.

As explained in the introduction of California Attorney General's *Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act*, the mitigation measures contained therein, and referenced by the commenter, were developed building upon the Attorney General's Bureau of Environmental Justice's comment letters on and collecting knowledge gained from the Bureau of Environmental Justice's review of hundreds of warehouse projects across the state in order to "help lead agencies pursue CEQA compliance and promote environmentally-just development as they confront warehouse project proposals." As stated above, the Final WRTP Specific Plan has been revised to make clear that warehousing is not a permitted use and that any land use within the WRTP Specific Plan area would be held to truck trip limits and gross square footage to ensure that diesel emissions would not compare to the levels generated by the truck traffic intensity for which the Attorney General's recommendations were developed. Furthermore, Mitigation Measure 3.3-3b requires those guidelines of the CARB *Air Quality and Land Use Handbook: A Community Health Perspective* (2005), and subsequent *Technical Advisory (2017)* be implemented for new development within the WRTP Specific Plan area. These guidelines include 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); the Final WRTP Specific Plan Performance Standard E (Section 3.3.2 of the Final WRTP Specific Plan) is consistent with this guidance.

Therefore, the City's existing General Plan policies, Climate Action Plan implementation measures, and Final WRTP Specific Plan Design Standards and Specifications, along with proposed mitigation in the EIR and the City's discretionary review and approval of future projects within the WRTP Specific Plan Area ensure that future projects will reduce long-term operational emissions to the extent feasible.

While the City has imposed all feasible mitigation, it is acknowledged that a significant and unavoidable impact would remain. This is consistent with the City's obligations under CEQA. No change to the Draft EIR is needed, nor would any change be appropriate. No revision to the EIR mitigation measures have been made or are necessary.

Comment 3-7 Summary of Comment: The commenter states that the Draft EIR fails to discuss all potentially feasible mitigation measures available to address the project's significant air quality impacts resulting from its construction. The commenter provides a list of additional feasible measures identified by the Attorney General and claims that the City must adopt and make enforceable these measures in order for the City to make a finding of overriding considerations.

Response: Please see the response to comment 3-6 with regard to the purpose and enforceability of recommendations of the California Attorney General's Bureau of Environmental Justice *Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California* Environmental *Quality Act*. As detailed in Mitigation Measure 3.3-2a, the identified mitigation measures are recommended by the lead agency for the County responsible for overseeing air quality, Yolo-Solano Air Quality Management District. However, the mitigation measure does not limit the required mitigation measures to that list, rather it extends to "those [measures] determined by the City to be as effective."

Furthermore, as the mitigation measures from the California Attorney General's Bureau of Environmental Justice *Warehouse Projects* white paper, and referenced by the commenter, could be applicable to construction projects in general and not only warehousing projects, these additional mitigation measures have been reviewed and considered for applicability, feasibility, and enforceability, and incorporated into the EIR as a revision to Mitigation Measure 3.3-2a.

1. Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier 4 Final engines, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

2. Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.

3. Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.

4. Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.

5. Limiting the amount of daily grading disturbance area. Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.

6. Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.

7. Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.

8. Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.

9. Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.

Comment 3-8 Summary of Comment: The commenter claims that the Draft EIR fails to discuss all potentially feasible mitigation measures available to address the project's significant noise impacts resulting from construction and operational activities of the implementation of the WRTP Specific Plan. The commenter acknowledges that the Draft EIR identifies several noise mitigation measures but, even with implementation of mitigation, finds potential noise impacts to be significant and unavoidable. states that all mitigation measures concerning air pollution impacts, besides one, only address impacts during construction.

Response: Mitigation Measure 3.11-1 has been reviewed. The construction hour limitations included with this mitigation measure are consistent with City policy and ordinance guidance and have not been revised. Additional mitigation has been incorporated into Mitigation Measure 3.11-1, as suggested by the commenter, including the following (see also Chapter 3, Errata, of this Final EIR, as well as the Mitigation Monitoring and Reporting Plan provided as Appendix A to this Final EIR):

- Further limiting idling time of noise-generating vehicles and equipment to 2 minutes, rather than 5 minutes.

- Where construction work is within 445 feet of properties with existing, occupied noise-sensitive uses, construction shall be prohibited on weekends and holidays and construction should start no earlier than 8 a.m.

- Where non-residential construction work is within 445-feet of an existing off-site residence, installation of continuous noise curtains shall be required between the construction site and those residences.

Comment 3-9 Summary of Comment: The commenter states that the Draft EIR fails to disclose the potentially feasible mitigation measure that large commercial development projects within the WRTP be conditioned on obtaining a CUP and ensure the City and the public have an opportunity to review additional feasible mitigation measures to address unavoidable significant impacts identified in the Draft EIR. The commenter asserts that requiring a CUP for future proposed developments within the Specific Plan Area would mitigate unavoidable air quality and noise impacts for the Project.

Response: Please see the responses to comments 3-1 and 3-2.

Comment 3-10 Summary of Comment: The commenter states that the Draft EIR fails to consider an Alternative to the WRTP Specific Plan that requires large commercial development projects within the WRTP be conditioned on obtaining a CUP. The commenter also states that providing Alternative versions of the Specific Plan that require

the use of CUPs for non-residential uses must be included in the Draft EIR to evaluate a reasonable range of alternatives and allow for informed decision making.

Response: Please see the responses to comments 3-1 through 3-3.

Comment 3-11 Summary of Comment: The commenter states that the Draft EIR does not address adequately the project's impacts on wildlife, and that Dr. Smallwood believes that the efforts to identify a meaningful baseline of wildlife values in and adjacent to the Specific Plan were inadequate. The commenter provides a summary of the three visits by Dr. Smallwood to the Project site and the findings and conclusions.

Response: The biological resources impacts of the WRTP Specific Plan and future projects within the Specific Plan Area and off-site improvement areas are evaluated in detail in Draft EIR Section 3.4, "Biological Resources." As described in Draft EIR Section 3.4.4 "Thresholds of Significance," the CEQA Guidelines Appendix G (14 California Code of Regulations 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on biological resources, and those criteria were used for this project.

Baseline wildlife use of the site was determined through desktop database review and also through field reconnaissance surveys in order to assess land cover types and special-status species habitat within the Specific Plan Area and off-site improvement areas. Results of these reconnaissance surveys are provided in Section 3.4.1 of the Draft EIR, which provides information about land cover types and special status species habitat in the WRTP Specific Plan Area and off-site improvement areas in order to define baseline site conditions to identify potential species that may be impacted by the project, to inform the need for future focused preconstruction species-specific surveys for avoidance and minimization of potential impacts on such species, and to quantify the direct loss of wildlife habitat as a result of buildout of the WRTP Specific Plan. The results of database review and biological surveys are presented in Section 3.4.2 "Environmental Setting" of the Draft EIR and include complete descriptions and mapping of all habitats in the Specific Plan Area and off-site improvement areas, including lists of existing vegetation and use of the site by common and special-status species. Section 3.4.2 accurately and completely describes the project site as having been altered by agricultural development and undergoing regular disturbance related to agricultural activities, and states that numerous common and special-status species may use the site for forage, cover, and/or nesting purposes.

A point-in-time list of wildlife species observed during a single survey effort, such as what was done by Dr. Smallwood on June 28-30, 2021, is not as informative to the baseline evaluation of the WRTP Specific Plan Area as the methods used in the Draft EIR given that the site is regularly disturbed by agricultural operations and wildlife use of the site is likely to change depending on time of year, type of crop in rotation, and level of disturbance at the time of the survey. Instead, the Draft EIR uses a habitat-based approach that conservatively identifies and evaluates impacts on species known to occur onsite (based on the desktop database review) and also species that may occur (based on the presence of suitable habitat), rather than only the species detected during a survey at a point in time. The Draft EIR describes that agricultural lands provide important habitat for common and special-status species, and provide greater habitat values than urban areas and developed land. The impact analysis presented in the Draft EIR assumes use of

the site by Swainson's hawk, white-tailed kite, northern harrier, and other special status birds, and that the site also provides nesting opportunities for raptors and other birds.

More specifically, the Draft EIR's impact analysis is based on reconnaissance-level site visits conducted by qualified biologists in 2017 and 2019 to identify the presence of land cover and habitat that could support special-status species within or adjacent to the WRTP Specific Plan Area and the off-site improvement areas, and a desktop database review of the California Natural Diversity Database (CNDDB) and U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) search results in 2019 to identify species known to occur within or adjacent to the project site. The Draft EIR's use of a potential-for-occurrence based approach conservatively evaluates impacts on species for which suitable habitat is present, as opposed to conducting protocol level surveys to determine which species are present and may be affected by the project. This potential-for-occurrence type of approach typically results in a more inclusive, conservative analysis of species potentially affected. As such, all 7 special-status species detected during surveys by Dr. Smallwood are evaluated for impacts from the project in the Draft EIR and mitigation proposed (See Impacts 3.4-1 and 3.4-2). In addition to the Mitigation Measures adopted in the 2035 General Plan EIR, the WRTP Specific Plan Draft EIR also contains eight additional mitigation measures designed to provide additional protection to special-status biological resources that are known to occur or may occur in the off-site improvement areas. See Response to Comment 3-14 below and Draft EIR Section 3.4.4 "Environmental Impacts and Mitigation Measures" for more detail. The commenter notes that loggerhead shrike could be present in the project area based on his personal experience observing them near the project site. The commenter also notes that Northern harrier could potentially nest in the project area. The potential for occurrence Table 3.4-4 from Section 3.4, "Biological Resources," of the EIR has been updated and this change provided in Chapter 3, "Errata" of this Final EIR to include these species. Impacts to these species are already addressed in in Impact 3.4-2 and Mitigation Measures 3.4-2a and 3.4-2b would avoid direct loss of protected bird nests and compensate for habitat loss. The commenter also points out that the tricolored blackbird has been listed under the California Endangered Species Act as threatened since 2018. At the time of the Notice of Preparation in 2017, the tricolored blackbird was listed as a candidate species under the California Endangered Species Act and is identified as such in the Draft EIR (Table 3.4-4). The listing status of the tricolored blackbird has been updated, as provided in Chapter 3, Errata, of this Final EIR, to reflect its current listing status. These revisions do not change the findings, conclusions, or recommendations of the Draft EIR.

Comment 3-12 Summary of Comment: The commenter states that the wildlife baseline described in the Draft EIR is inadequate and omits numerous special status species observed by Dr. Smallwood on and adjacent to the Project site. The commenter also claims that this makes the Draft EIR insufficient as an information document pursuant to CEQA.

Response: Section 3.4.2 "Environmental Setting" of the Draft EIR establishes the baseline that agricultural lands provide important habitat for common and special-status species, and states that they generally provide greater habitat values than urban areas and developed land. The impact analysis presented in the Draft EIR assumes use of the site by special status raptors listed in Table 3.4-4, and acknowledges that the site also provides nesting opportunities for raptors and

other birds, which are inclusive of the species observed by Dr. Smallwood. No protocol-level species-specific surveys were conducted for the WRTP Specific Plan Area and off-site improvement areas because the suitable habitat potential-for occurrence based approach used in the Draft EIR provided a more conservative (i.e., inclusive) assessment of potential impacts, and because each future project proposed under the WTRP Specific Plan will be required to carry out species-specific preconstruction surveys in accordance with the mitigation measures identified in Section 3.4.4 of the Draft EIR. Because site occupancy by a particular species may vary over time, especially given the noted disturbances to agricultural lands within the project site and potential for crop rotations including fallow fields at times, it is more appropriate to require preconstruction protocol-level surveys for raptors and other nesting birds at the time of each future project's implementation (such as the mitigation measures currently require) to ensure a more accurate identification of baseline nesting activity and appropriate avoidance and mitigation at the time of impact. Impacts to federal trust species, common raptors, and migratory birds mentioned specifically in the commenter's letter are addressed under Impact 3.4-2 (Special-Status and Migratory Nesting Birds and Raptors) in Draft EIR Section 3.4.4 "Environmental Impacts and Mitigation Measures," because specifically-mentioned species are either special-status or migratory nesting birds or raptors. Implementation of Mitigation Measures 3.4-1a – 3.4-1c requires focused preconstruction surveys for Swainson's hawk, white-tailed kite and burrowing owl, and will ensure that foraging habitat would be preserved at the appropriate ratio of habitat value lost. Implementation of Mitigation Measures 3.4-2a and 3.4-2b will ensure that all nesting birds and raptors, including the common and special-status species noted in the commenter's letter, will be protected in accordance with the Migratory Bird Treaty Act and the California Fish and Game Code.

The City appreciates the additional bird observation and nest location information provided in the commenter's attachments. Dr. Smallwood reported observation of the following seven special-status species as a result of visual surveys of the WRTP Plan Area: three raptor species that are protected by Fish and Game Code Section 3503.5 (red-tailed hawk, American kestrel, and barn owl); one California Department of Fish and Wildlife (CDFW) fully-protected species (white-tailed kite); and two species listed as threatened under the California Endangered Species Act (Swainson's hawk and tricolored blackbird). Dr. Smallwood also reported another 32 common wildlife species, including ground squirrel, black-tailed jackrabbit, coyote, and numerous migratory birds. These observations are consistent with Section 3.4.2 "Environmental Setting", which states that several species of raptors, common birds, and mammals are associated with habitats within the study area, and that agricultural lands in the site provide important habitat for common and special status raptors, including Swainson's hawk, white-tailed kite, northern harrier, and burrowing owl. The commenter points out that the tricolored blackbird has been listed under the California Endangered Species Act as threatened since 2018. At the time of the Notice of Preparation in 2017, the tricolored blackbird was listed as a candidate species under the California Endangered Species Act and is identified as such in the Draft EIR (Table 3.4-4). The listing status of the tricolored blackbird has been updated, as provided in Chapter 3, Errata, of this Final EIR, to reflect its current listing status. This revision does not change the findings, conclusions, or recommendations of the Draft EIR.

Comment 3-13 Summary of Comment: The commenter states the Draft EIR fails to address impacts of habitat loss to bird species.

Response: Impact analysis was based on the conservative assumption that ***all*** existing vegetation could be removed and that all existing habitat functions would be lost. Habitat loss to bird species is addressed in Section 3.4.4 under Impact 3.4-2 "Special-status and Migratory Nesting Birds and Raptors." Compensatory mitigation for modifications to habitats that are suitable for special status species, including nesting birds, are addressed under mitigation measures proposed for the loss of nesting and foraging habitat for Swainson's hawk (Mitigation Measure 3.4-1b) in Section 3.4.4 of the Draft EIR, which proposes compensatory mitigation for the loss of nesting and foraging habitat for Swainson's hawk; this mitigation would also cover the loss of suitable nesting and foraging habitat for other special-status and migratory birds. Furthermore, as discussed in Chapter 3.2 "Agriculture and Forestry Resources", project applicants for future projects proposed within the WRTP Specific Plan Area are required to replace Prime Farmland at a 1:1 ratio for lands within the City and 3:1 for lands within the County commensurate with the quantity and quality of the converted farmlands, within the same agricultural regions as the impacts occur, that could also provide suitable nesting and foraging habitat for special-status raptors and other birds. Given that the impact assessment within the Draft EIR is conservative and may even overstate actual impacts, no change to the Draft EIR is needed.

Comment 3-14 Summary of Comment: The commenter claims the Draft EIR's sole reliance on the Yolo County Habitat Conservation Plan (HCP) to mitigate wildlife impacts is not supported by substantial evidence and is insufficient as a matter of law. The commenter asserts that relying solely on the Yolo County HCP creates shortfalls to the cumulative impact analysis, and that there is an absence of information explaining the effect of HCP in achieving habitat goals.

Response: The WRTP Specific Plan Draft EIR was developed to be consistent with the Yolo HCP/NCCP, as required by Item 6 of the environmental checklist in Appendix G of the CEQA Guidelines, as amended, which states that a proposed project "would result in a significant impact related to biological resources if it would conflict with the provisions of an adopted HCP, natural community conservation plan, or other approved local, regional, or state HCP." Because the WRTP Specific Plan Area is within the Yolo HCP/NCCP coverage area, each project within the WRTP Specific Plan Area and Off-site Improvement Areas must apply for HCP/NCCP coverage prior to grading permit issuance and the avoidance, minimization, and mitigation measures included in the Draft EIR must be, and are, consistent with the Yolo HCP/NCCP. However, these mitigation measures do not rely solely on the Yolo HCP/NCCP to mitigate wildlife impacts. In addition to the provisions of the Yolo HCP/NCCP, all project-related work would be subject to the City of Woodland's uniformly applied development standards (CEQA Guidelines Section 15183[f][7]). Uniformly applied development standards include the 2035 General Plan, the Climate Action Plan, existing City regulations and standards, design review requirements, and impact fee programs. Furthermore, a suite of eight different mitigation measures specifically designed to protect wildlife and associated habitat related to buildout of the WRTP Specific Plan Area and off-site improvement areas would be implemented as part of future development projects. These mitigation measures would also protect wildlife species not covered in the HCP (i.e. yellow-billed magpie) and include the following:

- Mitigation Measure 3.4-1a: Minimize Take and Adverse Effects on Habitat of Swainson' Hawk and White-Tailed Kite.

- Mitigation Measure 3.4-1b: Comply with Yolo HCP/NCCP Requirements for Compensation for Loss of Swainson's Hawk Foraging Habitat.

- Mitigation Measure 3.4-1c: Minimize Take and Adverse Effects on Western Burrowing Owl.

As noted on pages 3.4-29 and 3.4-30 of the Draft EIR, implementing Mitigation Measures 3.4-1a through 3.4-1c would reduce significant impacts on Swainson's hawk, white-tailed kite, and burrowing owl to a less-than-significant level because it would ensure that these species are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young or result in decreased reproductive success of Swainson's hawks, white-tailed kites, or burrowing owls. These measures would also ensure that Swainson's hawk foraging habitat would be preserved at the appropriate ratio of habitat value lost, consistent with the strategy of the Yolo HCP/NCCP, which would also benefit other sensitive and common bird species that utilize this habitat for foraging.

- Mitigation Measure 3.4-2a: Avoid Loss of Protected Bird Nests.

- Mitigation Measure 3.4-2b: Implement Mitigation Measures 3.4-1b

As noted on pages 3.4-31 and 3.4-32 of the Draft EIR, implementing Mitigation Measure 3.4-2 would avoid disturbing birds during nesting so that project construction would not result in nest abandonment and loss of eggs or young and would ensure compliance with the MBTA and CDFG Code. Mitigation 3.4-2b would require developers for each individual project within the WRTP Specific Plan Area to apply for the HCP/NCCP coverage and payment of development-based fees to fund mitigation that will offset losses of land cover types, covered species habitat, and other biological values. Implementation of Mitigation Measure 3.4-2b would reduce significant impacts on foraging habitat for tricolored blackbird (as well as yellow-billed magpie and other sensitive bird species) and wintering habitat for mountain plover to a less-than-significant level because it would ensure that foraging habitat (i.e., 310 acres of cultivated lands) would be preserved at the appropriate ratio of habitat value lost, consistent with the conservation strategy of the Yolo HCP/NCCP (Yolo Habitat Conservancy 2018). Therefore, there would not be a negative cumulative impact.

- Mitigation Measure 3.4-3: Minimize Take and Adverse Effects on Habitat of Valley Elderberry Beatle.

As noted on page 3.4-34 of the Draft EIR, implementing Mitigation Measure 3.4-3 would reduce potentially significant impacts on VELB to a less-than-significant level because all elderberry shrubs would be mapped and impacts would be avoided and if impacts cannot be avoided, compensatory mitigation will be required. The WRTP Specific Plan will be implemented in accordance with the Yolo HCP/NCCP avoidance and minimization measures. Therefore, with incorporation of HCP/NCCP equivalent mitigation and adherence to other HCP/NCCP

avoidance and minimization measures, WRTP Specific Plan's individual impacts and its contribution to cumulative impacts to covered species would be less than significant.

- Mitigation Measure 3.4-4: Avoid Direct Loss of Bat Roosts and Special-status Bats.

As noted on page 3.4-35 of the Draft EIR, implementing Mitigation Measure 3.4-4 would reduce potentially significant impacts on bat roosts and special-status bat species, including pallid bat and western red bat, to a less-than-significant level because appropriate avoidance minimization measures will be implemented, such as preconstruction surveys, delaying removal of roost habitat until end of maternity season (August 31) or until the young are capable of flights in consultation with CDFW, and having a qualified biological monitor present during removal of habitat trees or structures.

- Mitigation Measure 3.4-5: Avoid Loss of and Degradation of Federally Protected Waters.

As noted on page 3.4-36 of the Draft EIR, implementing Mitigation Measure 3.4-5 would reduce potentially significant impacts on potentially jurisdictional water features, to a less-than-significant level because implementation of the BMPs, permit conditions, and mitigation requirements will avoid, minimize, and mitigate for impacts on jurisdictional waters.

(see Draft EIR Section 3.4.4 "Environmental Impacts and Mitigation Measures" for more detail).

The commenter notes that populations of burrowing owl breeding pairs and white-tailed kite breeding pairs in the County have declined over the past 25-27 years, and that there is no substantial evidence supporting the assumption that implementation of the HCP will mitigate the Project's cumulative impacts on these species. The Draft EIR does not rely solely on the HCP/NCCP and includes mitigation measures as described above (Mitigation Measures 3.4-1a – 3.4-1c) to avoid, mitigate, and compensate for impacts to these species.

As for the commenter questioning the status of implementation and performance trends of the HCP, the HCP/NCCP is a newly approved (2018) 50-year program and implementation is just getting underway. It is supported by CDFW and USFWS and this approach benefits natural resources at the landscape level. There is no substantial evidence at this point, and it would be considered speculative, that the HCP/NCCP and the mitigation measures included in this Draft EIR are insufficient to address cumulative impacts on burrowing owl, white-tailed kite, or Swainson's hawk.

No change to the Draft EIR is needed.

Comment 3-15 Summary of Comment: The commenter states that the Draft EIR fails to adequately analyze the project's impacts on wildlife movement. The commenter identifies that the Draft EIR must account for wildlife movement that includes stopover habitat and staging habitat for wildlife.

Response: Potential stop-over and foraging habitat for birds along the Pacific Flyway as addressed in Draft EIR Impact 3.4-6. As discussed in Impact 3.4-6, the WRTP Plan Area consists of open

agricultural land used for row crops, and abundant agricultural habitat of equal or better value (for migrating birds on the Pacific Flyway) is available surrounding the WRTP Specific Plan Area. Migratory routes associated with the Cache Creek, Willow Slough, and Yolo Bypass riparian corridors will not be affected by the proposed project. Furthermore, the WRTP Specific Plan Area and off-site improvement areas are 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 change to the Draft EIR is needed.

Comment 3-16 Summary of Comment: The commenter states that the Draft EIR fails to address the impacts on wildlife from additional traffic generated by the project, specifically, the potentially significant impact on wildlife that could occur due to possible increased vehicle collisions with special-status species.

Response: The loss of species as a result of buildout of the WRTP Specific Plan is already addressed through evaluation of project-related impacts in Section 3.4.4 of the Draft EIR, which assumes total loss of existing habitats. The WRTP Specific Plan Area is surrounded by roadways, including State Route 113 immediately to the west, that pose existing unquantified traffic threats to wildlife that may use the site or surrounding areas. Speculating on additional cumulative impacts on any remaining wildlife and/or wildlife that may be attracted to the site after buildout of the Specific Plan Area, and speculating on the potential future use of the site by wildlife and possible new traffic-related threats after buildout of future projects, is not consistent with the purpose or requirements of CEQA. The commenter is referring to an animal crossing the road and getting hit by a vehicle or a flying bird getting hit by a vehicle, which would not be significant. Analysis of vehicle traffic on wildlife in an urban setting is focused on those situations in which special-status species may regularly move from between suitable habitat, such as for breeding, and be hindered as a result of roadway crossings. In the case of the WRTP Specific Plan Area, the only special-status species in the area are birds that can fly out of harm's way and there are no unusual obstacles or traffic conditions proposed by the Specific Plan that would preclude such. It would be speculative to try and determine if and how many mortalities of special-status birds there might be due to an incremental increase in regional traffic created by the project. No change to the Draft EIR is needed.

Comment 3-17 Summary of Comment: The commenter states that the project may have significant environmental impacts by causing fatal bird strikes on its structure and windows, and to be legally sufficient, the Draft EIR must include an analysis of the likely magnitude of bird collisions with the project, as well as the particular species that would be most likely to collide, and be evaluated for direct and cumulative impacts of bird fatalities.

Response: The loss of species as a result of buildout of the WRTP Specific Plan is adequately and comprehensively addressed through project-related impacts, as described in Section 3.4.4 of the Draft EIR, which assumes total loss of existing habitats. Speculating on additional cumulative impacts on any remaining wildlife and/or wildlife that may be attracted to the site after buildout of the Specific Plan Area, and speculating on the potential future use of the site by wildlife and possible new threats, such as bird window collisions, after buildout of future projects, is not consistent with the purpose or requirements of CEQA. No change to the Draft EIR is needed.

Comment 3-18 Summary of Comment: The commenter states that the Draft EIR fails to analyze the impacts of house cats on wildlife, specifically, the project will likely introduce house cats to the project site that will prey upon birds and small mammals, and could contribute to the downstream loading of Toxoplasma gondii, a parasite in which definitive hosts are cats.

Response: The loss of species as a result of buildout of the WRTP Specific Plan is adequately and comprehensively addressed through evaluation of project-related impacts, as described in Section 3.4.4 of the Draft EIR, which assumes total loss of existing habitats. The WRTP Specific Plan Area is bordered to the east and north by the existing Spring Lake development that already poses an existing unquantified threat to wildlife via the presence of outdoor cats, all of whom may already move through the site. Speculating on additional cumulative impacts on any remaining wildlife and/or wildlife that may be attracted to the site after buildout of the Specific Plan Area, and speculating on the potential future use of the site by wildlife and possible addition of cats after buildout of future projects, is not consistent with the purpose or requirements of CEQA. No change to the Draft EIR is needed.

Comment 3-19 Summary of Comment: The commenter states that the Draft EIR's estimate of air pollutant emissions is inconsistent with information presented in the Draft EIR and underestimates emissions that would result from the Specific Plan. The commenter includes claims of inconsistency and lack of substantial evidence for emissions estimating methodology, as identified in further comments below.

Response: The emissions estimates included in the Draft EIR use the best available information and industry accepted modeling methodology to analyze air pollutant emissions and related impacts, supported by substantial evidence. Specific responses to comments related to air pollutant emissions estimates are provided below in responses to comments 3-20 through 3-28.

Comment 3-20 Summary of Comment: The commenter states that the Draft EIR's air quality models use unsubstantiated reductions to land use sizes. Specifically, that in the project's California Emissions Estimator Model (CalEEMod) output files, found that the air model made reductions to land use sizes than what was proposed in the Draft EIR, without providing justification to the change.

Response: The estimate of total non-residential square footage provided on page 2-7 of the Draft EIR, as referenced by SWAPE in the comment letter, is an estimate based on developable land within the WRTP Specific Plan Area and allowable land uses and development standards included in the WRTP Specific Plan. The acreage and square footage estimates used to inform the land use inputs to CalEEMod were based upon more detailed land use planning exercises to reflect permitted land uses, as well as a more detailed understanding of circulation, utility, open space, and buffer areas that will be integrated in the WRTP Specific Plan Area, along with off-site improvement areas. As explained on page 0-7 of the Draft EIR, while the total development square footage and other land use details are all reasonable assumptions based on the land use designations and other planning details of the WRTP Specific Plan, these inputs are assumptions used for the purposes of analysis of environmental impacts of the WRTP Specific Plan. A difference of 27,831 square footage from the 2.2 million square feet as generally referenced in the Draft EIR project description, is approximately 1.2 percent. As detailed on page 3.3-23 of the Draft EIR, the emissions estimated using CalEEMod assume full-build out of the project by

the year 2035, but it is unlikely that the entire WRTP Specific Plan will be build out in 2035. In addition, as further described on this same page, emissions from building operations and mobile sources would likely be reduced in future years due to increasingly stringent regulatory requirements and technological advances to reduce emissions from both construction and operations and as a result of the WRTP Specific Plan Performance Standards, including that which requires that all uses within the WRTP Specific Plan are subject to the Performance Standards listed in Section 3.3.2 and shall demonstrate consistency with the 2035 Climate Action Plan as outlined in Section 3.3.3 of the WRTP Specific Plan, and the WRTP Specific Plan's Transportation Demand Management/Vehicle Miles Traveled Reduction Program that would reduce overall vehicle miles traveled and related emissions from future operations within the WRTP Specific Plan Area, all of which were not accounted for in the emissions modeling for the WRTP Specific Plan Area. As such, the emissions presented in the Draft EIR are considered conservative and the slight difference between the square footage estimate presented in the Draft EIR Project Description and the more detailed land use estimates used in the CalEEMod model do not present an overall underestimation of future emissions to potential impacts associated with such emissions. Furthermore, the potential construction and operational emissions associated with buildout of the WRTP Specific Plan were updated to eliminate the discrepancy noted by the commenter. The emissions were estimated using the most current version of CalEEMod (Version 2023.1.1.14), applying the same methodology as detailed in the Draft EIR Section 3.3.4 and as detailed in Appendix B to the Draft EIR, but with updated land use detailed to match those of the Final WRTP Specific Plan Land Use Table 2.1 and to account to parking and landscaping as appropriate. Based on the updated modeling, the total construction and total operational emissions are less than those presented in the Draft EIR. Although the land use square footage was increased by approximately 1.2 percent, anticipated construction and operational emissions reflect the most current emission factor and energy use data, as appropriate for the land uses to be developed under the WRTP Specific Plan, with development starting at the earliest in 2024. This further supports the significance conclusions related to air quality impacts, as presented in Section 3.3 of the Draft EIR. Therefore, no change to the Draft EIR is needed or has been made.

Comment 3-21 Summary of Comment: The commenter states that the Draft EIR's air quality model made unsubstantiated reductions related to parking, specifically, that neither the Draft EIR nor the CalEEMod output files provided an estimate of the extent of future parking, so the project's air quality impacts can't be relied upon.

Response: The specific parking areas and types associated with each proposed land use designation have not yet been identified; however, as explained in response to comment 3-20, emissions estimates have been updated to include estimated parking and landscaping areas associated with each of the proposed land uses based on the land use type and similar ratios of horizontal building development to parking and landscaping uses. The emissions were estimated using the most current version of CalEEMod (Version 2023.1.1.14) applying the same methodology as detailed in the Draft EIR Section 3.3.4 and as detailed in Appendix B to the Draft EIR, but with updated land use detailed to match those of the Final WRTP Specific Plan Land Use Table 2.1 and to account to parking and landscaping, as appropriate. Based on the updated modeling, construction-related emissions are less than those presented in the Draft EIR. Although parking and landscaping land uses were added as appropriate, anticipated construction emissions reflect

the most current emission factor and energy use data, as appropriate for the land uses to be developed under the WRTP Specific Plan, with construction starting at the earliest in 2024. This further supports the significance conclusions related to air quality impacts, as presented in Section 3.3 of the Draft EIR. Therefore, no change to the Draft EIR is needed or has been made.

Comment 3-22 Summary of Comment: The commenter states that the modeling data does not include an adequate basis for changing the default percent paved values, and that it assumes that future hauling, vendor, and worker trips will only travel on paved surfaces, despite the project sitting on farmland. The commenter states that this is an important distinction to make for estimating the project's fugitive dust emissions.

Response: Notes provided within the CalEEMod output files contained in Appendix B to the Draft EIR specifically state that the Specific Plan Area's proximity to major roadways surrounding the Specific Plan Area is the relevant factor in changing the percent paved values. Trips to and from the WRTP Specific Plan Area for future development projects would use the surrounding highways and major roadways. In addition, as detailed in Chapter 6 of the WRTP Specific Plan, infrastructure requirements for each phase of development of the WRTP Specific Plan include on-site backbone infrastructure and off-site facilities necessary for each development, which includes roadway and other facilities and improvements. As such, there would be minimal on-road vehicle activity on unpaved roadways since the roadway improvements would occur to support the larger development area. In addition, as development occurs, agricultural operations within the development footprint that include fugitive-dust generating vehicle and equipment activity on previously unpaved roadways and agricultural land would no longer occur once development occurs. The default percent unpaved road characteristics in CalEEMod are based up a county average for unpaved roadways, and do not reflect project-specific considerations of construction traffic routes and project planning that would occur to appropriately phase any necessary roadway improvements with proposed development projects. The revision of the default to 99 percent paved roadways for construction is appropriate and reflects that between one-tenth to one-half mile of the various construction-related trips may occur on unpaved roadways, which is a reasonable assumption for a portion of initial construction-related trips as internal roadways infrastructure is being developed, and perhaps conservative for later phases of construction when roadway improvements to support initial development phases would have already been completed, thereby providing paved roadways for 100 percent of the construction-related on-road travel. Similarly, revising the default parameter for operational vehicle trips occurring on paved roadways to 100 percent accurately reflects that the WRTP Specific Plan provides for supporting infrastructure improvements, including new and improved roadways; in general, and as explained in Section 6.3, "Infrastructure Sequencing," of the WRTP Specific Plan, development sequencing strategy is structured to advance the backbone infrastructure improvements needed to support associated development, in compliance with City policies and standards, and that the development area can support the costs of the required improvements. Therefore, no change to the Draft EIR or supporting emissions estimates is needed.

Comment 3-23 Summary of Comment: The commenter states that the air quality model improperly assumes reductions to default values for energy usage.

Response: As acknowledged in Exhibit B page 5 of this comment letter, the Draft EIR explains on page 3.3-17 that the energy intensity factors for energy uses subject to Title 24 standards were adjusted to reflect 2019 Title 24 standards from CalEEMod defaults, which are based on the 2016 Title 24 standards. Contrary to the claim in the comment letter that there is no "guarantee that these reductions would be implemented locally on the Project site," Title 24 California Building Energy Efficiency Standards are adopted into the California Code of Regulations (Title 24) and are required of new development in California and would be implemented by future projects within the WRTP Specific Plan Area. The energy reductions between new development that would be constructed to the 2016 Title 24 standards and the same new development but construction to 2019 Title 24 standards are based upon data provided by the California Energy Commission and are a best available estimate for such information. In addition, these reductions are considered conservative, as they reflect only the most current standards, while the Title 24 standards are updated every three years and increase energy efficiency and conservation requirements with each subsequent iteration. As such, consistent with the balance of analysis in the Draft EIR, the reductions applied to the CalEEMod modeling for the WRTP Specific Plan Area are conservative (likely to overestimate future building energy consumption). No change to the Draft EIR is needed, nor would any change be appropriate.

Comment 3-24 Summary of Comment: The commenter states that the Draft EIR's air quality model improperly assumed that off-road construction equipment would meet Tier 4 Final standards.

Response: Mitigation Measure 3.3-2b has been refined to clearly distinguish the requirement for the use of equipment greater than 50 horsepower to be powered with engines that meet Tier 4 Final emissions standards. Item 'c.' of Mitigation Measure 3.3-2b has been revised as such:

Mitigation Measure 3.3.-2b …

c. "~~- Comply with the State On-Road Regulation by using on-road~~ For all off-road heavy-duty equipment greater than 50 horsepower, utilize equipment that meet or exceed CARB's Tier 4 Final standards for ~~on~~ off-road heavy-duty diesel engines."

This aligns with the intent of the mitigation measure to reduce construction-related emissions of nitrogen oxides (NO_X) and particulate matter with aerodynamic diameter less than 10 microns (PM_{10}) and is reflected in the CalEEMod emissions modeling for the mitigation scenario, as included in Appendix B of the Draft EIR. This change does not change the significance determination as presented in the Draft EIR.

Comment 3-25 Summary of Comment: The commenter states that the Draft EIR failed to disclose a significant air quality impact from construction-related NOx emissions.

Response: The commenter is incorrect. The CalEEMod model inputs were specifically adjusted to project-specific data and reasonable assumptions based on the proposed land use mix and regional context, as detailed in the responses to comments 3-19 through 3-24. The data are appropriate for use in the calculations presented in the Draft EIR. The use of the data inputs and assumption for the CalEEMod model is appropriate for the Draft EIR, and the emissions estimates based on this modeling provide substantial evidence for the impact analyses and findings of significance.

As explained in response to comments 3-20 and 3-21, the potential construction and operational emissions associated with buildout of the WRTP Specific Plan were updated to eliminate the discrepancy in buildout square footage noted by the commenter, and to include parking and landscaping areas. The emissions were estimated using the most current version of CalEEMod (Version 2023.1.1.14), applying the same methodology as detailed in the Draft EIR Section 3.3.4 and as detailed in Appendix B to the Draft EIR, but with updated land use detailed to match those of the Final WRTP Specific Plan Land Use Table 2.1 and to account to parking and landscaping as appropriate. Based on the updated modeling, unmitigated construction-related emissions of NO_X would be 26 percent less than the NOx emissions presented in the Draft EIR, but would still exceed the Yolo-Solano Air Quality Management District (YSAQMD) threshold of significance for NOx prior to mitigation being applied. Impacts associated with NOx emissions are still concluded to be Less Than Significant with mitigation. This updated modeling therefore does not change the significance findings or the need for mitigation, as provided in the Draft EIR. The revised modeling by SWAPE is acknowledged, but does not reflect the appropriate modeling inputs or assumptions, as discussed above in the response to comments 3-19 through 3-24. Also note, the comment is incorrect in characterizing the Draft EIR as indicating a "no significant effect," as the Draft EIR concludes that unmitigated NO_X (as well as reactive organic gas [ROG] and PM_{10}) emissions would exceed thresholds of significance and that NO_X emissions are only reduce to below thresholds with implementation of Mitigation Measures 3.3-2a through 3.3-2c to reduce construction-related emissions. No change to the Draft EIR is needed, nor would any change be appropriate.

Comment 3-26 Summary of Comment: The commenter states that the Draft EIR fails to adequately evaluate health risks from diesel particulate matter emissions. The commenter requests that objective criteria be identified in the Draft EIR for any future projects requiring a health risk assessment, based on location relative to any existing or potential future residence and potential of toxic air contaminant (TAC) emissions during construction or operation.

Response: Mitigation Measure 3.3-3b requires implementation of guidelines from the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective* and the subsequent Technical Advisory, which detail land use compatibilities and buffer zone recommendations between various land uses, as well as measures to reduce exposure of sensitive receptors to substantial TAC concentrations. Mitigation Measure 3.3-3c provides objective criteria in the form of specific performance standards for excess cancer cases and non-cancer acute and chronic indices for future projects, along with mitigation requirements for future projects developed under the Specific Plan (Draft EIR, page 3.3-41).

In addition, the WRTP Specific Plan includes design standards to ensure compatibility of proximate land uses and minimize adverse impacts. The Specific Plan's land use diagram, as shown in Exhibit 2-3 of the Draft EIR, is designed to ensure separation of incompatible land uses such that proximity of sensitive receptors to substantial TAC emission sources. Chapter 3 of the WRTP Specific Plan includes guidelines regarding land use classifications and regulations pertaining to land uses within the WRTP Specific Plan Area. All uses are subject to the Performance Standards listed in Section 3.3.2 of the WRTP Specific Plan, including Performance Standard D that prohibits dust and particulate matter emissions "detectable beyond

property lines by a reasonable person without instruments" and requires that "[e]xhaust air ducts shall be located or directed away from abutting residentially-zoned properties." Table 3.1 of the WRTP Specific Plan identifies the permitted uses in each of the zoning designations, including notes detailing specific requirements pertaining to each land use. No change to the Draft EIR is needed, nor would any change be appropriate.

Comment 3-27 Summary of Comment: The commenter claims that the Draft EIR's reliance on the City's Climate Action Plan to find that the Project's greenhouse gas (GHG) emissions will be less than significant is in error because the Project does not comply with a number of measures set forth in the Climate Action Plan. The commenter references inconsistencies or omissions between the WRTP Specific Plan and the City's Climate Action Plan that are identified in Exhibit B, pages 12 through 19, appended to the comment letter, and requests the City review the comments and ensure that the GHG reduction measure are binding and enforceable on future projects prior to approving the WRTP Specific Plan.

Response: In preparation of the Draft EIR, the City closely reviewed the proposed WRTP Specific Plan and whether it would meet the standards of consistency with the City's Climate Action Plan and the 2035 General Plan and Climate Action Plan EIR, in accordance with CEQA Guidelines 15183.5(b).

Exhibit B of the comment letter asserts several reasons that the WRTP Specific Plan is inconsistent with the City's Climate Action Plan or where mitigation is required to ensure enforceability.

With regard to Climate Action Plan measures E-2, E-5, T/LU-6, UF-3, W/W-1, and W/W-2, the commenter notes that these measures are not included in Table 3.5-2 of the Draft EIR and therefore the commenter is unable to verify the WRTP Specific Plan's consistency with the City's Climate Action Plan. However, these measures are not at the discretion of future development under the WRTP Specific Plan. Rather, these measure are actions under the City's purview to promote and coordinate with local agencies for implementation. For example, and as noted by the commenter in the table provided in Exhibit B, page 12, Measure E-2 action are to: "Support/promote group purchasing programs for discounted energy-efficient appliance and equipment replacements; Promote residential programs such as Pacific Gas & Electric Company's (PG&E's) Energy Savings Assistance Program to help low-income homeowners and renters manage energy use and energy costs through free or low-cost upgrades to more energy-efficient appliances, lighting, and building features; Conduct education and outreach to promote rebates, incentives, and other programs as they become available, and use available information on rebates used by consumers to determine where to focus education and outreach; Provide information on equipment upgrade benefits, rebates, and energy-efficiency assistance from Yolo Energy Watch and other programs as part of the business license renewal process." These actions are not for individual projects to demonstrate consistency with and, therefore, were not included in Table 3.5-2 of the Draft EIR, which specifically was introduced as a table providing an outline of "the City's Climate Action Plan policies as relevant to the WRTP Specific Plan," and not a comprehensive list.

With regard to Climate Action Plan measures E-1, E-3, E-4, E-6, T/LU-5, T/LU-7, UF-2, the commenter points out that the City's Climate Action Plan requires that "a project must demonstrate that it is included in the growth projections upon which the Climate Action Plan modeling is based and that it incorporates applicable strategies and measures from the Climate Action Plan as binding and enforceable components of the project." As explained throughout the Draft EIR and specifically on page 3.5-15 of the Draft EIR impact analysis pertaining to greenhouse gas emissions and climate change, the scale and intensity of development proposed under the WRTP Specific Plan was assumed as part of the development analyzed under the 2035 General Plan and Climate Action Plan (CAP) EIR and considered in the growth projections upon which the CAP modeling is based.

The commenter goes on to claim that the identified policies, standards, and design guidelines of the WRTP Specific Plan that are referenced in the consistency checklist of Table 3.5-2 of the Draft EIR are not binding and enforceable components of the Project because they are not included as mitigation measures, referencing AEP CEQA Portal Topic Paper on mitigation measure that recommends inclusion of project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP) to ensure that these measure accompany building and construction plans through the permit process and are not eliminated during future design reviews without the understanding of the resulting environmental impact(s). In the case of the WRTP Specific Plan, these are not individual development design features, but policies, design standards, and design guidelines of the WRTP Specific Plan itself, which will serve as the governing document, along with other City regulations in effect at the time of development, against which subsequent development and/or proposed land use, including tentative map applications, within the WRTP Specific Plan Area will be reviewed for consistency and compliance. In acting to approve a project or permit, the City may impose conditions as are reasonably necessary to ensure that the project is in substantial compliance with the Specific Plan and all applicable plans and regulations. Furthermore, while Table 3.5-2 in included as one piece of the analysis in the Draft EIR regarding consistency between the WRTP Specific Plan and the City's Climate Action Plan, the analysis also included discussion and consideration of the implementation and administrative processes required of the WRTP Specific Plan and how those processes further ensure consistency of the WRTP Specific Plan with the City's Climate Action Plan. This analysis is provided on page 3.5-21 of the WRTP Specific Plan and includes review of Section 3.3.3, "Climate Action Plan Consistency," of the WRTP Specific Plan, which outlines the following requirements of all future development under the WRTP Specific Plan to demonstrate consistency with the City's Climate Action Plan:

(A) All new development projects and major expansion projects shall provide a summary of incorporated conservation measures, consistent with the City's 2035 Climate Action Plan, adopted with the General Plan in 2017 . For each Climate Action Plan strategy and related "action" relevant to new development projects, the City will determine: (a) the project is consistent; (b) the project with conditions or when modified would be consistent; (c) the strategy is relevant for new development, but not the subject project; or (d) the project includes one or more replacement strategies that would be equally or more effective in reducing GHG emissions and such replacement strategy or strategies are not include in

the Climate Action Plan or required by any other regulations, standards, design criteria, or other existing requirement.

(B) All projects shall complete and submit the City's Climate Action Plan Consistency Checklist for review and approval by the City prior to project approval. The Climate Action Plan Consistency Checklist allows proposed development projects to demonstrate consistency with the Climate Action Plan.

(C) Consistent with General Plan Policy 2.L.2, all projects shall strive to meet net zero energy consumption through the incorporation of conservation measures above Title 24 standards and shall, at minimum, demonstrate consistency with CalGreen Tier 1 Standards.

(D) Additional GHG reductions strategies and sustainability measures shall be considered in major expansion projects and in the ongoing operations and use of all commercial and residential projects within the [WRTP Specific] Plan Area including, but not limited to, Energy Conservation, Water Conservation/Quality and Low Water Landscape measures as outlined in [the WRTP Specific Plan] Sustainability Guidelines Sections 3.5.3.B for commercial uses and Section 3.5.12.B for residential.

As detailed in Chapters 3 through 5 of the City's 2035 Climate Action Plan, the Climate Action Plan addresses each of the recommended plan elements spelled out in CEQA Guidelines Section 15183.5(b)(1), and, therefore, will be used to streamline review of projects that are consistent with the Climate Action Plan. The City's Climate Action Plan Checklist serves to apply the relevant 2035 General Plan and Climate Action Plan policies and reduction measures through a streamlined review process for proposed new development projects that are subject to discretionary review and that trigger environmental review under CEQA. Projects that are consistent with the General Plan and demonstrate consistency with the Climate Action Plan may use this consistency determination in lieu of a project-specific GHG emissions analysis to address potential GHG emissions impacts. Therefore, construction and operational GHG emissions generated from implementation of the WRTP Specific Plan are evaluated based upon compliance with the City's Climate Action Plan.

As noted on page 1-2 of the Draft EIR, the City will evaluate future projects within the Specific Plan Area for consistency with the Specific Plan and the EIR, and will evaluate whether additional CEQA analysis is necessary. Per Specific Plan Policy 2.2.3.1, and as outlined in Section 3.3.3. of the WRTP Specific Plan, development under the WRTP Specific Plan will be required to demonstrate consistency with the City's Climate Action Plan as it is updated in the future to ensure the City stays on target to achieve future State GHG emissions targets, thereby providing for the consideration of additional reductions required and achievable in future years. The Final WRTP Specific Plan Section 6, "Implementation," also identifies an Enhanced Climate Action Plan Checklist to achieve WRTP energy efficiency and sustainable design goals and to achieve consistency with citywide and 2035 General Plan GHG reduction targets, as a subsequent plan that must be prepared either prior to approval of the first development application or residential tentative map or as otherwise required by conditions of approval and/or Environmental Impact Report and associated Mitigation Monitoring Program, or by the

Community Development Director, as appropriate, to ensure feasibility and enforceability of this review requirement.

The analysis provided in Section 3.5 of the Draft EIR comprehensively assesses the proposed project. In addition to the anticipated land use plan, the policies, design standards, and design guidelines are the basis of review of the WRTP Specific Plan for the EIR, and are binding with the adoption of the WRTP Specific Plan. As with review of future development applications under the WRTP Specific Plan, proposed changes to the WRTP Specific Plan itself would undergo additional environmental review to determine whether additional review is required under CEQA Section 15183 and 15182, thereby ensuring that policies and standards of the WRTP Specific Plan, such as those describe above requiring review of future projects for consistency with the City's Climate Action Plan do not get removed from the WRTP Specific Plan without recognizing the environmental impacts of such a change.

Table 3.5-2 of the Draft EIR, which is the subject of the commenter's review for inconsistencies or omissions between the WRTP Specific Plan and the City's Climate Action Plan, is one component of the environmental review and analysis provided to address this potential impact, along with future project-specific review for consistency with the City's Climate Action Plan. Per the commenter's request, the City has reviewed the comments and ensures that the GHG reduction measures are binding and enforceable on future projects.

Section 3.5, "Climate Change, Greenhouse Gas Emissions, and Energy," of the Draft EIR (page 3.5-15) comprehensively evaluates the WRTP Specific Plan's fair share contribution to the emissions reduction required by the State's emissions reduction targets. As explained in this analysis and reiterated above, consistent with CEQA Guidelines Section 15183.5(b), the WRTP Specific Plan was determined to be consistent with the City's 2035 Climate Action Plan. Therefore, as provided by CEQA Guidelines section 15183.5(b), the WRTP Specific Plan would not result in an incremental contribution to a cumulative effect. No change has been made to the analysis and no additional mitigation is required.

Comment 3-28 Summary of Comment: The commenter closes the letter and requests that the City amend and supplement the Draft EIR and recirculate it for additional public comment before approval of the Project.

Response: For the reasons stated above in responses to Comments 3-1 through 3-27, revisions to the Draft EIR have been made as appropriate. The revisions made and specified in response to **Comments 3-1 through 3-27** do not change the validity or findings of significance of the of the analysis in the Draft EIR, and recirculation is not required.

Exhibit A

Comment 3A-1 Summary of Comment: The commenter introduces the letter and provides a summary of the Draft EIR. The commenter states that the analysis of baseline conditions included in the Draft EIR is incomplete and flawed, and the impact analysis fails to thoroughly address potential impacts to wildlife that are both substantial and significant.

Response: The parts of this comment that introduce the comment letter and summarize the WRTP Specific Plan do not raise any topics related to the veracity of the Draft EIR. For the topics raised about the analysis of baseline conditions and the potential impacts to wildlife included in the Draft EIR, please see the response to comment 3-11.

Comment 3A-2 Summary of Comment: The commenter presents their qualifications and describes their contribution to the scientific foundation for the earliest version of the Yolo County Habitat Conservation Plan (HCP) and the certification process of the Spring Lake Specific Plan.

Response: This comment does not raise any topics related to the veracity of the Draft EIR. The disclosed information is noted.

Comment 3A-3 Summary of Comment: The commenter describes the site visits they completed within the project area on June 28, 29, and 30, 2021. The commenter provides a summary table of the thirty-nine species of vertebrate wildlife they identified during these site visits, and of which seven are listed as special-status species. The commenter includes photographs taken during these site visits that show the observed wildlife in and around the project area, as well as a nonlinear regression model to predict the number of species that could have been detected with a longer survey effort using the same visual scan method (Figure 1 of Exhibit A to the Comment Letter 3). In addition, the commenter provided another figure; one graph demonstrating the relationship between the number of species detected during a survey being a function of survey effort, and the second graph depicting the probability of detection of listed species as a function of an increasing number of vertebrate wildlife species detected (Figure 2 of Exhibit A to the Comment Letter 3). Both graphs in Figure 2 used data from the outcomes of the 152 previous surveys completed at proposed project sites by the commenter. The commenter states that they are confident from their past experiences with site surveys, personal driving trips along Highway 113 in which they have seen Swainson's Hawks on the project site, and other stories they have heard from the public concerning witnessing special-status species on or near the project site, that multiple additional special-status species would be detected with a greater survey effort. The commenter states that a larger survey effort is required to inform the public and decision makers about the potential project impacts to wildlife and special-status species and how to mitigate them.

Response: Please see the responses to comments 3-11 and 3-12.

Comment 3A-4 Summary of Comment: The commenter states that the two field reconnaissance surveys mentioned in the Draft EIR fail to include basic information a biologist would expect to see reported about these surveys, and that the Draft EIR provides no list of wildlife species that were detected.

Response: Please see the response to comment 3-11.

Comment 3A-5 Summary of Comment: The commenter states that there is a major shortfall in the analysis of project impacts to biological resources in the Draft EIR since no detection surveys were performed for special-status species. The commenter states that the catch-all surveys that were performed at the project site are inappropriate for determining the absence of special-status species and that detection surveys for the burrowing owl are warranted since ground squirrels occupy the project site, which increases the potential presence of burrowing owls. The commenter claims that the Draft EIR argues that the Yolo County Habitat Conservation Plan (HCP) exempts the City of Woodland from having to perform detection surveys.

Response: Please see the responses to comments 3-11 and 3-12.

Comment 3A-6 Summary of Comment: The commenter states that the Draft EIR accurately describes alfalfa production as part of the crop rotation typical of the project site, but it does not inform the reader of the importance of alfalfa to wildlife in Yolo County, and particularly to multiple special-status species in the area. The commenter describes their experience of studying wildlife alfalfa in Yolo County, and acknowledges that the Draft EIR did not include or make use of what was learned about wildlife use of alfalfa and of other Yolo County crops from their studies, or of other special-status species studies that have been conducted in the project area. The commenter states that the Draft EIR has severely underestimated the importance of the site to special-status species of wildlife, and that the Draft EIR should be revised to more carefully and thoroughly analyze potential project impacts to wildlife. The commenter gave specific mention of the Draft EIR ruling out the occurrence likelihood or of the project site offering no suitable habitat for loggerhead shrike, yellow warbler, northern harrier, tricolored blackbird nesting, and Modesto song sparrow, and that the Draft EIR should more realistically assess these occurrence likelihoods. The commenter provides a table of the occurrence likelihoods of special-status species at the project site based on records of sightings in eBird and iNaturalist (data bases) and the commenter's project site visits.

Response: Please see the responses to comments 3-11 and 3-13 and 3-15.

Comment 3A-7 Summary of Comment: The commenter states that the project would contribute to an ongoing trend of declining birds in North America through habitat loss and the permanent loss of productive capacity. The commenter asserts that the project would result in a loss of 1.1 million birds over the first century following construction and that the Draft EIR does not include this as a significant and substantial impact or provide any mitigation measures. The commenter states that the Draft EIR should be revised to appropriately analyze the project's impacts from habitat loss.

Response: Please see the response to comment 3-13.

Comment 3A-8 Summary of Comment: The commenter suggests that the water consumed by future operations of land uses of the WRTP Specific Plan could conceptually come from, and thereby reduce the amount of water available to, the agricultural sector in California. The commenter goes on to suggest that this water consumption would make water unavailable to and therefore take 319 acres of arable farmland out of production. The commenter states that the Draft EIR should be revised in order to evaluate and analyze the project's impacts to habitat loss from the project's water demand, and the loss of breeding sites and annual production that would occur as a result.

Response: The commenter incorrectly suggests that the proposed project's water demand would be served by sources that would then no longer be available to farmland and related wildlife habitat. As explained in Section 3.14, "Utilities," of the WRTP Specific Plan Draft EIR, the City Public Works Department completed a Water Supply Assessment for the proposed land use plan contained within the WRTP Specific Plan and, as documented in the Water Supply Assessment and Certification Form, the City has sufficient water supplies for the proposed project during normal, single dry, and multiple dry years over a 20-year period. The WRTP Specific Plan would increase the demand for municipal water supplies, but there is no evidence that such

demand would result in any indirect loss of habitat, breeding sites, or annual production of wildlife species.

Comment 3A-9 Summary of Comment: The commenter states that the Draft EIR fails to adequately analyze the project's impacts on wildlife movement, and that this constitutes a revision of the Draft EIR.

Response: Please see response to comment 3-15.

Comment 3A-10 Summary of Comment: The commenter states that the Draft EIR fails to analyze the project's traffic impacts to wildlife caused by vehicles traveling to and from the project site. The commenter asserts that operations over fifty years would accumulate 2,333,264 wildlife fatalities, and that the Draft EIR must be revised to account for this impact and to implement mitigation measures to improve wildlife safety along the roads.

Response: Please see response to comment 3-16 and 3-17.

Comment 3A-11 Summary of Comment: The commenter states that the project would result in potentially significant adverse biological impacts because of the predicted level of bird-window collision mortality, and the lack of any proposed mitigation in the Draft EIR. The commenter asserts that the project would result in 8,206 bird deaths per year, and that the vast majority of these deaths would be of birds protected under the Migratory Bird Treaty Act and under the recently revised California Fish and Game code section 3513, thus causing unmitigated significant impacts. The commenter includes a list of bird-window collision factors, window collision solutions, and claims that post-construction fatality monitoring should be an essential feature of any new building project.

Response: Please see response to comment 3-17.

Comment 3A-12 Summary of Comment: The commenter states that the Draft EIR fails to analyze the impacts of house cats on wildlife, specifically, the project will likely introduce house cats to the project site that will prey upon birds and small mammals, and could contribute to the downstream loading of Toxoplasma gondii, a parasite in which definitive hosts are cats.

Response: Please see response to comment 3-18.

Comment 3A-13 Summary of Comment: The commenter states that impacts to wildlife would occur caused indirectly by the project's demand for 3.15 megawatt (MW) of electricity. The commenter claims that wildlife mortality is caused by collisions of volant wildlife with wind turbines and utility-scale solar photovoltaic (PV) panels and associated infrastructure (fences, distribution lines, transmission lines). The commenter asserts that effects of habitat loss from renewable energy generation would result in an annual death toll of wildlife that would be exacerbated by on-site habitat loss, window collisions, traffic impacts, and house cats, and that these potential impacts warrant a revision of the Draft EIR.

Response: The proposed Project does not include proposed wind turbines or utility-scale PV panels. No revisions to the no revisions are required of or have been made to the WRTP Specific Plan EIR.

Comment 3A-14 Summary of Comment: The commenter states the Draft EIR's sole reliance on the Yolo County HCP (Habitat Conservation Plan) to mitigate wildlife impacts is not supported by substantial evidence and is insufficient as a matter of law. The commenter states that relying solely on the Yolo County HCP creates shortfalls to the cumulative impact analysis, and that there is an absence of information explaining the effect of HCP in

achieving habitat goals. The commenter asserts that that HCP can't prevent significant cumulative impacts to its covered species, let along the special-status species that the HCP does not cover, and that an emergency cumulative impacts assessment is needed for burrowing owl and white-tailed kite.

Response: Please see response to comment 3-14.

Comment 3A-15 Summary of Comment: The commenter references *Mitigation Measure 3.4-1a: Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite*, and states that prior to the certification of the Draft EIR, species detection surveys must be completed to support negative findings of species when appropriate, inform preconstruction surveys to improve their efficacy, estimate project impacts, and inform compensatory mitigation and other forms of mitigation.

Response: Please see the responses to comments 3-11 through 3-13.

Comment 3A-16 Summary of Comment: The commenter references *Mitigation Measure 3.4-1b: Comply with Yolo HCP/NCCP Requirements for Compensation for Loss of Swainson's Hawk Foraging Habitat*, and states that prior to the certification of the Draft EIR, the project proponent should clearly identify lands where the Swainson's Hawk mitigation fee would be applied. The commenter also states that the Draft EIR should be revised to demonstrate the efficacy of the HCP mitigation fee.

Response: Please see response to comment 3-14.

Comment 3A-17 Summary of Comment: The commenter references *Mitigation Measure 3.4-1c: Minimize Take and Adverse Effects on Western Burrowing Owl*, and states that preconstruction surveys aren't substitutes for detection surveys, and that the proposed mitigation measure would be inconsistent with the standards of the burrowing owl survey and mitigation guidelines (CDFW 2012).

Response: Please see response to comment 3-12.

Comment 3A-18 Summary of Comment: The commenter references *Mitigation Measure 3.4-2a: Avoid Direct Loss of Protected Bird Nests*, and states that compensatory mitigation is required for bird nests and roosting bats that will be missed by preconstruction surveys, and that compensatory mitigation is also needed for the impacts to wildlife from mortality caused by collisions with windows and automobiles, predation by house cats, and by habitat loss.

Response: Please see response to comment 3-13, 3-17, and 3-18. In addition, loss of bat roosts and special-status bats is further addressed in Impact 3.4-4, and applicable mitigation provided through Mitigation Measure 3.4-4 to avoid direct loss.

Comment 3A-19 Summary of Comment: The commenter references *Mitigation Measure 3.4-4: Avoid Direct Loss of Bat Roosts and Special-status Bats*, and recommends that acoustic surveys with Sonobat be performed to identify which species of bats occur on the site, and that the Draft EIR should be revised to inform the public about bat use on the project site.

Response: As detailed in Mitigation Measure 3.4-4 of the Draft EIR, acoustic surveys are included in the applicable survey methods to provide the best opportunity to determine if roosting bats are

present. No revisions to the no revisions are required of or have been made to the WRTP Specific Plan EIR.

Comment 3A-20 Summary of Comment: The commenter describes their recommended mitigation measures concerning habitat protection; including, that habitat should be permanently protected in the form of fee title or conservation easement, or a combination thereof, and that fifteen years of monitoring be performed for targeted special-status species on and around the protected lands, and that native trees and shrubs be planted with incorporation of the project elements such as in residential yards, street-scaping, etc.

Response: The loss of species as a result of buildout of the WRTP Specific Plan is adequately and comprehensively addressed through project-related impacts, as described in Section 3.4.4 of the Draft EIR, which assumes total loss of existing habitats. Compensatory mitigation for modifications to habitats that are suitable for special status species, including nesting birds, are addressed under mitigation measures proposed for the loss of nesting and foraging habitat for Swainson's hawk (Mitigation Measure 3.4-1b) in Section 3.4.4 of the Draft EIR, which proposes compensatory mitigation for the loss of nesting and foraging habitat for Swainson's hawk; this mitigation would also cover the loss of suitable nesting and foraging habitat for other special-status and migratory birds and would be developed in consultation with CDFW. Furthermore, as discussed in Chapter 3.2 "Agriculture and Forestry Resources," project applicants for future projects proposed within the WRTP Specific Plan Area are required to replace Prime Farmland at a 1:1 ratio for lands within the City and 3:1 for lands within the County commensurate with the quantity and quality of the converted farmlands, within the same agricultural regions as the impacts occur, that could also provide suitable nesting and foraging habitat for special-status raptors and other birds. Furthermore, City of Woodland General Plan Policies 7.B.8 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, provide benefits for native wildlife, and ensure that a variety of plants suited to the region are maintained. The WRTP Specific Plan would also be required to comply with the City's Tree Ordinance, including a tree plan and the replacement of any trees proposed to be removed. While the impact assessment within the Draft EIR may be conservative, and may tend to somewhat overstate actual impacts, no change to the Draft EIR is needed.

Comment 3A-21 Summary of Comment: The commenter recommends funding wildlife crossings at locations along roads used by the project in areas where special-status species likely travel, and road mortality would be anticipated. The commenter also recommends funding research into wildlife mortality caused by car and truck traffic.

Response: Please see response to comment 3-16.

Comment 3A-22 Summary of Comment: The commenter states that the project should adhere to available Bird-Safe Guidelines, such as those prepared by American Bird Conservancy and New York and San Francisco. The commenter also recommends that fatality monitoring and compensatory mitigation be incorporated into any new building project.

Response: Please see response to comment 3-17.

Comment 3A-23 Summary of Comment: The commenter states that a fund should be established for long-term management of house cats in the project.

Response: Please see response to comment 3-18.

Comment 3A-24 Summary of Comment: The commenter states that the impacts of renewable energy generation should be mitigated by promotion of energy conservation and of distributed generation, and that all of the project's homes and non-residential buildings should include solar panels. The commenter also recommends that fatality monitoring be implemented to establish whether the rooftop solar panels cause collision mortality.

Response: The proposed Project does not include proposed wind turbines or utility-scale PV panels. Please also see response to comment 3-17.

Comment 3A-25 Summary of Comment: The commenter states that compensatory mitigation should include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals caused by the project, including collisions with windows and automobiles, and by attacks by house cats.

Response: Please see response to comment 3-13, and 3-16 through 3-18.

Exhibit B

Comment 3B-1 Summary of Comment: The commenter introduces the letter and provides a summary of the WRTP Specific Plan. The commenter states that the Draft EIR fails to adequately evaluate the project's air quality, health risk, and greenhouse gas impacts, resulting in the emissions and health risk impacts associated with construction and operation of the proposed project to be underestimated. The commenter recommends that the Draft EIR be updated to address these concerns.

Response: Specific responses to the topics addressed in this summary are provided through response to comments 3B-2 through 3B-12.

Comment 3B-2 Summary of Comment: The commenter states that the Draft EIR's estimate of air pollutant emissions is inconsistent with information presented in the Draft EIR and underestimates emissions that would result from the Specific Plan. The commenter includes claims of inconsistency and lack of substantial evidence for emissions estimating methodology, as identified in further comments below.

Response: Please see response to comment 3-19.

Comment 3B-3 Summary of Comment: The commenter states that the Draft EIR's air quality models use unsubstantiated reductions to land use sizes. Specifically, that in the project's CalEEMod output files, found that the air model made reductions to land use sizes than what was proposed in the Draft EIR, without providing justification to the change.

Response: Please see response to comment 3-20.

Comment 3B-4 Summary of Comment: The commenter states that the Draft EIR's air quality model made unsubstantiated reductions related to parking, specifically, that neither the Draft EIR nor the CalEEMod output files provided an estimate of the extent of future parking, so the project's air quality impacts can't be relied upon.

Response: Please see response to comment 3-21.

Comment 3B-5 Summary of Comment: The commenter states that the modeling data does not include an adequate basis for changing the default percent paved values, and that it assumes that future hauling, vendor, and worker trips will only travel on paved surfaces, despite the project sitting on farmland. The commenter states that this is an important distinction to make for estimating the project's fugitive dust emissions.

Response: Please see response to comment 3-22.

Comment 3B-6 Summary of Comment: The commenter states that the air quality model improperly assumes reductions to default values for energy usage.

Response: Please see response to comment 3-23.

Comment 3B-7 Summary of Comment: The commenter states that the Draft EIR's air quality model improperly assumed that off-road construction equipment would meet Tier 4 Final standards.

Response: Please see response to comment 3-24.

Comment 3B-8 Summary of Comment: The commenter states that the Draft EIR fails to discuss all potentially feasible mitigation measures available to address the project's significant air quality impacts resulting from its operation. The commenter references a section of the letter, "Feasible Mitigation Measures Available to Reduce Emissions," and states that the Draft EIR should be revised including updated and accurate air modeling, as well as incorporating all feasible mitigation to reduce emissions to less-than-significant levels.

Response: Please see response to comments 3-6 through 3-8.

Comment 3B-9 Summary of Comment: The commenter states that the Draft EIR failed to disclose a significant air quality impact from construction-related NOx emissions.

Response: Please see response to comment 3-25.

Comment 3B-10 Summary of Comment: The commenter states that the Draft EIR fails to adequately evaluate health risks from diesel particulate matter emissions. The commenter requests that objective criteria be identified in the Draft EIR for any future projects requiring a health risk assessment, based on location relative to any existing or potential future residence and potential of toxic air contaminant emissions during construction or operation.

Response: Please see response to comment 3-26.

Comment 3B-11 Summary of Comment: The commenter claims that the Draft EIR's reliance on the City's Climate Action Plan to find that the Project's GHG emissions will be less than significant is in error because the Project does not comply with a number of measures set forth in the Climate Action Plan. The commenter references inconsistencies or omissions between the WRTP Specific Plan and the City's Climate Action Plan that are identified in Exhibit B, pages 12 through 19, appended to the comment letter, and requests that the Draft EIR be updated demonstrating the project's consistency with the City's CAP.

Response: Please see response to comment 3-27.

Comment 3B-12 Summary of Comment: The commenter states that the Draft EIR fails to discuss all potentially feasible mitigation measures available to address the project's significant air quality impacts resulting from its operation. The commenter provides a list of additional feasible mitigation measures identified as example measures to mitigate air quality and greenhouse gas impacts from operations of warehouse projects in the California Attorney General's *Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act*, and asserts that the Draft EIR must be recirculated in order to evaluate, consider, and, where feasible, adopt these measures. The comment goes on to assert that all 19 example measures are feasible for future development within the Research and Technology Park of the Specific Plan Area and therefore should be adopted and made enforceable in order for the City to make a finding of overriding considerations.

Response: Please see response to comments 3-6 through 3-8.

Comment 3B-13 Summary of Comment: The commenter closes the letter and provides a disclaimer that they retain the right to revise or amend their report and review of the WRTP Specific Plan if additional information about the project becomes available.

Response: This comment does not raise any topics related to the veracity of the Draft EIR. The City is appreciative of SWAPE's review.

Comment 3B-14 Summary of Comment: The commenter provides the detailed modeling outputs using CalEEMod Version 2016.3.2 that they prepared using their own inputs regarding percent paved roadways and mitigated equipment Tier emissions standards.

Response: Please see response to comments 3-20 through 3-22, 3-24, and 3-25.

2.2.4 COMMENT LETTER #4:

NATHAN BENEDICTO

Letter 4

From: Nathan Benedicto <nbenedicto@gmail.com>
Sent: Friday, July 02, 2021 4:58 PM
To: researchpark <researchpark@cityofwoodland.org>
Subject: School Site

Please update your plan and work with WJUSD to include school sites for this growing community. Families, such as mine, have moved here with the expectation of new schools for our children. Springlake Elementary is overburdened and cannot support the growing number of children in our neighborhood. Please don't fail us with leaving out a school site for our children. This neighborhood needs at least another elementary school and certainly a middle school. Otherwise, children need to be transported across the freeway for school. No child should have to cross a free way to get to school. Otherwise, Davis will continue to take our students. 4-1

Thank you.

-Nathan Benedicto

RESPONSE TO COMMENT LETTER 4

Comment 4-1 Summary of Comment: The commenter expresses their concern regarding the current and future capacity of schools within the Woodland Unified School District. The commenter claims that another elementary and middle school are needed to meet the community's growing needs.

Response: With regard to the proposed WRTP Specific Plan and impacts related to school services, this concern is addressed in Section 3.12, Public Services and Recreation, of the Draft EIR. Table 3.1 of the WRTP Specific Plan identifies TK/K through 12 Public/Private School as a permitted use within the Medium Density Residential land use designation of the WRTP Specific Plan Area. The WRTP Specific Plan reserves up to a 12-acre portion of the medium density residential zone south of Parkland Avenue and east of Road B for a potential new elementary school site, should a school be needed, as determined by the Woodland Joint Unified School District (WJUSD) and the California Department of Education. See also, responses to comments 6-2 and 6-3. Also, in addition to the existing schools within WJUSD and the planning for a school site within the Specific Plan Area, WJUSD owns 20 acres in the Spring Lake Specific Plan Area and adjacent to Pioneer High School, which is currently identified as a potential site for a future middle school. Spring Lake Elementary School was also recently opened, recognizing the need for additional school services to support the current and planned development southeast of the area. Direct effects associated with the construction and operation of a new elementary school within the WRTP Specific Plan Area are addressed in specific resource area analyses, as appropriate, throughout the Draft EIR, including the indirect effects associated with transporting students. Chapter 2, Project Description, of the Draft EIR describes the inclusion of an option site for a school within the WRTP Specific Plan, and specific resource area section of Chapter 3, Environmental Impact Analysis, account for the potential for this school to be a part of the future land uses within the WRTP Specific Plan Area, as appropriate. For example, the transportation study used to inform the analysis in Section 3.13, Transportation and Circulation, applied modeling based on SACOG's regional travel demand forecasting model and the anticipated land uses within the WRTP Specific Plan Land Use Plan, including those residential units that would generate regional and local trips including those to work, schools, and retail and commercial services, among others. This modeling was then also used to inform the air quality, greenhouse gas, and noise analysis of the Draft EIR. Should a school be constructed within the WRTP Specific Plan EIR, trip rates and distances associated with travel to this local-serving school would be reduced compared to those required to travel to existing schools, further reducing potential impacts. In addition, Section 3.12, Public Services and Recreation, of the Draft EIR also evaluated the existing and projected future capacity and demand for schools within the Woodland Joint Unified School District jurisdiction, and Section 3.8, Hazards and Hazardous Materials, of the Draft EIR evaluated the potential for hazardous emissions and the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, including the potential school within the WRTP Specific Plan Area. No additional CEQA review is required.

2.2.5 COMMENT LETTER #5:

JOHN CHEN

Letter 5

From: John Chen <johnhchen@yahoo.com>
Sent: Thursday, July 01, 2021 10:53 AM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>
Subject: A response to Draft EIR of WRTP specific plan

Dear Sir,

I am a resident living inside the Arabella community in the vicinity of the planned WRTP. I would like to take this occasion to voice my opinion regarding the draft EIR. I would like to suggest that a strip of land be reserved as a buffer zone between the park on the west side of Route 101 and the community on the east side in order to protect the residential area from the probable disadvantageous industry environment. I along with the residents living in this community would greatly appreciate it if this thought be taken in to consideration in the environment impact assessment. Thank you very much,

5-1

Sincerely,

John Chen

RESPONSE TO COMMENT LETTER 5

Comment 5-1 Summary of Comment: The commenter requests and recommends for a physical buffer zone to be reserved between the WRTP Specific Plan Area and the community located to the east side in order to protect sensitive land uses such as residential and prevent incompatible land uses.

Response: The WRTP Specific Plan includes an extensive greenbelt system to provide both for a multimodal circulation system and open space. As shown in Exhibit 2-3 of the Draft EIR, and further detailed in the WRTP Specific Plan, the WRTP Specific Plan provides for a greenbelt along the western perimeter of Harry Lorenzo Avenue (County Road 101). In addition, to provide for separation between sensitive land uses, the City of Woodland General Plan 2035 identifies the following policies that are applicable to the WRTP Specific Plan: Policy 7.F.3. Protect Sensitive Receptors, includes implementing applicable buffer distances recommended by the California Air Resources Board between sensitive land uses and sources of substantial pollutant concentrations. Also, Policy 7.F.4. Landscaping to Improve Air Quality includes promoting an increase of community-wide tree canopy and the use of plants and trees that are efficient pollutant absorbers. Also, the Land Use Plan Layout for the WRTP Specific Plan generally separates incompatible land uses and applies conditions to those that could have external effects, providing for residential land use designations in the eastern portion of the WRTP Specific Plan Area and non-residential land uses in the western and southern portions of the WRTP Specific Plan Area, away from existing residential land uses. No change to the WRTP Specific Plan is needed. No revision to the Draft EIR has been made or is necessary.

2.2.6 COMMENT LETTER #6:

BRIAN COWARD

Letter 6

From: BC <brianbcoward@gmail.com>
Date: July 2, 2021 at 6:57:24 PM PDT
To: researchpark <researchpark@cityofwoodland.org>, Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>, Ken Hiatt <Ken.Hiatt@cityofwoodland.org>, Tom Stallard <Tom.Stallard@cityofwoodland.org>, Mayra Vega <Mayra.Vega@cityofwoodland.org>, Rich Lansburgh <Rich.Lansburgh@cityofwoodland.org>, Tania Garcia Cadena <Tania.GarciaCadena@cityofwoodland.org>, Vicky Fernandez <Vicky.Fernandez@cityofwoodland.org>, Kirby Wells <Kirby.Wells2@cityofwoodland.org>, Marco Lizarraga <Marco.Lizarraga2@cityofwoodland.org>, Steve Harris <Steve.Harris@cityofwoodland.org>, Chris Holt <Chris.Holt2@cityofwoodland.org>, Valerie Hurst <Valerie.Hurst@cityofwoodland.org>, Fred Lopez <Fred.Lopez@cityofwoodland.org>
Subject: Fwd: Public Comment - Will our children have a chance to go to a neighborhood school?

Good evening City Manager Hiatt, Mayor Stallard, and Council Members,

I would like to submit my public comment in regard to the 'Woodland Research and Technology Park - Draft Environmental Impact Report (EIR)'. My main concern; the formal inclusion of a school in the land use and zoning maps of the Woodland Research and Technology Park Specific Plan. 6-1

I and others in the community have been in communication with City and Woodland Joint Unified School District Staff, Council, and the School Board since 2018 raising a red flag over the lack of planning for the elementary-age children in the Spring Lake and future Tech Park area. I have attached a petition with signatures (177 as of 2021/07/02), comments, and detailed supporting evidence. Please take the time to review the petition and you will see Woodland is in dire need of elementary school(s) and while the District works out the details of financing we must have the land use and zoning for a school settled. All efforts should be made to allow the District time to plan, negotiate, finance, and construct the school as it is critical to a healthy and vibrant community. 6-2

I would like to express the positive aspects of pursuing neighborhood schools from the City's perspective. I understand that the District is a separate entity from the City but the impacts of supporting them, in every manner necessary, to achieve the necessary facilities in newly developing parts of Woodland will benefit the entire City.

The current WRTP - Land Use Plan (Exhibit 2-1) map does not show a 'school' or 'public/quasi-public' (PQP) for a school on the map. Instead, there is an exhibit in 'Chapter 5 - Public Utilities and Services' on page 210 that shows a 'Possible School Site' location on what has a land-use of 'Medium Density Residential' (MDR). This conflicting/overlapping land-use causes confusion to the public/developers, diminishes the likelihood of critical infrastructure in the form of a school coming to be, fails 6-3

to meet requirements of 2035 General Plan housing mix if the overlapping MDR is removed/reduced when the school comes to be, and confuses the planning/design at the location.

6-3 (Cont'd)

The District and the School Board have expressed reticence towards Woodlander's expectations of a school actually coming to be in the WRTP. It will be challenging. But it's what we need and what, as a community, we must pursue with zeal. We must show our intentions boldly and in plain view; both in maps, supporting documentation (EIR), and evidence of the elementary schools need to the community in order to negotiate a fair developer agreement. This approach will ensure Woodlanders have what they need when the WRTP is complete.

6-4

The 'Student-Yield' rates (Table 3.12-5 of the EIR) show the WRTP, alone, will need to accommodate 376 K-6 students. The Draft EIR fails to address the Spring Lake communities 'Student-Yield' rates which according to the attached petition study (Attachment 4 - Addendum 1, Cooperative Strategies, 2020) will need to accommodate 944 K-6 students. That's 1,320 K-6 students in the WRTP and Spring Lake area with a single, open enrollment (NOT a neighborhood school where kids in the area are guaranteed a spot, like most other WJUSD elementary schools), elementary school, with a capacity of 430 students. This leaves 890 children without a K-6 school to attend if the WRTP elementary school does not materialize. That's 890 children that, to access education, will be removed from the neighborhood, driven across town or to Davis, to become permanent

6-5

transients as Woodlanders. Unacceptable.

6-5 (Cont'd)

The City also has affordable housing ordinances that encourage room for those of limited means access to newly developing areas. The ordinance is necessary, admirable, and should be encouraged. But we risk subjecting this vulnerable part of our community to yet another obstacle when we don't provide critical infrastructure in our neighborhoods. With the City requiring 10% of residential units to be affordable to Low-Income households, we must also ensure the critical infrastructure of neighborhood schools are available, so those of limited means are not marooned in urban sprawl, with children.

6-6

A neighborhood school would also alleviate traffic congestion and the wear and tear on our roads in the transportation of children to schools outside of our neighborhood. We know through the District's own studies there will be roughly 900 elementary-age students in the Spring Lake and Tech Park area that, if there is no elementary school built, will require a car/bus in order to get to school across town or in Davis. A neighborhood school allows our children to stay local, walk, and ride to school.

6-7

Spring Lake and the Tech Park have and are planned to have a really magnificent set of greenbelts which we pay for in our CFD (Mello-Roos) and Lighting & Landscape fees. These trails connect our community, get us to move our bodies making us healthier, and provide a safe means for our children to get to school with minimal interaction with automobiles.

6-8

I would also be remiss if I didn't bring attention to climate change. We know carbon emissions are contributing to the extreme droughts, the dying off of our forests, and ultimately fire season. The City has its own Climate Action Plan which should not be a false tribute to our children's future. We can not afford to build our communities in a way that continues to facilitate our dependency on fossil fuels by not providing the essential services needed, where we need them. Proximity matters. Land use matters.

6-9

Please plan for the formal inclusion of a 'school' or 'public/quasi-public' (PQP) area on the land use and zoning maps of the Woodland Research and Technology Park Specific Plan and EIR. It's step one.

6-10

Sincerely,
Brian Coward

Letter 6a

change.org

Recipient: Rogelio Villagrana, Member, The Honorable Tom Stallard

Letter: Greetings,

The signers of this petition are concerned that the Spring Lake community will not have enough neighborhood schools when development is complete. There have been multiple amendments made to the Spring Lake Specific Plan which have eliminated key components of neighborhood access to schools for our children. As a community, we have invested heavily in our infrastructure to provide safe access through our greenbelts to neighborhood schools, parks, and commerce. With two of three planned school sites covered in homes, a new Research and Technology Park Specific Plan (draft) only providing language and lacking formal acceptance into the land use and zoning maps for a school(s) site, and a projected elementary-age population of 1,328, we find our community at risk of losing the opportunity to have enough neighborhood schools to serve our children.

We ask that our School Board of Trustees work with the City Council of Woodland to ensure formal inclusion in the land use and zoning maps of the Research and Technology Park Specific Plan, formulate a financial plan to acquire the necessary land and school construction to meet the needs of the elementary school children in our community (both the Spring Lake and Tech Park Specific Plans) at completion.

Attachment 1 - Planned School Sites map
Attachment 2 - Student and new school projections
Attachment 3 - Woodland Elementary Schools
Attachment 4 - Addendum 1: Student and new school projections 2020

Signatures

Name	Location	Date
Brian Coward	Woodland, CA	2018-12-10
Yelena P	Woodland, CA	2018-12-10
Dmitriy P	Woodland, CA	2018-12-10
Eric Garber	Woodland, CA	2018-12-10
Michael Cameron	Woodland, CA	2018-12-10
Denise Halfacre	West Sacramento, CA	2018-12-10
JON INWOOD	Brooklyn, NY	2018-12-10
Amy Juarez	West Sacramento, CA	2018-12-10
Tami Johnson	woodland, CA	2018-12-10
Shanna Durr	Woodland, CA	2018-12-10
Ashley Curtis	Woodland, CA	2018-12-10
Janet Hamilton	Woodland, CA	2018-12-10
mike brugh	Woodland, CA	2018-12-10
Avtar Sidhu	Woodland, CA	2018-12-10
Sukhi Sidhu	Woodland, CA	2018-12-10
Tatiana Bonilla	Woodland, CA	2018-12-10
kully Purewal	Sacramento, CA	2018-12-10
Jeannine Kruenegel	Woodland, CA	2018-12-10
William Fremgen	Woodland, CA	2018-12-10
Christiane Midence	Redwood City, CA	2018-12-10

Name	Location	Date
Danielle Burgess	Woodland, CA	2018-12-10
Tiana Babcock	Woodland, CA	2018-12-10
Randi Thornton	Woodland, CA	2018-12-10
Mary Reyes	Woodland, CA	2018-12-10
Jag Purewal	Woodland, CA	2018-12-10
Brian Snethen	Woodland, CA	2018-12-10
Aimee Robello	Woodland, CA	2018-12-10
Rita Capshaw	Woodland, CA	2018-12-10
Alicia Ballor	Woodland, CA	2018-12-10
Kari Osegueda	Woodland, CA	2018-12-10
Taylor Kelley	Woodland, CA	2018-12-10
Shelby Berriman	woodland, CA	2018-12-10
Jennifer Mitchell	Woodland, CA	2018-12-10
David Zavala	Woodland, CA	2018-12-10
Brad Mitchell	San Carlos, CA	2018-12-10
Carolee Churchill	Woodland, CA	2018-12-10
Chloe Liu	Woodland, CA	2018-12-10
Karla Torres	Woodland, CA	2018-12-10
Helen Frasier	Woodland, CA	2018-12-10
Keri Johnston	Woodland, CA	2018-12-10
Chris Durr	Woodland, CA	2018-12-11
Kimberlee Colombara	San Jose, CA	2018-12-11

Name	Location	Date
Kim Smith	Woodland, CA	2018-12-11
Kim Sterner	West Sacramento, CA	2018-12-11
Rosario Arreola Pro	Woodland, CA	2018-12-11
Teresa Allen	Woodland, CA	2018-12-11
Jennifer Owens	Woodland, CA	2018-12-11
Sara Smith	Woodland, CA	2018-12-11
Tina Denena	Woodland, CA	2018-12-11
Anja Garber	Woodland, CA	2018-12-11
Anne Quilter	Woodland, CA	2018-12-11
Carla Almeida	Davis, CA	2018-12-11
Jasmine Jimenez	Northridge, US	2018-12-11
Charles Smith	Woodland, CA	2018-12-11
Najwa Marrush	Woodland, CA	2018-12-11
Chris Seguin	Lakeside, CA	2018-12-11
Caryn bettencourt	San jose, CA	2018-12-12
Sharlene Miyagishima	Woodland Hills, US	2018-12-12
Brandon D'Ambra	Hermosa Beach, US	2018-12-12
Candido ramirez	West Sacramento, CA	2018-12-12
Tim Fairchild	Woodland, CA	2018-12-12
Natalie Yick	West Covina, CA	2018-12-13
Renee' Fremgen	Woodland, CA	2018-12-14
Renee Wecker	Woodland, CA	2018-12-15

Name	Location	Date
Michael Pro	Woodland, CA	2018-12-19
Kierra Currie	Salisbury, US	2018-12-26
Janice G Hunter	East Spencer, US	2018-12-27
Demet Candas	Woodland, CA	2019-01-01
Ramona Marten	Woodland, CA	2019-01-01
Dave Marten	Woodland, CA	2019-01-01
John Dolan	Woodland, CA	2019-01-03
Nicole Odell	Woodland, CA	2019-01-09
SURINDER DHANDA	WOODLAND, CA	2019-01-09
Larissa Getchel	Woodland, CA	2019-01-09
Danni Greenlee	Woodland, CA	2019-01-09
Angela Diaz	West Sacramento, CA	2019-01-10
Danah Singapuri	Woodland, CA	2019-01-10
Edward Shelley	West Sacramento, CA	2019-01-10
Marie Bryan	Woodland, CA	2019-01-10
Kathryn Smoot	SACRAMENTO, CA	2019-01-10
Brett Babcock	Woodland, CA	2019-01-10
k davis	Wallington, US	2019-01-10
Bianca Santiago	Woodland, CA	2021-02-07
Marjoire Dodson	Woodland, CA	2021-02-07
Nick Edsall	Woodland, CA	2021-02-07
Kinsey Mitchell	Woodland, CA	2021-02-07

Name	Location	Date
Jenna Bell	Woodland, CA	2021-02-07
Tiffany Hodge	Woodland, CA	2021-02-07
Christina Guzman	Oakland, CA	2021-02-07
Andy Hsieh	Woodland, CA	2021-02-07
Stacy Kwit	Woodland, CA	2021-02-08
Kevin Kwit	Woodland, CA	2021-02-08
Bonnie Bartz	Woodland, CA	2021-02-08
Steve Bartz	Sacramento, CA	2021-02-08
Helen Park	Woodland, CA	2021-02-08
Brenda Trotman	Woodland, CA	2021-02-08
Benjamin Olson	Woodland, CA	2021-02-08
Diana Howard	West Sacramento, CA	2021-02-08
Maren Hawkins	Woodland, CA	2021-02-08
Cody Howard	Woodland, CA	2021-02-08
Mike Owens	Woodland, CA	2021-02-08
Sam Pellissier	Sacramento, CA	2021-02-08
Enedina Moreno	Woodland, CA	2021-02-08
Tamara Gedge	Vacaville, CA	2021-02-08
Cynthia Bono	Woodland, CA	2021-02-08
Katie Neverkovec	Sacramento, CA	2021-02-09
Robyn Diruzza	Woodland, CA	2021-02-21
Anthony Perry	Santa Clara, CA	2021-05-11

Name	Location	Date
Francine Hurt	Woodland, CA	2021-05-11
Kali Slusser	Woodland, CA	2021-05-11
Manmeet Kallu	Woodland, CA	2021-05-11
Miranda Castro	West Sacramento, CA	2021-05-11
Joe Romero	Woodland, CA	2021-06-08
Rachel Kumler	Woodland, CA	2021-06-17
Connie Curva	Woodland, CA	2021-06-18
Mara Thompson	Woodland, CA	2021-06-18
Ellie Mae Antonio	Sacramento, CA	2021-06-20
Melissa Edsall	Woodland, CA	2021-06-21
Denise Halfacre	Woodland, CA	2021-06-21
Kacie Quello	Woodland, CA	2021-06-21
Maya Garrett	Woodland, CA	2021-06-21
Laura Ruano	Woodland, CA	2021-06-21
Jenny Tang	West Sacramento, CA	2021-06-21
amy robbins	San Lorenzo, CA	2021-06-22
Joyce Winter	Woodland, CA	2021-06-22
Minerva Guevara	Woodland, CA	2021-06-22
Kelley Weiss	Woodland, CA	2021-06-22
Robert Robert	Woodland, CA	2021-06-22
Corinne McCoy	Woodland, CA	2021-06-22
Ryan Dietz	Woodland, CA	2021-06-22

Name	Location	Date
Taylor Harrison	Davis, CA	2021-06-22
Meggie Schiveley	Woodland, CA	2021-06-22
Norah Shimokawa	Woodland, CA	2021-06-22
Aron Katz	Davis, CA	2021-06-22
Artemis Mosier	Woodland, CA	2021-06-22
Peggy Bernardy	Woodland, CA	2021-06-22
Kathryn Crepeau	Woodland, CA	2021-06-22
Brooke Gary	Davis, CA	2021-06-22
Phillip Martin	Fall River Mills, CA	2021-06-22
Sarah Low	Woodland, CA	2021-06-22
Som Ashton	Kamphaengphet, Thailand	2021-06-22
Cristal Cabbat	Woodland, CA	2021-06-23
Kimberly Villa	Woodland, CA	2021-06-23
Ken Forbes	Woodland, CA	2021-06-23
N. A. Naranjo	Woodland, CA	2021-06-27
Karen Rosenkilde Bayne	Woodland, CA	2021-06-30
Barbara Mills	Davis, CA	2021-06-30
Antonio Yepez	Woodland, CA	2021-06-30
Sara Walter	Woodland, CA	2021-06-30
Jan Van Horne	Woodland, CA	2021-07-01
Paul Mendez	Roseville, CA	2021-07-01
Theanne Griffith	Woodland, CA	2021-07-01

Name	Location	Date
Jia-Min Rosendale	Woodland, CA	2021-07-01
Lydia Contreras	Woodland, CA	2021-07-01
Samah Razek	Woodland, CA	2021-07-01
Nicholas Kent	Woodland, CA	2021-07-01
Jason Macomb	Acampo, CA	2021-07-01
Mike Lindberg	Concord, US	2021-07-01
Carlos Corona	Woodland, CA	2021-07-01
Rhonda Berka	El Macero, CA	2021-07-01
Roberta Campbell	Woodland, CA	2021-07-01
Rebecca Callahan-Petrucci	Woodland, CA	2021-07-01
JoAnn Finazzo	Woodland, CA	2021-07-01
David Salkoff	Woodland, CA	2021-07-01
Victoria Feuerstein	Woodland, CA	2021-07-01
Ella Meng	Woodland, CA	2021-07-01
Tyler Dunaway	Woodland, CA	2021-07-01
RANDY BERKA	Woodland, CA	2021-07-02
Austin Cho	Woodland, CA	2021-07-02
Aida Swanson	Woodland, CA	2021-07-02
Guy Swanson	Woodland, CA	2021-07-02
Tracy Diesslin	Sacramento, CA	2021-07-02
Hong Dao	Sacramento, CA	2021-07-02
Donna Dickinson	West Sacramento, CA	2021-07-02

Name	Location	Date
Kristin Dees	Woodland, CA	2021-07-02
Kat Kerlin	Davis, CA	2021-07-02

change.org

Recipient: Rogelio Villagrana, Member, The Honorable Tom Stallard

Letter: Greetings,

The signers of this petition are concerned that the Spring Lake community will not have enough neighborhood schools when development is complete. There have been multiple amendments made to the Spring Lake Specific Plan which have eliminated key components of neighborhood access to schools for our children. As a community, we have invested heavily in our infrastructure to provide safe access through our greenbelts to neighborhood schools, parks, and commerce. With two of three planned school sites covered in homes, a new Research and Technology Park Specific Plan (draft) only providing language and lacking formal acceptance into the land use and zoning maps for a school(s) site, and a projected elementary-age population of 1,328, we find our community at risk of losing the opportunity to have enough neighborhood schools to serve our children.

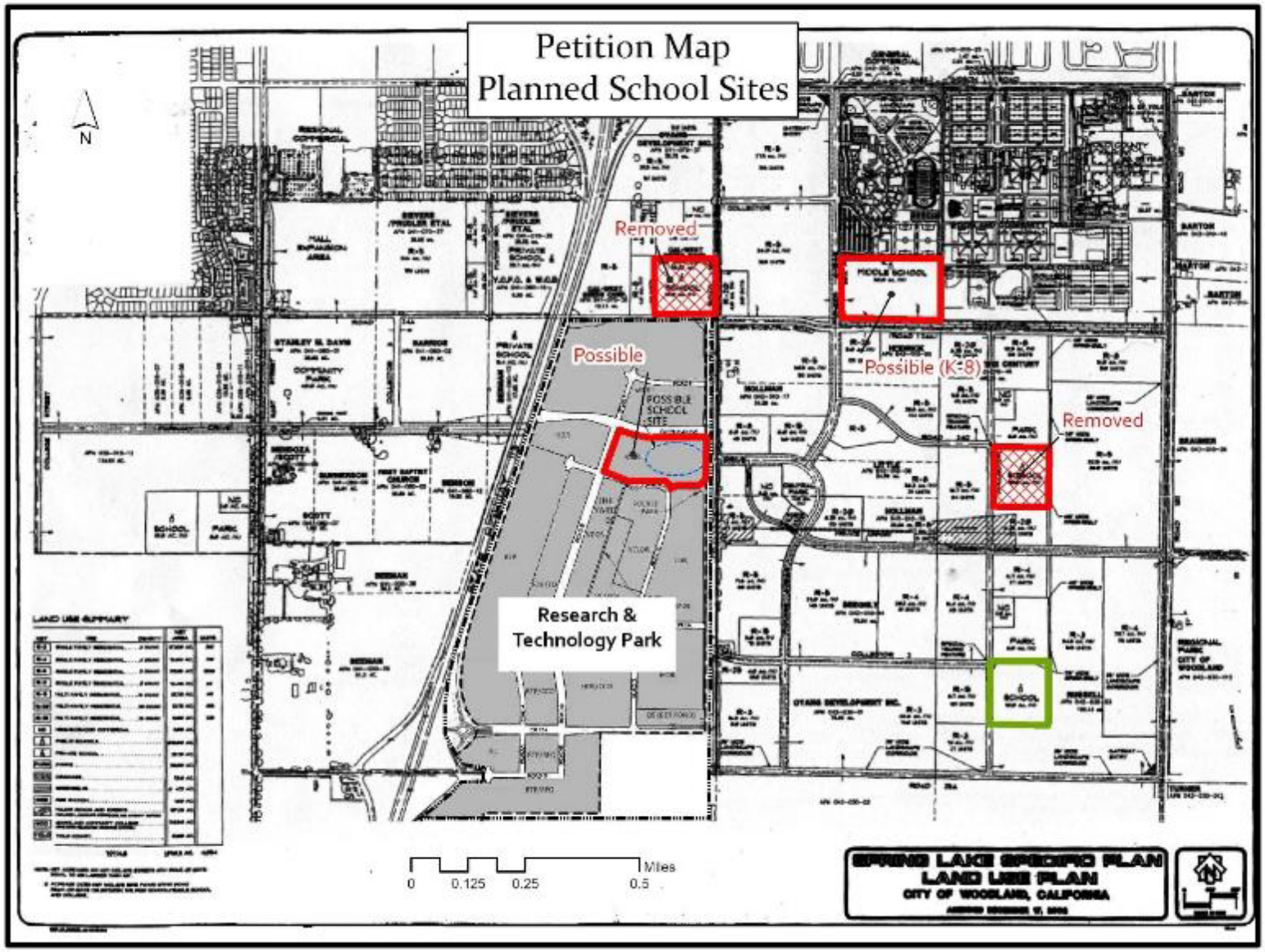
We ask that our School Board of Trustees work with the City Council of Woodland to ensure formal inclusion in the land use and zoning maps of the Research and Technology Park Specific Plan, formulate a financial plan to acquire the necessary land and school construction to meet the needs of the elementary school children in our community (both the Spring Lake and Tech Park Specific Plans) at completion.

Attachment 1 - Planned School Sites map
Attachment 2 - Student and new school projections
Attachment 3 - Woodland Elementary Schools
Attachment 4 - Addendum 1: Student and new school projections 2020

Comments

Name	Location	Date	Comment
Denise Halfacre	West Sacramento, CA	2018-12-10	"This needs to stop! Spring Lake too often is having changes done, now the children are becoming victims."
Tami Selfridge	woodland, CA	2018-12-10	"Our kids need a place to go to school that is close by."
Shanna Durr	Woodland, CA	2018-12-10	"All our kids deserve the chance to go to a close neighborhood school."
Jeannine Kruenegel	Woodland, CA	2018-12-10	"Our neighborhood schools are not large enough to serve all the additional new homes being built. Plans must be started now for schools for all the children!"
William Fremgen	Woodland, CA	2018-12-10	"I just built a new home in Spring Lake community in Fall of 2017 and was hit with a very heavy tax burden as a result (mello roos)--we need to make sure that the resources corresponding to this large tax burden are provided by our local government."
Danielle Burgess	Woodland, CA	2018-12-10	"Let's make sure that fancy mello roos we all pay goes towards much needed neighborhood schools!"
Carla Almeida	Davis, CA	2018-12-11	"My mello Roos taxes should be spent on my local community."
Brian Coward	Woodland, CA	2018-12-13	"Yes, the mello roos tax is a huge commitment by our community to fund the Spring Lake Specific Plan. In addition to infrastructure, a portion of those fees are meant to provide connectivity within our neighborhoods to parks, schools, and commercial services via greenbelts. This Specific Plan was created in the late 1990's and, in my opinion, was meant to address the issues of urban sprawl, community connectivity, and health. Unfortunately, the only elements the City has followed through on are our parks. The schools and commercial sites are either gone (replaced by homes) or at risk of being replaced by homes. We need to come together as a community to protect our investment in each other and our infrastructure. Letting our leaders know they can't fail to plan for our community's children and move on to the next development is critical."
Brian Coward	Woodland, CA	2018-12-13	"Mello Roos tax can only be used to payback on bonds that were issued to build the infrastructure in our community. Here's a great document the City of Woodland put together answering this questions and discussing many others regarding resident concerns."
Michael Pro	Woodland, CA	2018-12-19	"The Springlake Community which was delayed in building out in the Great Recession is now at the point where existing school infrastructure is lacking. There has been a substantial build out of new homes in the past several years yet it took over 10 years to get Springlake Elementary built which does not have much room for expansion. Seeing that Tayfoa Elementary School is overcrowded, and with the demolishing of Willow Springs Elementary this leaves two Elementary schools for the community East of Highway 113 which is the part of town that is growing. I already see a lack of

Name	Location	Date	Comment
			foresight regarding a middle school in this area of town. Lee and Douglass Middle Schools are approximately a mile from each other are are located in the center of town. There needs to be another middle school to serve Springlake and the rest of East Woodland. There are already two high schools in town, I would think there would need to be three to four middle schools to feed the two high schools. With all of the new housing and property"
Kathryn Smoot	SACRAMENTO, CA	2019-01-10	"We have neighborhood schools, Twin Rivers, not problem-free, but they're in our neighborhoods!"
Aron Katz	Davis, CA	2021-06-22	"We bought here with the promise of school infrastructure."
Kathryn Crepeau	Woodland, CA	2021-06-22	"I believe the schools should be close to where the children live. Please add a school to this area."
Karen Rosenkilde Bayne	Woodland, CA	2021-06-30	"It is critical to set aside land for an additional elementary school in the Spring Lake plans now. If the need isn't there, the land can be sold/used for other needs. But if a land for a school is not set aside now, it won't ever be there. It isn't worth the risk."
Mike Lindberg	Concord, US	2021-07-01	"Mike Lindberg"
Anne Quilter	Woodland, CA	2021-07-01	"We need neighborhood schools, especially for elementary aged children."
Guy Swanson	Woodland, CA	2021-07-02	"I live in springlake and pay springlake school taxes. My children should benefit from my tax investment."



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Spring Lake SP + Woodland Tech Park...K-12 student projection

Prepared by B. Jacks

28-Nov-18
Rev. 1-3-19

This is a "stand alone" projection assuming all student generated within SLSP & Woodland Tech Park SP are served by schools 100% within the SLSP/WTP bndy

Table A	Historical Lookback: Projected SLSP students...Approved SLSP Dec 18, 2001 land use plan								
	Land use designation		K-6	K-6	7-8	7-8	9-12	9-12	Total
		# units	SGF (1)	Students	SGF	Students	SGF	Students	all students
	R-3 (1.0 to 3.0 du/ac) to R-25 (>20 to 25 du/ac)								
	Totals	4037	0.508	2051	0.128	517	0.24	969	3536
Note:	(1) SLSP student generation factors (SGF) are per footnotes from Pg 6-18 in the approved Dec 18, 2001 SLSP								

Compare	SLSP...Projected student generation...2018 vs 2001 (2)		K-6		7-8		9-12	Total
	Table B/A: 2018 projected student compare to 2001...%		50%		54%		64%	54%

Note (2) The 50% reduction in projected SLSP K-6 student load partially explains why the projected number of Spring Lake K-6 sites was reduced from 4 sites to the current one K-6 (Willow Spring School). The need and request for second K-6 site east of Hwy 113 within the SLSP or Woodland Tech Park boundary was initiated in fall 2018 by a Spring Lake homeowners

Table B	Projected SLSP students...Table 5...WJUSD School Fee Justification Study Mar 8, 2018 by Cooperative Strategies								
	Land use designation		K-6	K-6	7-8	7-8	9-12	9-12	Total
		# units	SGF	Students	SGF	Students	SGF	Students	all students
	R-3 (1.0 to 3.0 du/ac)	364	0.2396	87	.0671	24	0.1564	57	169
	R-4 (>3.0 to 4.0 du/ac)	407	0.2396	98	.0671	27	0.1564	64	188
	R-5 (>4.0 to 5.0 du/ac)	1512	0.2396	362	.0671	101	0.1564	236	700
	R-8 (6.0 to 8.0 du/ac)	583	0.2396	140	.0671	39	0.1564	91	270
	R-15 (10.0 to 15.0 du/ac)	491	0.2886	142	.0746	37	0.1476	72	251
	R-20 (18.0 to 20.0 du/ac)	455	0.2886	131	.0746	34	0.1476	67	232
	R-25 (>20.0 to 25.0 du/ac)	225	0.2886	65	.0746	17	0.1476	33	115
	Totals	4037		1025		280		621	1925

Table C	Woodland Tech Park (WTP)...projected students using 2018 Cooperative Strategies SGFs								
	Land use designation		K-6	K-6	7-8	7-8	9-12	9-12	Total
		# units	SGF	Students	SGF	Students	SGF	Students	all students
	Low to medium density	1043	0.2552	266	0.0695	72	0.1536	160	499
	High density	581	0.2552	148	0.0695	40	0.1536	89	278
	Totals WTP	1624		414		113		249	777

Table	Grand Total SLSP + WTP (2018 Cooperative Strategies SGFs)		K-6		Middle		Sen HS	Total
B + C	SLSP + WTP build out projected student count		1439		393		871	2702

Summary schools needed (within SLSP + WTP boundary)			Students	Student/sch	New schools (3)	Comments			
SLSP & WTP	K-6		1439	864	1.6656	Total K-6 schools to serve SLSP + WTP			
SLSP & WTP	7-8		393	??	0	1152 ..District seat excess 2017/2018. Capacity exists.			
SLSP & WTP	9-12		871	2008	0.4335	Senior HS... (9-12) to service SLSP + WTP			

Note: (3) Assumes that Spring Lake school with estimated 2018 enrollment of 160 = 160/864 = 0.1805 K-6 school was NOT counted by Cooperative Strategies as an existed facility. If Willow Springs WAS counted as existing, there remains a 1.6656 - 0.1854 = 1.4805 K-6 shortage with Woodland Tech Park added to SLSP.


99
20
113
21
E8
24
98
101
25
25A
N. Ashley Ave
N. East St
N. Pioneer Ave
E. Beamer St
E. Main St
Lincoln Ave
W. Cross St
Cross St
Cottonwood St
College St
3rd St
Gibson Rd
El Dorado Dr
Bourn Dr
Harry Lorenzo Ave
Branigan Ave
East St
West Side Hwy
BEAMER
GIBSON
0.6
0.9
1.3
1.0
1.3
0.9
0.7
© 2018 Google
ELEMENTARY SCHOOL LOC
EXHIBIT B
INCH
1" = 2050'±

ADDENDUM 1 (2021/02/06)

Table B2	Projected SLSP students...WJUSD School Fee Justification Study April 6, 2020 by Cooperative Strategies								
	Land use designation		K-6	K-6	7-8	7-8	9-12	9-12	Total
		# units	SGF	Students	SGF	Students	SGF	Students	all students
	R-3 (1.0 to 3.0 du/ac)	354	0.2233	81	0.0619	23	0.1413	55	155
	R-4 (>3.0 to 4.0 du/ac)	407	0.2233	91	0.0619	25	0.1413	58	174
	R-5 (>4.0 to 8.0 du/ac)	1512	0.2233	338	0.0619	94	0.1413	214	646
	R-8 (8.0 to 8.0 du/ac)	583	0.2233	130	0.0619	36	0.1413	82	249
	R-15 (10.0 to 15.0 du/ac)	491	0.2596	127	0.0711	35	0.2342	66	228
	R-20 (18.0 to 20.0 du/ac)	455	0.2596	118	0.0711	32	0.2342	61	212
	R-25 (>20.0 to 25.0 du/ac)	215	0.2596	56	0.0711	16	0.2342	36	105
	Totals	4037		944		261		562	1767
	Note: Cooperative StrategiesFee Study April 6, 2020.. "Student generation factors" are from Table 5... Adjusted Student Generation Factors								

Table	SLSP...Projected student generation... VS			K-6		7-8		9-12	Total
B /C	2018 projected student compared to 2001...%			50%		54%		64%	55%
B2/B	2020 projected student compared to 2018...%			92%		93%		91%	91%

Table C2	Woodland Tech Park (WTP)...projected students using 2020 Cooperative Strategies SGFs								
	Land use designation		K-6	K-6	7-8	7-8	9-12	9-12	Total
		# units	SGF	Students	SGF	Students	SGF	Students	all students
	low to medium density	1048	0.2233	235	0.0619	65	0.1413	147	445
	High density	581	0.2596	151	0.0711	41	0.2342	78	270
	Totals WTP	1624		384		106		225	715

Table	Grand Total SLSP (2020 Cooperative Strategies SGFs)			K-6		Middle		Sen HS	Total
B2 + C2	SLSP + WTP projected student count			1328		367		787	2482

Summary schools needed		Students	ISLE - Existing capa	New schools (B2)	Student/sch	Comments
SLSP & WTP	K-6	1328	430	2	449	Two new elementary schools to serve SLSP + WTP
SLSP & WTP	7-8	367		0	> 1000	1096 WJUSD seat excess in 2016. Adequate cap exists. No new 7 8
SLSP & WTP	9-12	787		1	> 1000	226 WJUSD seat shortage in 2016. One new 9-12 Sen HS needed.

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RESPONSE TO COMMENT LETTER 6

Comment 6-1 Summary of Comment: The commenter introduces the letter and states that their main concern is the inclusion of schools in the land use and zoning maps of the WRTP Specific Plan.

Response: With regard to the proposed WRTP Specific Plan and impacts related to school services, this concern is addressed in Section 3.12, Public Services and Recreation, of the Draft EIR. Table 3.1 of the WRTP Specific Plan identifies TK/K through 12 Public/Private School as a permitted use within the Medium Density Residential land use designation of the WRTP Specific Plan Area. The WRTP Specific Plan reserves up to a 12-acre portion of the medium density residential zone south of Parkland Avenue and east of Road B for a potential new elementary school site, should a school be needed, as determined by WJUSD and the California Department of Education. See also, responses to comments 6-2 and 6-3. Also, in addition to the existing schools within WJUSD and the planning for a school site within the Specific Plan Area, WJUSD owns 20 acres in the Spring Lake Specific Plan Area and adjacent to Pioneer High School, which is currently identified as a potential site for a future middle school. Spring Lake Elementary School was also recently opened, recognizing the need for additional school services to support the current and planned development of the southeast area. Spring Lake Elementary accommodates 400 students.

Comment 6-2 (and Attachment 6a to the Comment Letter) Summary of Comment: The commenter provides a summary of a petition they created in addition to comments and justifications to support why WJUSD needs more elementary schools. The petition, included in this Final EIR as Comment Letter 6a (above) includes signatures of community members in support of inclusion of a school in the land use and zoning maps for the WRTP, asks that the School Board and City formulate a financial plan for land and construction of a school to serve the WRTP Specific Plan Area and nearby Spring Land Specific Plan Area, provides comments from community members requesting a school, provides a "Planned School Sites" map for the WRTP and Spring Lake area, and provides independent calculations of student projections for the WRTP and Spring Lake areas at potential build out. The commenter explains the importance in which schools have in contributing to a healthy and vibrant community, and states that new schools are necessary to benefit the entire City.

Response: The petition has been reviewed in detail, including the planned school site map and student generation estimates for the Spring Lake Specific Plan and WRTP Specific Plan. As noted in the City's General Plan, while the City does not control the location or design of schools, the City coordinates with WJUSD on school planning (General Plan, page PF 5-22). The City and WJUSD are coordinating on current and projected school service needs and are committed to ensuring adequate services are provided for all students in the community. Section 3.12.4 of the Draft EIR analyzes the proposed WRTP Specific Plan's potential impacts to related school services. Table 3.12-2 has been updated (See Chapter 3, Errata, of this Final EIR) to reflect updated data from the WJUSD Annual Enrollment Projection Report supporting documentation regarding enrollment and capacity (DecisionInsight 2021). As explained in this section, student generation from anticipated development in the WRTP Specific Plan Area would be approximately 376 new elementary school students (grades K–6), 104 middle school students (grades 7–8), and 222 high school students (grades 9–12), each of which is below the remaining capacity at the schools surrounding the WRTP Specific Plan Area. In addition, based on growth

projections developed for the WJUSD Annual Enrollment Projection Report, with an additional 2,800 residential units becoming occupied and generating growth in the number of students districtwide, Tafoya Elementary School, Douglass Middle School, and Pioneer High School all maintain capacity through 2030 (DecisionInsight 2021).

As acknowledged in Section 3.12.4 of the Draft EIR and accounted for by the City's General Plan and Climate Action Plan EIR Impact 4.12-3 (pages 4.12-35 through 4.12-39) (City of Woodland 2016), future development consistent with the General Plan, based on the State's classroom loading factors, would require new schools. The 2035 General Plan and Climate Action Plan EIR found this impact to be potentially significant. Funding for new school construction is provided through State and local revenue sources. Senate Bill 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." The 2035 General Plan and Climate Action Plan EIR concluded that pursuant to State law the impact is considered less than significant after mitigation. As noted, in the event that additional students resulting from new residential development within the WRTP Specific Plan Area would exceed the elementary school capacity or an additional school is otherwise determined by the WJUSD and the California Department of Education to be necessary, the WRTP Specific Plan provides for a new school site within the Planning Area. The proposed development in the WRTP Specific Plan is consistent with that assumed for analysis in the 2035 General Plan and Climate Action Plan EIR, including increased students within the school district due to residential development, and planning for additional schools. Funding for new school construction, as provided through fees authorized by Senate Bill 50 and identified as mitigation under the 2035 General Plan and Climate Action Plan EIR would be applicable to development within the WRTP Specific Plan Area. Therefore, this impact was comprehensively considered and analyzed in the Draft EIR, and no changes are needed.

Comment 6-3 Summary of Comment: The commenter states that Exhibit 2-1 of the WRTP Specific Plan does not show zone designations for either a school or public/quasi-public land use. The commenter expresses their opinion that the 10-acre portion of medium-density residential land that is reserved under the WRTP Specific Plan for possible school use would be a conflicting use and not be consistent with the City's General Plan 2035 housing mix requirements if this land is used for a school rather than residential use.

Response: Table 3.1 of the WRTP Specific Plan identifies transitional kindergarten and kindergarten (TK/K) through 12 Public/Private school uses as a permitted land use within the Medium Density Residential land use designation of the WRTP Specific Plan Area. As noted in the City's General Plan, while the City does not control the location or design of schools, the City coordinates with WJUSD on school planning (General Plan, page PF 5-22). However, based on coordination with WJUSD, the WRTP Specific Plan reserves a location for a new school site, should a school be needed, as determined by WJUSD. See also, responses to comments 6-2 and 6-3.

Comment 6-4 Summary of Comment: The commenter expresses their opinion that the WJUSD and the School Board have displayed reticence towards potential development of new schools, but that the residents of Woodland want and need these additional resources.

Response: This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR, but please see the response to comment 6-2 with regard to the City's planning efforts to support a school within the WRTP Specific Plan Area, should an additional school be determined by the WJUSD and the California Department of Education to be necessary.

Comment 6-5 Summary of Comment: The commenter states that the student-yield generation rates for the Woodland Joint Unified School District (Table 3.12-5) in the Draft EIR (page 3.12-16) do not account for students who reside in the Spring Lake community. The commenter also expresses his concern for the City's capacity to provide local school availability so that students do not need to commute/travel outside their community for this purpose.

Response: Please see response to comments 6-1 through 6-3 and 6-6. In addition, it is noted on page 0-27 of the Draft EIR that the infrastructure provided for the WRTP Specific Plan is consistent with the anticipated growth under the 2035 General Plan. The commenter is correct that Table 3.12-5 in the Draft EIR (page 3.12-16) only includes data pertaining to the anticipated student generation rate associated with the proposed WRTP Specific Plan. However, districtwide enrollment projections are evaluated by Woodland Joint Unified School District for planning purposes. The 2021 Annual Enrollment Projection Report for Woodland Joint Unified School District analyzed enrollment through 2030 with the addition of 2,800 residential units becoming occupied and generating growth in the number of students districtwide; this growth would account for growth within the WRTP Specific Plan Area, Spring Lake Specific Plan Area, and elsewhere throughout the City. Based on this report, even with this growth, of the schools closest to the WRTP Specific Plan Area, Tafoya Elementary School, Douglass Middle School, and Pioneer High School all maintain capacity through 2030 (DecisionInsight 2021). As discussed in response to comments 6-1 through 6-3, the WRTP Specific Plan also identifies TK/K through 12 Public/Private school uses as a permitted land use within the Medium Density Residential land use designation of the WRTP Specific Plan Area. Therefore, this impact was comprehensively considered and analyzed in the Draft EIR, and no changes are needed.

Comment 6-6 Summary of Comment: The commenter references the City's affordable housing ordinance. The commenter also asserts that low-income families and residents not having sufficient access to local schools could cause an extra burden to low-income families.

Response: This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted. Please also see the response to comment 6-2 with regard to the planning efforts to provide for a new school within the WRTP Specific Plan Area, should it be determined by the WJUSD and California Department of Education to be needed. The identification of required school services is based on loading factors and actual and projected student generation. In addition, the City coordinates closely with WJUSD to implement City's General Plan Policies 5.E.2, 6.B.2, 6.B.6, and 6.B.7, as listed below.

- 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."

- Policy 6.B.2: Promote Active Transportation. Remove barriers and improve multimodal mobility throughout the city for all community members by supporting transit, pedestrian, and bicycle connections between residential neighborhoods and major destinations, including parks, civic facilities, school campuses, other educational institutions, employment centers, shopping destinations, parks and recreation areas."

- Policy 6.B.6: Active Transportation to Schools. Improve the street and neighborhood conditions in the areas surrounding schools to support children and youth walking and bicycling to school. Continue to work with the Woodland Joint Unified School District and other agencies to implement a Safe Routes to School program and prioritize identified Safe Routes to School infrastructure improvements in transportation improvement plans.

- Policy 6.B.7: Siting of New Schools. Work with Woodland Join Unified School District and private and charter schools to locate and design new school sites so they are easily and safely accessible to pedestrians and bicyclists and located and accessed away from major street intersections and major streets.

Comment 6-7 Summary of Comment: The commenter states that by developing more centralized schools within the neighborhoods of the City of Woodland, traffic congestion would be reduced, and road conditions would be preserved due to an increased accessibility for students to walk and ride their bikes to school. The commenter also asserts that without a new elementary school there would be about 900 elementary-age students from the buildout of the Spring Lake and WRTP Specific Plan Areas that would require a car/bus in order to get to school across town or in Davis.

Response: As noted on page 3.12-16 of the Draft EIR, depending on the timing of future development within the WRTP Specific Plan Area, future students could potentially be bused or driven to schools within the WJUSD boundaries, resulting in indirect impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. While the City actively coordinates with the WJUSD regarding consideration of the need for new school facilities, as noted in Response to Comment 6-6, these potential impacts were considered in the 2035 General Plan and Climate Action Plan EIR analysis for the relevant resource areas, and are addressed as part of the impact analyses in each of the environmental topic-specific sections of the WRTP Specific Plan Draft EIR No revision to the Draft EIR has been made or is necessary.

Comment 6-8 Summary of Comment: The commenter expresses their excitement for the future development of greenbelts within their community and the beneficial impacts they will have on the quality of life for residents, such as promoting active lifestyles and providing a safe means for children to get to school.

Response: This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR. The support for the Specific Plan's proposed greenbelts is noted.

Comment 6-9 Summary of Comment: The commenter references the City's Climate Action Plan and states the importance of planning communities for reducing dependence on fossil fuels to ensure a quality environment for future generations, and also deems that land use planning and having close proximity between residences and schools are important.

Response: The City continues to support and implement the Climate Action Plan and appreciates the commenter's support for this important document. This comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; the comment is noted. Please see response to comment 6-2 with regard to the Citywide and WRTP Specific Plan efforts and coordination with appropriate agencies as it pertains to school facilities.

Comment 6-10 Summary of Comment: The commenter reiterates their request for the 'formal inclusion of a 'school' or 'public/quasi-public' area' in the land use and zoning maps included in the WRTP Specific Plan.

Response: Please see response to comments 6-1 through 6-6.

2.2.7 COMMENT LETTER #7:

ERIC GARBER

Letter 7

From: Eric <garberville@hotmail.com>
Sent: Friday, July 02, 2021 8:39 AM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>
Subject: Tech Park EIR Public Comment

Good Morning Erika,

I wanted to offer my public comments for the Tech Park EIR

First, I wanted to start by stating that the plan should include land zoned for a school, not a potential change of designation.

If the area designated for a potential school site is used, what will happen to the medium density homes?

7-1

I also question the numbers for school capacity:

On page 410 the EIR states:
Table 3.12-2 shows 2019-2020 enrollment, design capacity, and estimated remaining capacity for each school. As shown on Table 3.12-2, these schools are currently operating below design capacity
The table itself has the columns "District Capacity" but the table description states "Design Capacity" which I assume is the same thing but could mean something different. I also am confused by the Estimated Remaining Capacity numbers. In some cases they are exact numbers and other they are rounded or close if you subtract current enrollment from capacity. I also wonder where the capacity numbers came from. From my knowledge of sites, I would like to see how these capacity numbers can be achieved. Do these numbers require any additional modifications to the school sites or, are they current capacity as the site is now? Finally, the Spring Lake Elementary school capacity numbers are off. The school does not have a remaining capacity of 312 or 472 (at build out). That is total capacity, not remaining.

I don't know the impact of these estimates but they may create the wrong conclusions for future capacity for the schools in the area.

7-2

Thanks,
Eric

RESPONSE TO COMMENT LETTER 7

Comment 7-1 Summary of Comment: The commenter states that the WRTP Specific Plan should include area specifically reserved for a school(s) and should not require the redesignation of land zones to do so. The commenter also asks about the impact it will have on medium density homes if a school were to be built in these areas.

Response: The WRTP Specific Plan reserves up to a 12-acre portion of the medium density residential zone south of Parkland Avenue and east of Road B for a potential new elementary school site should a school be needed, as requested by WJUSD. This is a permitted land use within the Medium Density Residential designation and would not require a land use redesignation. In addition, as explained on page 0-7 of the Draft EIR, while the total development square footage and other land use details are all reasonable assumptions based on the land use designations and other planning details of the WRTP Specific Plan, these inputs are assumptions used for the purposes of informing related planning efforts and the analysis of environmental impacts of the WRTP Specific Plan. In addition, as detailed in Table 2.1 of the WRTP Specific Plan, the land use plan provides for a range of residential densities, and provides design standards and guidelines for each residential land use designation category including the floor area ratio range. The estimated dwelling units that would be accommodated under each residential land use designation is based on average yields for planning purposes and analysis in the EIR. Using land within the Medium Density Residential land use reserved for a school site would not necessarily preclude the ability of the WRTP Specific Plan Area to accommodate the anticipated number of medium density residential units, since the loss of units for a possible school site could be made up through increased densities in other locations.

Comment 7-2 Summary of Comment: The commenter references Table 3.12-2 on page 3.12-4 (Woodland Joint Unified School District Enrollment, 2019-2020) and expresses their uncertainty in the meaning of definitions between the terms District Capacity and Design Capacity, as well as asks about the basis for the data in the "District Capacity" and "Estimated Remaining Capacity" numbers.

Response: The text on page 3.12-4 has been revised from "design capacity" to "District capacity" as the intended content. Consistent with the commenter's observation, the estimated remaining capacity data were inconsistent and did not reflect the exact calculations between District Capacity and Enrollment at the time of analysis. These data have also been refined for consistency to reflect updated data from the WJUSD Annual Enrollment Projection Report supporting documentation regarding enrollment and capacity (DecisionInsight 2021) (See Chapter 3, Errata, of this Final EIR)). These revisions do not change the validity or findings of significance of the of the analysis in the Draft EIR.

2.2.8 COMMENT LETTER #8A:

BRUCE JACKS (JUNE 3, 2021)

Letter 8a

WTRP DEIR Storm Drainage Discussion...June 3, 2021

Summary of Topics

1. Cunningham Engineering WRTP Jan. 31, 2020 Storm DrainageTech Memo does not provide a reasonable drainage solution, and leaves design issues to be resolved or deferred. 8a-1
2. The interaction of WRTP and its discharge to the Upper South Canal is not a zero impact. The USC was not originally designed to drain lands south of Rd. 25a between Rd. 101 and East St. 8a-2
3. Dividing the South Regional Pond into four smaller basins with two basins pumped is not a good engineering solution. 8a-3
4. Siting a storm drainage basin on prime ag lands south of Rd. 25a outside the Urban Limit Line conflicts with Yolo County preservation goals. The WRTP further proposes to possibly expand the Owyang South SWQ basin located on prime ag land outside the Urban Limit Line. 8a-4
5. The Mar. 2018 SUGA SDMP as described by city staff is a "guide." As such, the current version still contains significant errors, misidentified and/or overlooked shed areas. 8a-5
6. The functionality of the USC since design/construction in 2004 to 2021 has changed dramatically. The 100 yr. HGL has risen 1.66 ft. from elev. 38.14 to 39.8. Over 100 pads in Spring Lake north of Rd. 25a, do not have one foot protection. In a catastrophic event, many pads may be submerged. 8a-6
7. City staff direction to use an n value of 0.03 for the USC in the Rev. Mar. 2018 in effect dictated design criteria to Wood Rodgers. The consultant clearly did not agree with that direction. Using a realistic n value of 0.07 in the USC would produce a higher HGL at Rd. 25a resulting in overtopping and OLR into Spring Lake at Promenade. 8a-7
8. The Willow Slough storage area south of Rd. 25a to mitigate Willow Slough overflow cannot be reasonably confirmed without field survey and an inundation easement. 8a-8
9. The 100 yr. HGL at Rd. 25a must be reduced. 8a-9
    a. Big new detention basin south of Rd. 25a, west of Rd. 102
    b. Add capacity at Rd. 102/Willow Slough
    c. Add culvert capacity at Rd. 102/Upper South Canal and widen the USC up and downstream of Rd. 102
    d. Other

Primary Topics

1. The Cunningham Engineering WRTP Jan. 31, 2020 Tech Memo does not provide a complete drainage solution, and leaves design issues to be resolved or deferred:
   a. Discharge from the WRP is to be 55 cfs instead of 109 cfs per the SUGA SDMP
   b. Shed 4 is designated to require 100% on-site water quality storage. What does that mean?
   c. Sheds 5A and 5B have upstream sub-sheds west of Hwy 113 that will be required to have SD pump stations. This conflicts with city SD standards when a gravity solution is possible.
   d. Shed 6 drains to an on-site Water Quality/Hydromodification Basin. What makes the functionality of that basin different from SRP No. 1?
   e. Shed 6 has an option to move its footprint burden off-site to prime ag land with expansion of the Owyang hydromod basin. This assumes the off-site property owner will sell more prime ag land for urban use.

   8a-10

2. WRTP Sheds 4, 5A, 5b, and 6 drain to the Upper South Canal which has a minus (-) 1.66 ft. freeboard. The math: north top of bank = 39.14. Max 100 yr. WS per CoW standards one foot freeboard = 38.14. Calculated 100 yr. WS = 39.8. Freeboard = 38.14- 39.8 = minus (-)1.66 ft. The current 100 yr. HGL is at the crown of Rd. 25a...ZERO freeboard. At time of construction in 2005, the South Interceptor Channel aka the Upper South Canal had one foot freeboard. It's time to fix the problem. The WRTP capital improvement finance plan should front the cost, and the capital cost be spread over benefitting properties.

   8a-11

3. As part of lowering the USC HGL 1.66 ft. to achieve one foot freeboard in the channel, the hydraulic model should use the realistic n value of 0.07 as shown in the initial Wood Rodgers SD Facilities Master Plan. The current condition of Farmers Central Channel, the Heritage outfall, and the Upper South Canal at Rd.25/Rd. 103 is a clear indication that a 0.03 n value used for the Rev. Mar. 2018 SUGA SDMP is not realistic and increases flood risk to SLSP properties north of Rd. 25a.
   a. Widening the USC east and west of Rd. 102 and adding additional conveyance capacity at Rd. 102 may help lower the 100 yr. WS
   b. Added conveyance at Willow Slough/Rd. 102 would likely reduce the HGL.
   c. A dedicated detention facility south of Rd. 25a and west of Rd. 102 would help

   8a-12

There are several issues to be addressed by the Woodland Research and Technology Park (WRTP) specifically related to drainage.

Background:

1. A critical flood protection facility, the Upper South Canal (USC)...formerly known as the South Interceptor Facility, was designed and constructed from 2004 to 2005 based on standards at that time. The HGL on USC record plans does not show an HGL, but the typical cross section shows the 100 yr. WS graphically at about one foot below top of the elev. 39.14 north bank/maintenance road which would be a 100 yr. HGL at elev. 38.14. One foot freeboard was an industry wide standard then and now for an open channel. 8a-13
2. Since 2004, Yolo County rainfall standards have increased in 2008 resulting in higher intensity storm. The 2006 Wood Rodgers SDMP for the city was used as the basis for the Feb. 2017 SUGA SDMP which was updated in Mar. 2018 to correct errors. The 2017 SDMP also accounted for higher runoff coefficients within the SLSP due to a higher percentage of impervious surface over developed subdivisions. These factors and ?? account for an increase in the USC 100 yr. WS from 38.14 in 2004 to 39.8 in 2018. **That's a significant increase of 1.66 ft. 100 yr. USC HGL from the original design.** 8a-14

General:

- **Woodland Research and Technology Park interaction with the Upper South Canal**
- **Does the Rev. Mar. 2018 SUGA SDMP contain errors or lack sufficient detail?**

3. Per its SDMP, the WRTP drains to the Upper South Canal (USC) south of Rd. 25a. This open channel is currently impacted by combined developed SLSP, ag land WRTP drainage, and Willow Slough overflow. The USC is currently overcapacity because the calculated 100 yr. HGL at elev. 39.8 is 0.66 ft. above the record elev. 39.14 north top of bank / maintenance road, and 0.66 ft. above emergency access to the inlet structure trash rack. At the design flood, critical access to the Rd. 102 box culvert inlet structure, trash rack, and north maintenance road are compromised. The 100 yr. HGL at elev. 39.8 is called to be at the crown of Rd. 25a at the south limit of the SLSP. Rd. 25a, therefore, is the last line of defense with a ZERO safety factor to protect the SLSP from combined drainage from WRTP, Owyang South, and Willow Slough overflow. 8a-15
4. The 2018 SUGA SDMP provides macro solutions to regional drainage problems, and has been described by city staff as a "guide." As such, it has been subject to filling in critical details by development projects to its intent, or modification to suit phasing. In addition, the SDMP has not been thoroughly examined for the accuracy of the consultant's defined tributary drainage sheds. In addition, the 2018 SDMP has not provided enough detail to determine the ultimate sizing of WRP which would pin down the footprint of the WRP on the CoW Sports Park Expansion Project. 8a-16

5. Has the 2018 SUGA SDMP fully discovered and tested drainage issues, verified sheds, and provided viable solutions? Examples of the 2018 SDMP errors, and/or lack of detail:
    a. Defining 320 acres west of East St./RR at tributary to the former Farmers Central Ditch irrigation canal is an error that originated as part of the 2004 CoW SDMP. That entire 320 acres drains south to a 14.25 wide RR box culvert 0.5 mile south of Rd. 25a, and ultimately discharges to Willow Slough. While some percentage of runoff from that 320 +/- acres of ag land including 160 acres of SP-1C west of East St./RR technically may reach the South Canal and be pumped by the city in a 100 yr. Willow Slough overflow event, .
    b. Wood Rodgers has not defined the flood event that Willow Slough overtops its bank east and west of Rd. 102, so it's not known how often the city will pump any water from a Willow Slough overflow.
    c. Has Wood Rodgers field survey verified the storage area calculated on the Russel property south of Rd. 25a/west of Rd. 102 to confirm the peak flow mitigation from a Willow Slough overflow? Topography used for storage calc was likely the 2008 DWR LiDAR topo.
        i. At best, this has an accuracy of +/- 0.6 ft. It could be less accurate than +/- 0.6 ft.
        ii. DWR topo ground control. Since topo was flown county wide, it was probably tied to various bench marks that may or may have variance from city BMs.
        iii. The Russell property was converted from row crop to an orchard around 2016 to 2017. The land form/contours may have been altered and the calced storage may be less or greater than calculated by Wood Rodgers.
        iv. There is no inundation easement for flood storage to date on the Russell property. As of early 2021, the property owner reports no contact from the city to obtain that easement.
        v. Effectively, there is no storage available as the property owner has the right to grade to protect their land, and the full impact of a Willow Slough overflow to the SLSP is by definition not known.

8a-17

Specific questions related to the WRTP SDMP

6. **Location and size of the South Regional Basin**. The 2018 SUGA SDMP sited the South Regional Basin south of Rd. 25a within the Urban Limit Line, to serve properties within the 2001 Spring Lake Plan "Remainder Area" plus about 45 acres south of Rd. 25a/east of SR 113 (now part of the WRTP), and about 25 acres south of Rd. 25a/ west of SR 113 included with a later City of Woodland General Plan Update. The WRTP SDMP has divided the Wood Rodgers SDMP SRB into four smaller basins; one 4 ac basin (Specific Plan "Open Space") on the WRTP site north of Rd. 25a, one south of Rd. 25a on prime ag land outside the Urban Limit Line (this basin is not shown on most WRTP DEIR exhibits), and two basins west of SR 113 one north and one south of Rd. 25a.
7. **What are the design standards for the two detention basins north and south of Rd. 25a?**
    a. Will there be an emergency spillway on the WRTP basins?
    b. If yes, a spillway is lower than the top of berm, so will the berm be elevated above the roadway, and the HGL will be above inlet grates in the street.
8. Explain why there are two SRP basins in the WRTP, one north of Rd. 25a within the project limits and one south of Rd. 25a on prime ag land outside the Urban Limit Line.

8a-18

9. **Why is the SRP split into four basins?** Two on WRTP, and two west of Hwy 113, north and south of Rd. 25a? The two basins west of 113 require pumping which is not consistent with the CoW operations and maintenance guidelines by WR. 8a-18 cont.
10. **Occurrence of 100 yr. event east of Rd. 102 combined with local event west of Rd. 102.** Wood Rodgers recommendation is to combine a 25 yr. local with the 100 yr. off-site. 8a-19
11. Wood Rodgers recommends 8 inches maximum depth of water at any point in a travel way for emergency vehicle access. 8a-20

Cunningham Engineering Tech Memo Jan. 31, 2020 WRTP Storm Drainage Management

1. Attachments 7 to 9 are not included on the CoW website posting. 8a-21
2. Pg. 2, para. 3. Shed SB1C1 does not appear to naturally drain to or through the WRTP site as inferred by the SD Memo. From aerial photos and topography, SB1C1 and SB1D1 may be currently draining south to Willow Slough. If those two sheds currently drain to Willow Slough, detention mitigation should be 100% of 100 yr. runoff from those areas. 8a-22
3. Pg. 5, 100-yr Storm Routing and Release Point, 2nd para. 8a-23
   a. Provision of OLR in Arterial streets is not advised. Parkland Ave, Rd. 25a, and other arterials are major escape routes and should be clear of standing water for emergency vehicle access. Reference attached City of Roseville Table 10-6 for an example of safe flood routing.
4. Pg. 5, last para. Allowing water to pond one foot deep in streets is excessive and not consistent with public safety.
   a. Using a one foot standard has resulted in multiple lots in the SLSP with less than one foot protection from OLR to the minimum pad. Woodland has no written standard or definition of depth of street flooding. Most jurisdictions have a much more stringent requirement than one foot and they define the location of maximum depth.
   b. Where is the CoW reference point for one foot depth? Gutter flow line or street centerline?
   c. The city of Roseville for example does not allow more than 12D of standing water in a gutter before OLR. At a 0.35% street slope, this translates to a maximum 0.40 ft. standing water at gutter sag points before release. See attached CoR Table 10-6.
   d. Recommendation; reduce maximum depth and define the location where measured.
5. Pg. 6, 3rd para.
   a. Runoff from Sheds HW20 and SB1C1 west of SR 113 should be gravity and not pumped. 8a-24
   b. Detention should be merged with a true Regional SRP per the 2018 SUGA SDMP.
6. Pg. 6, last para. Isn't the pipeline between SR 113 and Pioneer 60", not 72"? 8a-25
7. Pg. 7, para 1. Wood Rodgers has 109 cfs discharge from WRP. Cunningham says 55 cfs max. due to downstream Farmers Central Channel constraints. 8a-26
   a. What is the problem? Wood Rodgers says the 100 yr. HGL at Rd. 102 is 33.9.
   b. The July 1, 2005 record drawings for FCC by Watershed Engr. Show the 100 yr. HGL at 35.7.
   c. How has the 100 yr. WS **dropped** 1.8 ft. after rainfall standards increased and runoff coefficients were found to be higher in the tributary upstream sheds.
   d. Reducing max discharge from WRP to 55 cfs will likely reduce the upstream service area.

8. Pg. 10, Shed 4 and 5A/5B. "The SRP was sized and its general location determined as part of the SUGA SDMP update.

a. The SRP is clearly shown graphically within the limits of the Urban Limit Line south of Rd. 25a.

b. The Tech Memo justifies multiple SRP basins based on "future" development west of SR 113 will "not be soon." Let's do some math:

Project	Estimated SLSP single family remain (Feb. 2021)	2018 to 2020 avg. permit/yr.	Years of SF permits remain
SLSP	758	283	2.7 yr. (end 2023)
WRTP	Proposed 1,100 LDR to MDR	Use 283	3.9 yr. (begin 2023 end and end 2027)

c. If the WRTP project moves forward and is successful marketing its Research and Tech Park, it's conceivable the project buildout could be more rapid.

d. **Future growth prediction.** There will be immediate pressure on the city to start processing a Specific Plan for 200 +/- acre SP-1B and 155+/- acre SP-1C. With substantial larger estate homes occupying about 15 acres of SP-1B and 10 to 15 acres of SP-1C, the net development from those lands will likely be reduced. Using the WRTP 70% of residential land as LDR/MDR, and 8.0 ac for SP-1B and 100% LDR at 3.5/ac for SP-C, there is a projected: 8a-27

Growth Area	Gross est. ac	Net est. LDR/MDR ac	Est. density	LDR/ MDR	Permit rate/yr	Build out yrs.	Est. build time line
SP-1B	200	185 x 70% = 130	7.8 [WRTP avg]	1014	300	3.4	2026-2029
SP-1C	155	140 x 100% LDR = 140	3.5 [low LDR]	490	150	3.3	2028-2031

e. **Conclusion and prediction**. There will be a few years before fees flow from SP-1B to pay toward a centralized SRP, but it makes for a much more efficient operation and maintenance program for the district (assume the benefitting area, not the general populace of the CoW). In summary, it makes no sense to split the SRB into four smaller basins, and the current drainage plan also includes infrastructure outside the Urban Limit Line.

Applicable City of Woodland Drainage Standards Matrix with Questions

Stds. Ref	Issue	Question	
4.01. STORM DRAINAGE GENERAL. A drainage system which includes unreasonable and intensive maintenance or operational requirements as determined by the City shall be rejected in favor of a drainage system which does not place an excessive burden on the owner/operators of such system	The South Regional Basin in the Rev. Mar. 2018 SUGA SDMP has one basin within the Urban Limit Line south of Rd. 25a	Why is the South Regional Basin split into 4 basins with 2 future basins west of Hwy 113 to be pumped? Why is one of the WRTP detention basins located outside the Urban Limit Line on prime ag land?	8a-28
4.02 PLAN REQUIREMENTS. All storm drainage improvement plans shall show geometric designs including plan and profile views, utility crossings, catch basins, laterals, manholes and invert elevations at all structures. In addition, the hydraulic grade line shall be shown on the storm drain profile	SLSP and subdivision plans have not been showing HGLs	Why not? Example; the Upper South Canal extension with the Owyang South project shows no 10 or 100 yr. HGLs.	8a-29
4.04 DESIGN CAPACITIES. Drainage facilities shall be designed to accommodate the future development of the entire upstream watershed. The future development shall be defined as full build-out of the General Plan Land Use Designations.	This standards section does not address drainage diversions.	The SUGA SDMP beginning in 2004 has mis-identified shed areas west of East St. and the RR as draining to the West Regional Pond (WRP). This is a diversion of up to 320 acres with at least 50% of the land outside the Urban Limit Line. SP-1C is approximately 160 acres.	8a-30
4.04.B. Open Channel: Open channels shall be designed to convey the 100-year storm event while maintaining at least one (1) foot of freeboard in cut sections and three (3) feet of freeboard in levied sections.	A "levee" is not defined in the CoW Design Standards.	Pg. 24 in the Yolo County Rev. 2010 SD Manual states: *In areas where fill is required to provide freeboard for open channels, three feet of freeboard shall be provided for the 100-year event.* Does the city accept this definition for a levee freeboard std?	8a-31
4.04.E Regional Storage Facilities	Designed according to Figure 4A	What is the definition of a Regional Storage Facility? Is there a minimum area (acres)? Why is there no access ramp to the bottom of a Regional Basin?	8a-32

4.04.E Regional Storage Facilities	If a detention basin fills beyond capacity, it must have provision for an emergency release. Remember...Oroville Dam. CoW design standards for Regional facilities are silent regarding a Regional Basin emergency spillway.	Will an emergency spillway be required for the WRTP Open Space basin north of Rd. 25a, and SRP No. 1 south of Rd. 25a? If yes, a spillway is lower than the top of basin bank/berm, but it must have a designated route/path to the roadway back of curb to spill to the street.	8a-33
4.06 NON-REGIONAL DETENTION PONDS.	These ponds are required in order to reduce peak flows in certain areas and may be considered or required on a case-by-case basis by the City Engineer for sites which cannot be adequately served by existing storm drains. Ponds shall be designed with spillway features to conduct excess flows into streets. Overland flow through streets shall not adversely impact areas downstream.	Are any of the SRPs (1, 2, 3, or 4) actually Non-Regional Ponds?	8a-34
4.07 STORM DRAINAGE PUMP STATIONS. To the extent practicable, storm drainage pump stations shall be avoided. In unavoidable cases, a pump station may be considered for ownership by the City after submission of a detailed engineering report documenting reasons for proposing a pump station. This report shall establish that there is significant benefit to the City in building a pump station to serve the proposed tributary area.	SRP 2 and 3 are set up to be pumped basins.	Pump stations for these 2 sheds make no sense from a capital cost and operational view. The shed area west of Hwy 113 and south of Red. 25a drains to Willow Slough. There is a substantial drainage course draining 1,550 +/- acres from west of the RR to Willow Slough about 1600 ft. south of Shed xxx. Why not drain Shed xxx by gravity to that ditch? The shed area west of Hwy 113 north of Rd. can easily be served by gravity by a new lower pipeline under Hwy 113.	8a-35

4.21 LEVEES Where new levees are constructed, the land side levee slope will be 2:1. The water side slope of the new levee embankment will be constructed at 3:1. The top width of the levee berm will be fifteen feet and will also function as a patrol road. The limits of the right-of-way will extend ten feet (10') beyond the toe of the land side slope of the new levee embankment to provide access for levee maintenance.	Will any of the proposed open drainage channels have top of bank and patrol/maintenance road in fill?	If any WRTP channels have levees, the minimum freeboard in channel to top of bank is 3 feet, correct?	8a-36
4.36 FIGURE 4M – STORM DRAINAGE POND STANDARDS FOR NON-REGIONAL DETENTION PONDS	**A. Design Criteria. 4.c. Pond Construction** For the PERMANENT DETENTION POND WITH PARK, the perimeter road/maintenance access is 6 ft. wide	6 ft. wide seems too narrow. Should it be 12 ft?	8a-37
Pg. 1 Yolo County City/County Drainage Manual Rev. Feb. 2010. (Co. SD Manual)	**A.Introduction...Background... June 2007 City County MOU** between City of Woodland, Yolo Co. and the Yolo Co. Flood Control and Water Conservation Dist.	Is the objective to develop solutions for reducing risks, a flood and management plan, been produced? Is this plan being implemented for Willow Slough overflow impact to Spring Lake?	8a-38
Pg. 2 and 3 Co. SD Manual	**B.Purpose.** Provide guidelines for achieving consistency in criteria and methodology for hydrologic and hydraulic analyses associated with storm runoff between rural and urban areas in Yolo County. This includes direction for conveyance (peak) and storage (volume) design.		8a-39
Pg.2 and 3 Co. SD Manual	**C. Regulatory Setting. Local** "Evaluating existing flooding conditions is the first step in identifying floodplains and problem areas."		8a-40

Pg. 14 of Co SD Manual	Guidelines for watersheds 10 to 500 sq. miles	Since the Woodland SD model falls in this range, was this methodology used to simulate storm events that could coincide with a Willow Slough 839 cfs overflow?	8a-41
Pg. 17 of Co SD Manual	SD design criteria	Are all the County criteria not addressed by CoW standards followed?	8a-42
Pg. 19 of SD Manual	A Design Criteria for Public Safety. State of California For urban and urbanizing areas within the Central Valley, a 200-year level of flood protection is required. This criteria is applicable to communities that have 10,000 or more residents, or communities where it is planned or anticipated to have 10,000 residents or more within the next 10 years	Does the State of CA 200 yr. level of protection apply to Willow Slough overflow impacts?	8a-43
Pg. 23 of Co SD Manual	Open channel freeboard	100 yr.–2 ft. freeboard 200 yr.–2 ft. freeboard does Woodland have a lesser 1 ft. freeboard std. for the 100 yr.?	8a-44
Pg. 24 of Co. SD Manual	In areas where fill is required to provide freeboard for open channels, three feet of freeboard shall be provided for the 100-year event.	The Upper South Canal south of Rd. 25a was designed in 2005 before release of the Yolo Co. SD Manual. The north maint. Road is in about 2 ft. of fill. In 2005 the USC had one foot of freeboard. Now, it has a negative 0.66 ft measured to the north top of bank/maintenance road. The USC is far below any standard to provide flood protection to the Spring Lake residents north of Rd. 25a.	8a-45

Pg. 41 of Co. SD Manual	**Flowage Easements.** Where the flooding of land serves to attenuate the peak runoff similar to a detention pond, a flowage easement is recommended to be acquired to ensure the functional integrity of the land as a component of the any designed storm drainage system relying on the preservation of storage upstream. The need for flowage easements east and west of Rd. 102 to mitigate impact from Willow Slough overflow is identified in the Rev. Mar. 2018 SUGA SDMP. The need for these easements was likely know at time of the 2006 City of Woodland SDMP by Wood Rodgers. As of early 2021, the impacted property owner north of Willow Slough and west of Rd. 102 had not even been contacted. Storage volume on Lands of Russel south of Rd. 25a was likely calculated using 2008 DWR LiDAR topography with an accuracy of not better than 0.6 ft.	Was the DWR topography field survey spot checked by Wood Rodgers for vertical accuracy? This is critical in confirming available storage volume. Around 2016-17, a new orchard was planted, and the field contours may have been altered. That may have impacted available storage. Why has the CoW not even started the process to obtain an inundation easement which is critical to reduce the peak Willow Slough overflow rate discharge to the Upper South Canal?

8a-46

Pg. 42 Co. SD Manual	**Floodplain Analysis.** Before any project is fully approved it must satisfy the City and/or County Engineer that all flooding sources have been identified and quantified with sufficient certainty to understand existing floodplains and the extent to which proposed changes in land use may affect it. For example, all flow must be accounted for when defining new facilities, such as diversion structures or detention ponds. If limited upstream channel capacities force water to leave the channel and divert around new (planned) facilities, this should be identified and accounted for as part of future design, as necessary.	It's not know what city or county floodplain analysis stds applied at time of SLSP approval, Dec. 18, 2001, but good engineering practice has always applied that "all flooding sources be identified." Prior to SLSP approval, Jacks commented to city staff that Willow Slough was a possible overflow impact to the SLSP. The 2001 SLSP SD MP, however, showed only a twin 54 inch pipe in Rd. 25a which is a strong indicator that the Willow Slough overflow was not an issue at that time. Now, Willow Slough overflow is a real flood threat to Spring Lake residents.	8a-47
Pg. 43 Co. SD Manual	**F. Interim Conditions** . As development progresses within a given jurisdiction, interim drainage conditions must be evaluated. Some flexibility in criteria and standards may be considered for interim conditions, but in no case would the following be allowed as a result of new development: • Jeopardizing public safety. • Increasing risk of property damage from flooding. • **Increasing floodplain elevations to surrounding lands, unless property owner approval is acquired in writing.** • Creating significant impacts to surface or groundwater quality, impacting the facilities and operation of downstream canal and ditch operations on surrounding land requires close coordination with downstream landowners and will require prior written legal permission granted by affected property owners resulting from adverse impacts.	Mitigation of drainage alteration impacts is consistent with California Drainage Law which long predates the SLSP and proposed WRTP. The Willow Slough overflow impact to SLSP must be addressed and mitigated. The WRTP drains to the impacted Upper South Canal and the WRTP should trigger a permanent solution.	8a-48

RESPONSE TO COMMENT LETTER 8A

Comment Letter #1 (8a) submitted by Bruce Jacks on June 3, 2021

Response: The referenced Technical Memorandum prepared by Cunningham Engineering is a planning level document. The City has reviewed the document and provided comments through its consultant for the applicant to address at a later date prior to improvement plan (design) review. The current document is sufficient to identify concepts and alternatives from a planning level perspective. The Technical Memorandum evaluated the proposed WRTP storm water system for the 10-year storm, including storm drainage water shed analysis and the backbone layout of the stormwater system for the WRTP. In addition, the Draft EIR comprehensively analyzed potential impacts related to the potential increase in the rate or amount or surface runoff that could result in flooding, exceed the capacity of existing or planned stormwater drainage systems, and provide substantial additional sources of polluted runoff. In accordance with General Plan Policies 5.I.3 and 5.I.7, the Technical Guidance Manual for Stormwater Quality Control Measures (City of Woodland 2006b), and the Engineering Standards: Design Standards, Standard Details and Construction Specifications (City of Woodland 2021), project applicants for future projects proposed under the WRTP Specific Plan are required to design site-specific on-site stormwater systems and submit the proposed designs to the City for approval prior to the start of any construction activities. The WRTP Specific Plan identifies best management practices (BMPs), low impact development (LID), and hydromodification management techniques that will be incorporated into the site-specific stormwater system designs and operation as required by the 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 Municipal Separate Storm Sewer System (MS4) permit. This ensures no deferral. However, because proposed development in the WRTP Specific Plan Area would substantially increase the rate or amount of surface runoff, primarily as a result of new impervious surfaces, and detailed drainage and stormwater flooding calculations and designs for the WRTP Specific Plan Area and the off-site State Route 113/County Road 25A interchange improvements have not yet been performed, the Draft EIR found this impact to be potentially significant. The detailed drainage and stormwater calculations and designs cannot be performed at this time because the project development plans and infrastructure plans have not been designed. Mitigation Measure 3.9-1a requires additional storm drainage analysis for determining the amount of new development acreage beyond the previously identified 80 residential acres allowable in the South Urban Growth Area that can be accommodated with current infrastructure, accounting for revised baseline conditions and identifying what additional storm drainage infrastructure would be needed to support full buildout of the WRTP Specific Plan. Therefore, this impact was comprehensively considered and analyzed in the WRTP Specific Plan EIR and no changes are needed.

Comment 8a-2 Comment: The commenter asserts that interaction of WRTP and its discharge to the Upper South Canal is not a zero impact. The Upper South Canal was not originally designed to drain lands south of Road 25A between Road 101 and East Street.

Response: Land within the WRTP in an undeveloped state currently discharges to the Upper South Canal. The estimated 100-year peak flow entering the South Canal under the 2006 Storm Drainage Facilities Master Plan (2006 SDFMP) has been modified under the SDFMP Update for the South Urban Growth Area (SUGA SDFMP) (updated February 2017, revised March 2018), with changes in precipitation creating impacts to previously designed conditions, as well as new land use, watershed, and detention configurations/assumptions. It was not the purpose of the 2018 SUGA SDFMP to partition all of the individual changes to determine their respective impacts separately. Rather, the approach was to take all of the changes at once and determine overall acceptable solutions to the City for the buildout of the General Plan. The SUGA SDFMP did evaluate the increases in flow to the Upper South Canal due to development in the WRTP. The SUGA SDFMP did evaluate the increases in flow to the Upper South Canal from areas south of CR 25A. The Draft EIR included review and analysis based on the SUGA SDFMP and no changes to the EIR are necessary or have been made.

Comment 8a-3 Summary of Comment: The commenter asserts that four smaller detention ponds with pumping is not a good engineering solution.

Response: To develop a balanced Specific Plan with multiple land uses, landowners, and physical constraints, many drainage alternatives including various pond locations, pipes versus channels, and construction costs were evaluated. The proposed layout was determined to spread the land burden associated with providing storm drainage infrastructure as an equitable approach while retaining sufficient land to yield the number of units at the intended densities per the WRTP Specific Plan proposed Land Use Plan (Cunningham Engineering 2020). See Responses to Comments 8a-10c, 8a-18 and 8c-18 for related responses.

Comment 8a-4 Summary of Comment: Commentor indicates that one of the storm drainage basins is outside the Urban Limit Line and asserts that this would conflict with Yolo County preservation goals. In addition, the commenter states that the WRTP drainage plan proposes a possible expansion of the Oyang South stormwater basin, also outside the Urban Limit Line.

Response: The City reviewed the location of the South Regional Pond, acknowledges that it is outside of the Urban Limit Line, included the South Regional Pond as part of the proposed land uses in the Draft EIR project description, and comprehensively analyzed the environmental impacts associated with development of the South Regional Pond at the proposed location for each impact area throughout the Draft EIR. Replacement of converted farmland or an in-lieu fee (dependent upon project size) would be required by the County's agricultural conservation ordinance (Section 8-2.404 and Section 8.2-405 of the Yolo County Code), and mitigation measures for the loss of habitat are included in the project mitigation measures detailed in Section 3.3 of the EIR. The expansion of the Oyang South stormwater basin, as referenced by the commenter, is not proposed as part of the WRTP Specific Plan; the WRTP Specific Plan and Storm Drainage Study have been revised to clarify this. The proposed drainage solutions, as presented within the WRTP Specific Plan EIR are consistent with the revised WRTP Specific Plan and Storm Drainage Study (Cunningham Engineering 2023). Therefore, no revisions are required of or have been made to the WRTP Specific Plan EIR.

Comment 8a-5 Comment: The commenter asserts that, because the March 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* is described by City staff as a "guide," the current version still contains significant errors, misidentified and/or overlooked shed areas.

Response: As a planning level document, the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* is intended to and appropriately serves as a guide for future design efforts, which then evaluate conditions in more detail using actual layouts and design plans for construction approval by the City, at the time that more advanced design level is complete and necessary details for future analysis are available. Not every number and condition in a planning level document will be the final condition after construction. As no specific errors are identified under this general comment, each instance of a specific purported error is separately addressed in detail in responses to more specific comments throughout Responses to Comments 8a, 8b, and 8c.

Comment 8a-6 Summary of Comment: The commenter asserts that the functionality of the Upper South Canal from the time of design and construction in 2004 to 2021 has changed dramatically. The commenter states that the 100-year hydraulic grade line has risen 1.66 feet from elevation 38.14 to 39.8, asserting that over 100 pads in Spring Lake north of Road 25A do not have one-foot protection and that, in a catastrophic event, many pads may be submerged.

Response: The purpose and suitability of the Upper South Canal has not significantly changed. While the peak flow conditions and water surface elevations have changed, the Upper South Canal was intended to convey the peak 100-year conditions and still does, serving its purpose. The change in peak water surface to 39.8 feet does not inundate structures to the north of County Road 25A, but is held within the Upper South Canal with zero freeboard within the channel (SUGA SDFMP, March 2018). As such, this is not the elevation or condition present adjacent to homes north of County Road 25A, as they will experience water surface elevations that correspond to rainfall and flow routing directly within these subdivisions (with an elevation lower than 39.8). The reference to a "catastrophic" event is not defined, but is assumed to be an event larger than the design event of a 100-year storm. The City standard is to provide protection against storms with a recurrence interval of 100-year or lower, in accordance with published design standards and approved exceptions.

Comment 8a-7 Comment: The commenter asserts that city staff direction to use a Manning's n-value (n-value) of 0.03 for the Upper South Canal in the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*, in effect, dictated design criteria to Wood Rodgers, and that the consultant did not agree with that direction. The commenter goes on to state that using a realistic n-value of 0.07 in the Upper South Canal would produce a higher hydraulic grade line at Road 25A, resulting in overtopping and overland release into Spring Lake at Promenade.

Response: The City developed a maintenance plan for the Upper South Canal that would allow higher levels of flow in this channel. This maintenance plan is consistent with the use of a Manning's n-value of 0.03. In accordance with the city's approach, Wood Rodgers characterized the channel with a 0.03 Manning's n-value with zero feet of freeboard in the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*. The commenter's characterization of 0.07 being a "realistic n-value" is the commenter's opinion. It is the City's responsibility to maintain the channel in such a manner to meet the 0.03 n-value design criteria. The comment does not

identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-8 Comment: The commenter asserts that the Willow Slough storage area south of Road 25A to mitigate Willow Slough overflow cannot be reasonably confirmed without field survey and an inundation easement.

Response: The area south of County Road 25A is not a storage pond. Based on the topographic information, flow is leaving Willow Slough at a higher elevation and flows in a sloping nature downhill toward the Upper South Canal, turning east to flow under County Road 102. The overland flow leaving the Willow Slough channel has a higher peak flow rate, which is slightly attenuated as it travels across the landscape to the Upper South Canal. The boundary of stormwater flow is determined by applying the highest water surface elevations along the path of the overland flow and cumulatively capturing all inundated areas, even though they do not all inundate simultaneously. Any effort to represent a flowage easement must map the area as inundation area, with changing stormwater flow elevation from south to north, while using underlying topographic mapping. The InfoWorks ICM program used to model the stormwater flow automatically superimposes the topography and water to generate a representation of the inundated areas at a micro level. For additional information regarding topographic accuracy see Response to Comment 8a-17c. The Spring Lake Capital Improvement Plan and Spring Lake fee program includes funding to acquire a flowage easement or flowage easements, as applicable. The City is currently in the process of negotiating (a) flowage easement(s). Notwithstanding, this has no bearing on the EIR analysis or conclusion therein. No revisions to the EIR have been made or are necessary.

Comment 8a-9 Summary of Comment: The commenter concludes that the 100-year water surface elevation at County Road 25A "must be reduced," and offers several recommendations to achieve that end.

Response: The conclusion asserted by the commenter is not entirely accurate and appears to be based on assumptions regarding channel roughness and freeboard, which are based on the maintenance plan for the channel. The conceptual alternatives offered by the commenter may be valid for reducing water surface elevations in targeted areas, however, the City has determined based on the facts below that alternative designs are not needed to protect the areas north of County Road 25A. The City monitors and maintains the roughness conditions in the Upper South Canal upstream and downstream of County Road 102 based on adherence to the City maintenance plan. Based on the SUGA SDFMP, the design condition of the Upper South Canal meets the City design standard for a 100-year storm event with the approval of a design exception by the City Engineer. The City Engineer approved a design exception to allow zero freeboard based on the fact that the peak flow in the Upper South Canal is at elevation 39.8 for less than one hour and the length of road that is at elevation 39.8 is less than 50 feet. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR. No change to the EIR is required.

Comment 8a-10 Summary of Comment: The commenter raises various questions and comments regarding the Cunningham Engineering WRTP January 31, 2020, Technical Memorandum for drainage, including concern that design issues remain to be resolved or have been deferred.

Response: A Specific Plan and its appendices are planning documents to guide future actions when more detailed design specifications are available. Specific answers to commenter's questions, a summary of each is presented (underlined) at the beginning of each response, are presented below:

Sub-comment 8a-10a: The commenter raises the question of the West Regional Pond Discharge of 55 cubic feet per second (cfs) as opposed to 109 cfs.

Response: The 2018 SUGASDFMP, indicates the planned maximum West Regional Pond discharge to be approximately 109 cfs, which is based upon the capacity of the 60-inch culvert beneath State Route 113. The 55 cfs flows were based on a conservative assumption from over 20 years ago which assumed a conservative 10-year hydraulic grade line using a more generic storm model. The 109 cfs of flow is more accurate than the 55 cfs of flow and is based on the more robust stormwater Integrated Catchment Modeling (ICM) model. The revised WRTP Technical Memorandum (July 2023) has been revised to accurately cite the 109 cfs.

Wood Rodgers analyzed the pipeline capacity in this corridor for the 10-year storm event to verify that there was adequate capacity to convey 109 cfs from the West Regional Pond plus developed flows within Spring Lake and future developed flows from shed C4B (the northern portion of the WRTP). The analysis used InfoWorks ICM, a two-dimensional (2D) hydraulic modeling software to assess the available capacity. The results indicate that the hydraulic grade line during the 10-year peak flow conditions is located below the soffit of the pipes in this corridor. Hence, the corridor is able to accommodate 109 cfs from the West Regional Pond in addition to developed flows within the relevant sheds east of State Route 113. The results of this analysis are part of a memo entitled *Farmer Central Drainage (10-year) and Woodland Research and Technical Park Development Triggers*, dated January 17, 2022 .

Sub-comment 8a-10b: The commenter asks for clarification on the meaning of Shed 4 being required to have 100 percent on-site water quality storage.

Response: Based on the requirements of the State Water Resources Control Board NPDES General Permit, the standard of care for water quality design is to implement post-construction best management practices through low impact design techniques. These may include, but are not necessarily limited to, vegetated swales, rain gardens/bioretention planters, and pervious pavements, all of which may also implement below grade infiltration trenches. This was discussed on page 12 of the Storm Water Technical Memorandum (Cunningham Engineering, 2023).

Sub-comment 8a-10c: The commenter notes that sheds west of Highway 113 will be required to have storm drain pump stations, which the commenter asserts conflicts with City standards when a gravity solution is possible.

Response: A gravity solution would require upsizing and deepening the culverts beneath Highway 113, and subsequently deepening the entire downstream drainage system. The Upper South Canal was designed with the assumption that the culverts beneath Highway 113 were to remain. It would be cost prohibitive to modify the existing culverts under State Highway 113. The WRTP Specific Plan EIR examines the adverse physical effects of all changes proposed under the Specific Plan, including all on- and off-site infrastructure required to serve planned land uses.

While the commenter offers an alternative drainage approach, the drainage approach summarized in the Specific Plan and Draft EIR is consistent with City drainage standards, and this drainage strategy is addressed comprehensively in the EIR. Further, the approach selected by the City has the fewest environmental impacts. No revisions to the EIR have been made or are necessary.

Sub-comment 8a-10d: The commenter asks for clarification regarding the difference between the Water Quality/Hydromodification Basin and the South Regional Pond.

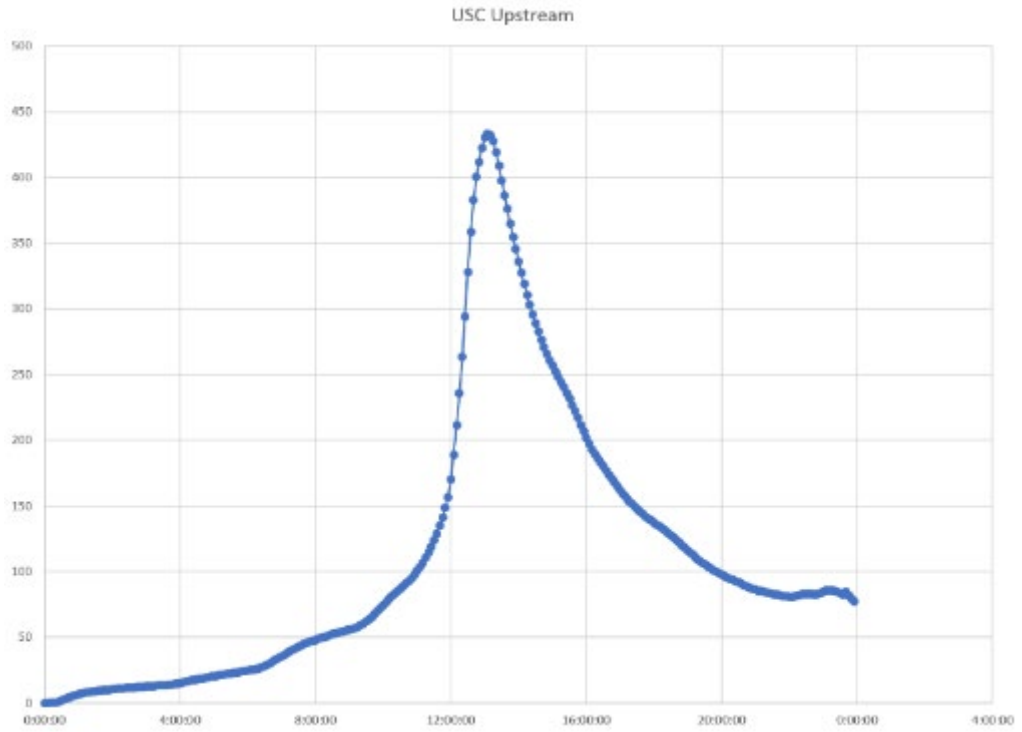
Response: The South Regional Pond will be sized to attenuate post development runoff from the 100-year storm to pre-development conditions of the WRTP Specific Plan Area. Current 100-year runoff from the culverts crossing beneath State Route 113 will also be routed through the South Regional Pond. The Water Quality / Hydromodification Pond will be sized only to attenuate flows up to the two-year storm post development runoff. Post development flows in excess of the two-year storm will overflow into the Upper South Canal and increased flows are ultimately attenuated for Shed 6 in the downstream South Urban Growth Area drainage system. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR has been made or is necessary.

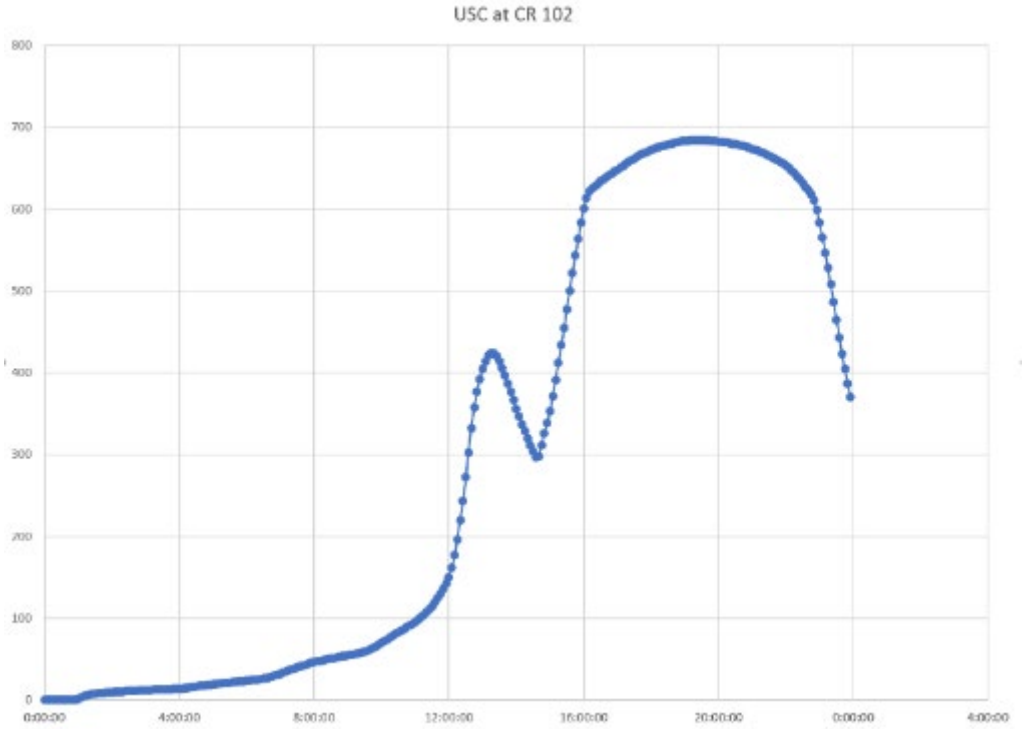
Sub-comment 8a-10e: The commenter notes that Shed 6 has an option to expand the Oyang South stormwater basin as an alternative to the onsite Water Quality/Hydromodification Basin.

Response: The expansion of the Oyang South stormwater basin, as referenced by the commenter, is not proposed as part of the WRTP Specific Plan; the WRTP Specific Plan and Storm Drainage Study have been revised to reflect this. The proposed drainage solutions, as presented within the WRTP Specific Plan EIR are consistent with the WRTP Specific Plan and revised Storm Drainage Study (Cunningham Engineering 2023). Therefore, no revisions are required of or have been made to the WRTP Specific Plan EIR.

Comment 8a-11 Summary of Comment: The commenter asserts that the WRTP Specific Plan area sheds drain into the Upper South Canal and that the Upper South Canal is operating with zero feet of freeboard, and, therefore, the WRTP should reduce water levels to have one foot of freeboard relative to the top of the north channel bank.

Response: While the WRTP Specific Plan area does drain into the Upper South Canal, the Plan area's contribution is not a straightforward determination, as the storm flows from the Willow Slough overflow are not entirely coincident with urban runoff flood timing. Aside from timing issues, the increase in flooding in the Upper South Canal at County Road 102 is more due to increases in design precipitation creating more non-urban runoff, and less due to upstream development. The following hydrographs show the flow in the Upper South Canal channel upstream of the Willow Slough overflow and the flow at the upstream side of the County Road 102 culverts, respectively; these hydrographs show the urban runoff peaking around hour 13, where the peak portion of the Willow Slough overflow is arriving at hour 15 and peaking after hour 18.





The City has determined that maintaining lower n-values in the Upper South Canal and allowing water surface elevation at 39.8 upstream of County Road 102 is an acceptable condition. The n-value is based on the City's maintenance plan for the Upper South Canal. The design condition of the Upper South Canal meets the City standard of protecting against the 100-year storm event with the approval of a design exception by the City Engineer. The City Engineer approved a design exception to allow zero freeboard based on the fact that the peak flow in the Upper South Canal is at elevation 39.8 for less than one hour and the length of road that is at elevation 39.8

is less than 50 feet. The WRTP Specific Plan EIR comprehensively analyzed potential impacts associated with stormwater and proposed drainage solutions, and no changes to the EIR are needed.

Comment 8a-12 Summary of Comment: The commenter asserts that 0.03 as a design n-value is not manageable, given how other segments of channels (e.g. Farmers Central, Heritage outfall, and other portions of the Upper South Canal) are operated within the city. The commenter goes on to provide suggestions for operating the Upper South Canal at a different design condition.

Response: The examples provided in the comment are being managed/operated by the City with a higher design roughness condition, or n-value. This does not preclude the City from operating other channels within the City at other roughness conditions as warranted by project circumstances. According to the City, operating the Upper South Canal in the vicinity of County Road 102 with a 0.03 n-value is manageable and is consistent with the City's maintenance plan for this Canal. The comment provided does not provide evidence that the Upper South Canal in the vicinity of County Road 102 is being maintained inadequately. Operating the Upper South Canal at a different design condition is not needed based on the City's current operations to maintain the Upper South Canal with a 0.03 n-value. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-13 Summary of Comment: The comment provides background relating to the history of the Upper South Canal design and the use of freeboard in standard design practices.

Response: Based on the SUGA SDFMP, the increasing stormwater elevations along the Upper South Canal west of County Road 102 to 39.8 feet are known to the City. The City has adequate maintenance funding to maintain the Upper South Canal consistent with a 0.03 n-value. Comments regarding what was done in the past do not prevent the City from operating the Upper South Canal with a 0.03 n-value and zero freeboard. The design condition of the Upper South Canal meets the City design standard for a 100-year storm event with the approval of a design exception by the City Engineer. The City Engineer approved a design exception to allow zero freeboard based on the fact that the peak flow in the USC is at elevation 39.8 for less than one hour and the length of road that is at elevation 39.8 is less than 50 feet. If stormwater was to overtop the road, the water would have to travel more than 1,000 feet in order to enter the subdivision. Given the short length of time that the stormwater is modelled to be at the crown of the road, and the short length of road that is impacted, the City Engineer concluded that it would be very unlikely for any amount of stormwater to overtop the road, travel more than 1,000 feet and then enter the subdivision and inundate the neighborhood with stormwater. The WRTP Specific Plan EIR comprehensively analyzed potential impacts associated with stormwater and proposed drainage solutions, and no changes to the EIR are needed.

Comment 8a-14 Summary of Comment: The comment provides background discussion relating to Yolo County design rainfall and increased imperviousness within the watershed contributing to conditions along the Upper South Canal.

Response: The City reviewed the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area,* which identifies and documents the Yolo County design rainfall and watershed imperviousness, and accounts for all known factors affecting flooding conditions along the Upper South Canal.

Comment 8a-15 Summary of Comment: The comment reiterates the assertion of the WRTP Specific Plan area's contribution to flooding within the Upper South Canal and the perceived inadequacy of the current design.

Response: See responses to Comments 8a-6, 8a-9, and 8a-11.

Comment 8a-16 Summary of Comment: The commenter claims that the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* does not accurately account for tributary drainage sheds affecting the South Urban Growth Area, and does not provide enough detail to determine the ultimate sizing of the West Regional Pond, resulting in an inadequate Upper South Canal design.

Response: The boundaries of the drainage areas contributing to the West Regional Pond and the Upper South Canal are provided in the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*. The supporting underlying topographic mapping is a product of the State of California and was approved by the State for use in the City's master planning efforts. This data can be requested by any person or agency for public benefit through the State Department of Water Resources relating to the Central Valley Floodplain Evaluation and Delineation Program. This data was only used in areas that were reasonably unmodified between 2000 (baseline conditions) and 2008 (data capture). The State's 2008 topographic data was used to verify drainage area contributions for areas draining to the Willow Slough channel upstream of County Road 102. The exact footprint of the West Regional Pond will be determined when development areas west of the WRTP are developed. The current size of the West Regional Pond accommodates existing development that flows into it. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-17 Summary of Comment: The commenter asks if the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* has fully discovered and tested drainage issues, verified sheds, and provided viable solutions, and goes on to provide a list of perceived errors, as detailed and responded to individually in the following sub-comments (note that the sub-comments are listed using the same alphanumeric provided in the comment letter, with the comment underlined and responses to follow).

Sub-comment 8a-17.a: The commenter asserts that defining 320 acres west of East Street/railroad (RR) as tributary for the former Farmers Central Ditch irrigation canal is an error that originated as part of the 2004 City of Woodland SDFMP, and that the entire 320 acres drains south to a 14.25-foot-wide railroad box culvert 0.5 mile south of Road 25A, and ultimately discharges to Willow Slough. The commenter asserts that some percentage of runoff from that 320 +/-acres of ag land (including 160 acres of SP-1C west of East Street/RR technically may reach the South Canal and be pumped by the city in a 100-year Willow Slough overflow event. The comment ends in an incomplete sentence, but response is provided below based on content provided.

Response to 8a-17.a. Wood Rodgers assumes the comment is in reference to watersheds west of East Street (parallel to the Railroad), though there is no clear reference by the commenter to the watershed naming used in the 2018 *Storm Drainage Facilities Master Plan South Urban Growth*

Area. Figure 4 in the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* shows watersheds labeled "WRR2A," "WRR2B," and "WRR1" for defining baseline conditions. All three of these watersheds are not flowing into the Farmers Central Channel in this baseline scenario.

For ultimate (developed) conditions, the model reflects that the runoff from WRR2A, WRR2B and the developing portion of WRR1 (shown on Figure 7 of the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*) and direct them into the West Regional Pond. Drainage shed WRR1B is the portion that will remain undeveloped on Figure 7 which continues to drain south as it does under baseline conditions, bypassing the developing portions of the City and entering Willow Slough upstream of County Road 102.

Sub-comment 8a-17.b: The commenter states that Wood Rodgers has not defined the flood event wherein Willow Slough overtops its bank east and west of County Road 102. The commenter, therefore, asserts that it is not known how often the city will pump any water from a Willow Slough overflow.

Response to 8a-17.b. The design level 100-year storm can be accommodated with the existing and planned drainage system without pumping at Willow Slough.

Sub-comment 8a-17.c: The commenter asks if field survey has verified the storage area calculated on the Russell property south of Road 25A and west of Road 102 to confirm the peak flow mitigation from a Willow Slough overflow. The commenter assumes that topography used for storage calculation was likely the 2008 Department of Water Resources light detection and ranging or laser imaging, detection and ranging (LiDAR) topography. The commenter goes on to provide a list of accuracy issues related to this assumption, and asks about a flowage easement.

Response to 8a-17.c. The city confirms that the 2008 Department of Water Resources LiDAR mapping dataset was used for the updated modeling in this area of the model, as performed by Wood Rodgers. Contrary to the commenter's assertion, the published vertical accuracy of this 1-foot contour data is +/- 0.33 feet. The scientific characterization of accuracy is the worst-case allowable error within the dataset and does not characterize the accuracy of every point in the data set. The vast majority of the data is much closer than this worst-case accuracy limit.

The conversion of the Russell property to orchard serves to reduce the hydraulic flow capacity northward, and force more water to stay in Willow Slough, which is to the benefit of the City. See response to comment 8a-8 above. This area is flowing/sloping and not behaving as a detention basin.

The SUGA SDFMP (2018) accounts for stormwater inundation at the Upper South Canal that results from County Road 25A. The Upper South Canal functions as intended to prevent stormwater from overtopping County Road 25A and flowing into the Spring Lake Specific Plan Area. The City of Woodland's Storm Drainage Facilities Master Plan Update and Preliminary Engineering (2006a) includes requirements for development to preserve water quality and minimize localized flooding during storm events. It outlines floodplains, design criteria, storm drainage water quality monitoring, and implementation of future facilities. The City's South Area Drainage Master Plan was updated in 2018, particularly as related to additional urban

development projected in the City's updated General Plan (inclusive of the WRTP Specific Plan Area), in the SUGA SDFMP (2018). Furthermore, all development projects in the City are required to comply with City's Post Construction Standard Plan (2015) to reduce post-construction runoff. While development within the South Urban Growth Area, including the WRTP Specific Plan Area, contribute incrementally to the 100-year stormwater flow, any such development is accounted for within the SUGA SDFMP (2018). In addition, the Spring Lake Capital Improvement Plan and Spring Lake fee program includes funding to acquire a flowage easement. The City is currently in the process of negotiating a flowage easement. The Draft EIR comprehensively analyzed potential impacts related to the potential increase in the rate or amount or surface runoff that could result in flooding, exceed the capacity of existing or planned stormwater drainage systems, and provide substantial additional sources of polluted runoff (see Section 3.9, "Hydrology, Flooding, and Water Quality," of the Draft EIR).

Comment 8a-18 Summary of Comment: The Commenter requests information about the four drainage basins planned for the WRTP Specific Plan area, specifically noting that the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* sited one single pond denoted as the South Regional Pond. The commentor asks specific questions summarized below as underlined, with response contained immediately following without underline.

Comment 8a-18.a. Summary: The commenter asked what the design standards are for the detention basins north and south of County Road 25A, and if there will be an emergency spillway.

Response: The design of the ponds will be per City *Engineering Standards: Design Standards, Standard Details and Construction Specifications* (City of Woodland 2021). The WRTP Specific Plan is a planning level document. Commenter's engineering specific comments will be appropriately addressed and reviewed at the time that specific information is proposed via specific project's construction documents.

Comment 8a-18b. Summary: The commenter requested explanation as to why there are two basins, one north of County Road 25A within the WRTP Specific Plan area and one south of County Road 25A outside the Urban Limit Line.

Response: See responses 8a-4, 8a-27, and 8c-18.

Comment 8a-18c. Summary: The commenter requested explanation as to why there are four basins, including two west of State Route 113, requiring pumping.

Response: Development of the areas west of State Route 113 are not proposed for development with the WRTP Specific Plan. Therefore, the Specific Plan did not accommodate storm water detention for these areas and the EIR did not evaluate this development. See Comment 8a-27 for additional discussion regarding timing of development. See Comment 8a-10.c for additional discussion regarding the use of pumps for the ponds.

Comment 8a-19 Comment: The commenter asserts that for the occurrence of a 100-year event east of Road 102 combined with local event west of Road 102, the Wood Rodgers recommendation is to combine a 25-year local with the 100-year off-site.

Response: While not specifically stated in the comment, it is understood that the commenter's intent is to assert that the City should run the 25-year local analysis combined with the 100-year offsite in the Yolo Bypass. The evaluation by Wood Rodgers for the 2006 SDFMP provided a coincident frequency analysis for evaluating Woodland conditions with the conditions in the Yolo Bypass. As the South Urban Growth Area is pumped into the Outfall Channel, the conditions downstream of the pump station do not influence conditions within the South Urban Growth Area, therefore no coincidence with the Yolo Bypass is necessary to evaluate.

Comment 8a-20 Comment: The commenter asserts that Wood Rodgers recommends 8 inches maximum depth of water at any point in a travel way for emergency vehicle access.

Response: No reference is provided by the commenter as to where Wood Rodgers made this recommendation. Wood Rodgers did include a section on Roadways and Overland Conveyance Systems in Appendix D of the 2006 SDFMP which is consistent with the comment; however, the City has never adopted such an overland release allowance. The original recommendation was based on the vertical clearance of fire trucks and ambulances being able to safely negotiate a flooded internal street within a subdivision. There is no nexus between the comment and the analysis of the WRTP Draft EIR.

Comment 8a-21 Summary of Comment: The commenter notes that attachments to the Cunningham Engineering Drainage Tech Memo are not uploaded to the City Website.

Response: Attachments 7 through 9 have been uploaded to the City website.

Comment 8a-22 Summary of Comment: The commenter references page 2, paragraph 3, of the January 2020 WRTP Storm Drainage Management Technical Memorandum, asserting that shed SB1C1 does not appear to naturally drain to or through the WRTP Specific Plan area as inferred by the referenced memorandum. The commenter states that, from aerial photos and topography, SB1C1 and SB1D1 may be currently draining south to Willow Slough and, if that is the case, the commenter asserts that detention mitigation should be 100 percent of 100-year runoff from those areas.

Response: The WRTP drainage design accommodates flows from these sheds directing them to the South Regional Pond. The Draft EIR comprehensively analyzed potential impacts related to the potential increase in the rate or amount or surface runoff that could result in flooding, exceed the capacity of existing or planned stormwater drainage systems, and provide substantial additional sources of polluted runoff (see Section 3.9, "Hydrology, Flooding, and Water Quality," of the Draft EIR). The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-23 Summary of Comment: The commentor states the opinion that arterial streets should not be used for overland release and, rather, for emergency vehicle access, to be kept clear of standing water; the commenter provides additional technical recommendations regarding safe flood routing and related standards.

Response: Comments noted. Overland release design will be done in accordance with the City of Woodland Engineering Standards and commonly accepted industry standards, and consistent with City of Woodland General Plan Policy 5.I.3, which establishes that the City will, "[r]equire

development to provide for the overland flow of stormwater meeting or exceeding the City's standard design capacity of the storm drainage system," and that "[o]verland 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." The maximum depth of ponded water measurement applies to the entire street section; hence, the gutter flowline will be subject to the deepest ponding at a sag point.

Comment 8a-24 Summary of Comment: The commenter states the opinion that runoff from west of State Route 113 should not be pumped and that detention should be merged with the South Regional Pond.

Response: Comments noted. See responses to Comment Nos. 8a-3, 8a-10.c, 8a-18.c, and 8c-18.

Comment 8a-25 Summary of Comment: The commenter questions whether the storm drain pipe along the Farmers Central corridor between State Route 113 and Pioneer Avenue is a 60-inch or 72-inch diameter pipeline.

Response: As provided on page 6, last paragraph, of the Cunningham Engineering Drainage Technical Memorandum, "… a 60[-inch] and subsequent 72[-inch] pipeline between [State Route] 113 and Pioneer Avenue …" [bold emphasis added]. The pipeline transitions in size from a 60-inch to a 72-inch pipeline at the intersection of Farmers Central and Harry Lorenzo Avenue.

Comment 8a-26 Summary of Comment: The commenter referenced discharge rates from the West Regional Pond and references and questions:

a) the fact that the Wood Rodgers report states that the 100-year hydraulic grade line at County Road 102 is 33.9;

(b) the July 1, 2005, record drawing for Farmers Central Channel shows the 100-year hydraulic grade line at 35.7;

(c) how the 100-year water surface dropped 1.8 feet after rainfall standards increased and runoff coefficients were found to be higher in the tributary upstream sheds; and

(d) that reducing max discharge from the West Regional Pond to 55 cfs would likely reduce the upstream service area.

Response: In regard to comment parts a, b, and d, see responses to comment 8a-10.a. Furthermore in comment c, the commenter references and questions the drop in water surface elevation from the 2005 analysis until the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*. Although the 2018 study uses increased runoff, the study uses more accurate modelling software as well as more accurate topography to produce more reliable water surface elevation data.

Comment 8a-27 Summary of Comment: The commenter questions multiple ponds versus a centralized South Regional Pond, and supplies independent assumptions regarding total growth and rate of development of the Spring Lake Specific Plan area, WRTP Specific Plan area, and SP-1B and SP-1C outside of the WRTP Specific Plan area. The commenter uses this information to assert that the South Regional Pond should not be separated into individual ponds, and also makes note of the proposed infrastructure outside of the Urban Limit Line.

Response: The WRTP Specific Plan EIR, and supporting planning technical memoranda including the referenced 2020 WRTP Storm Drainage Management Technical Memorandum (Cunningham Engineering), reflect the proposed Specific Plan's total anticipated growth. The commenter's opinion is noted. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-28 Summary of Comment: The commenter asked why the South Regional Basin is split into four basins, with two future basins west of State Route 113 to be pumped and the proposed WRTP Specific Plan area South Regional Pond to be located outside of the Urban Limit Line.

Response: Please see responses to Comments 8a-4, 8a-18c, 8a-27, and 8c-18.

Comment 8a-29 Summary of Comment: The commenter asks why the Spring Lake Specific Plan and subdivision plans have not been showing hydraulic grade lines and asserts that the Upper South Canal extension with the Oyang South project shows no 10- or 100-year hydraulic grade line.

Response: This comment does not relate to the EIR but to development projects that have already been approved. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-30 Summary of Comment: The commenter asserts that the South Urban Growth Area (SUGA) SDFMP beginning in 2004 has mis-identified shed areas west of East Street and the railroad as draining to the West Regional Pond, and claims that this is a diversion of up to 320 acres with at least 50 percent of the land outside the Urban Limit Line. The commenter notes that SP-1C is approximately 160 acres.

Response: Please see response to Comment 8a-17.

Comment 8a-31 Summary of Comment: The commenter asserts that a levee is not defined in the City of Woodland Design Standards, and asks if the definition on page 24 of the Yolo County 20210 Storm Drainage Manual is acceptable to the city as a levee freeboard standard.

Response: The city has chosen to provide an exception from this design standard. The City Engineer is allowed to make exceptions to design standard. See response to Comment 8a-13. The justification is that this standard was created for when a channel is surrounded on all sides by development, or future development (such as the Farmers Central Channel). For the Upper South Canal, the south half of the channel is taking in overflow storm flows from the Willow Slough Channel. The City Engineer has determined that the city can adequately protect residents with the current channel and road section. The city is not required to meet County design standards; county development and maintenance standards are different than those of the city, and so it is appropriate to have different design standards. Nonetheless, the comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-32 Summary of Comment: The commenter points to the City's drainage standards and asks the definition of a Regional Storage Facility and if there is a minimum acreage. The commenter also asks about an access ramp to the bottom of a regional basin.

Response: This is a comment regarding City design standards. Design of this facility will be addressed during project design according to the city's design and review standards. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-33 Summary of Comment: The commenter points to the City's drainage standards and asks whether an emergency spillway would be required of the WRTP open space basin north of County Road 25A or of the South Regional Pond No. 1 south of County Road 25A. The commenter goes on to describe features of such a spillway in the commenter's own words.

Response: Future development, such as that under the WRTP Specific Plan, is subject to City review for consistency with the City's *Engineering Standards: Design Standards, Standard Details and Construction Specifications* (City of Woodland 2021) and the City's *Post Construction Standard Plan* (2015). These standards include design capacities for storm drains, open channels, bridges, culverts, regional storage facilities, and drains, as well as requirements to reduce post-construction runoff and control urban runoff pollution. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-34 Summary of Comment: The commenter points to the City's drainage standards and asks if the south regional ponds are 'Non-Regional Ponds.'

Response: This is a comment regarding City design standards. The 100-year storm has been accommodated and, as noted in Response to Comment 8a-33, project-specific design will be developed and reviewed according to applicable standards during phased development. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-35 Summary of Comment: The commenter asserts that the sheds served by South Regional Ponds 2 and 3 should be served by gravity rather than pump stations.

Response: See response to Comment 8a-10c.

Comment 8a-36 Summary of Comment: The commenter asks about the minimum freeboard associated with levees of the WRTP channels.

Response: There are no levees within the WRTP channels. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-37 Summary of Comment: The commenter points to the City drainage standards and asks if the perimeter access road/maintenance access for 'Permanent Detention Pond with Park' should be 12 feet rather than 6 feet.

Response: Future development, such as that under the WRTP Specific Plan, is subject to City review for consistency with the City's *Engineering Standards: Design Standards, Standard Details and*

Construction Specifications (City of Woodland 2021) and the City's *Post Construction Standard Plan* (2015). These standards include design capacities for storm drains, open channels, bridges, culverts, regional storage facilities, and drains, as well as requirements to reduce post-construction runoff and control urban runoff pollution. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-38 Summary of Comment: The commenter asks about the objective of the Yolo County Storm Drainage Manual and the 2007 Memorandum of Understanding (MOU) between the County and City, as referenced in the City drainage standards, and asks if this plan is implemented for Willow Slough.

Response: This City has not adopted the Yolo County Storm Drainage Manual and is not the design standard for the City of Woodland. A flood management plan has not been produced for the Willow Slough because it is not in a Federal Emergency Management Agency regulated floodplain.

Comment 8a-39 Summary of Comment: The commenter identifies the 'Purpose' as stated in the Yolo Count Storm Drainage Manual.

Response: The reference to the County's design manual is noted. There is no comment provided.

Comment 8a-40 Summary of Comment: The commenter identifies the 'Regulatory Setting: Local' as stated in the Yolo Count Storm Drainage Manual.

Response: The reference to the County's design manual is noted. There is no comment provided.

Comment 8a-41 Summary of Comment: The commenter identifies the County Storm Drainage Manual guidelines for watersheds of 10 to 500 square miles in area and asks if the related methodology was used to simulate storm events that could coincide with Willow Slough overflow. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Response: While the City has not adopted the Yolo County Storm Drainage Manual in its entirety, the City does use the County's hydrology for the purposes of modelling the 100-year storm.

Comment 8a-42 Summary of Comment: The commenter asks if County standards are followed when there are not alternative City of Woodland standards.

Response: This City has not adopted the Yolo County Storm Drainage Manual and is not the design standard for the City of Woodland. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-43 Summary of Comment: The commenter asks if the State of California 200-year level of protection applies to Willow Slough overflow impacts.

Response: Because Willow Slough is not a mapped Federal Emergency Management Agency floodplain, this design criteria does not apply. The comment does not identify a technical error or other

concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-44 Summary of Comment: With reference to the Yolo County Storm Drainage Manual, the commenter asks if the City of Woodland has a lesser one-foot freeboard standard for the 100-year storm event.

Response: This City has not adopted the Yolo County Storm Drainage Manual and it is not the design standard for the City of Woodland. See Response to Comment 8a-31.

Comment 8a-45 Summary of Comment: The commenter asserts that the Upper South Canal fails to meet Yolo County standards to provide flood protection.

Response: This City has not adopted the Yolo County Storm Drainage Manual and is not the design standard for the City of Woodland. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8a-46 Summary of Comment: The commenter asks if the City reviewed the California Department of Water Resources topographical field survey data and asserts that changes in agricultural use in 2016 need to be considered. The commenter goes on to assert that the City needs to obtain an inundation easement to reduce the peak Willow Slough overflow rate discharge to the Upper South Canal.

Response: See Response to Comment 8a-17c.

Comment 8a-47 Summary of Comment: The commenter asserts that the floodplain analysis standards for the Spring Lake Specific Plan are unknown and asserts that, since the time of the Spring Lake Specific Plan approval, Willow Slough overflow has become a flood risk. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Response: Willow Slough is not a mapped Federal Emergency Management Agency floodplain. The 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* evaluated the 100-year design level storm and appropriate projects have been constructed to address the storm drainage needs. As development is proposed, the City reviews and evaluates drainage needs.

Comment 8a-48 Summary of Comment: The commenter asserts that Willow Slough overflow is an impact to be mitigated and that the WRTP drainage to the Upper South Canal should warrants a permanent solution.

Response: See response to Comment 8a-47.

COMMENT LETTER #8B

BRUCE JACKS (JUNE 18, 2021)

Letter 8b

Steve Greenfield

From: Nick Ponticello <nick.ponticello@ponticelloinc.com>
Sent: Friday, June 18, 2021 9:48 AM
To: Steve Greenfield; Michael Nowlan
Cc: Chris Fong; Brent Meyer
Subject: FW: WRTP Hydraulic RFI...100 yr HGLs and 100 yr. Qs at various locations

Hi Steve and Mike
The email below was sent by Bruce Jacks requesting storm drainage information that he states should be readily available for CEC and W-R storm drainage reports. In order to facilitate his request the City is asking that you review the email below and where appropriate, based on reports you prepared for the City, provide answers to his request that can be easily and quickly provided. Let me know otherwise on how much effort will be needed. I believe most of the questions are in regards to the CEC Drainage Memo. Wood-Rodgers did a Peer Review of the Drainage memo, and if Mike has any information that can assist in answering the questions that would be helpful.
Thank you, Nick

From: Brent Meyer <Brent.Meyer@cityofwoodland.org>
Sent: Friday, June 18, 2021 8:01 AM
To: Nick Ponticello <nick.ponticello@ponticelloinc.com>
Cc: Chris Fong <Chris.Fong@cityofwoodland.org>
Subject: FW: WRTP Hydraulic RFI...100 yr HGLs and 100 yr. Qs at various locations

FYI,

From: Bruce Jacks <brucejacks@sbcglobal.net>
Sent: Friday, June 18, 2021 12:40 AM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>
Cc: Chris Fong <Chris.Fong@cityofwoodland.org>; Brent Meyer <Brent.Meyer@cityofwoodland.org>
Subject: WRTP Hydraulic RFI...100 yr HGLs and 100 yr. Qs at various locations

Erika:

To comment on the WRTP Draft EIR storm drainage plan, critical information is lacking and/or not found in the WRTP Specific Plan, the Cunningham Engineering Jan. 31, 2020 Stormwater Tech Memo, Owyang South record drawings for the Upper South Canal Extension, and the Rev. 2018 SUGA SDMP. 8b-1

Additional key information is needed for the public to evaluate project impacts and public safety related to flood protection.

Please provide the design 100 yr. HGL and Q (100) at these locations:

100 yr. HGL RFI

1. Owyang South Detention Pond; 100 yr. HGL at east discharge to Upper South Canal (USC) 8b-2

1

2. 100 yr. HGL at west end of USC at Harry Lorenzo 8b-3
3. South Regional Pond No. 1. What is the 100 yr. HGL? There are multiple possible answers: 1.) elev. 46.8 per pg. 20 in the Rev. 2018 SUGA SDMP; 2.) elev. 44.02 as shown on Fig. 13 in the Rev. 2018 SUGA SDMP; 3.) on pg. 5 of the Cunningham SD Tech Memo, it states that Line O and L discharge inverts are set at the SRP No. 1...100 yr. WS. and the Peak Flow calcs show a discharge invert at elev. 44.5. Correct SRP No. 1 HGL (100) is...elev. 46.8?, 44.02?, 44.5?, or ?? 8b-4
4. Hydromodification Basin north of Rd. 25a west of H. Lorenzo. What is the pond100 yr. HGL? I note that the Line M discharge to the pond is at elev. 38.4 in the supporting calcs. 8b-5

Q (100) RFI

1. Owyang South detention pond 100 yr discharge to USC. I note that the Rev. Mar. 2018 SUGA SDMP pg. 20, reports the Q(100) 1/2 mile west of Rd. 102 is 354 cfs. 8b-6
2. South Regional Pond No. 1; Q (100) discharge to USC at east side of Harry Lorenzo 8b-7
3. Hydromodification basin north of Rd. 25a west of H. Lorenzo, Q (100) discharge to the USC. 8b-8
4. Q (100) at the west end of USC at east side of Harry Lorenzo 8b-9
5. Overland release in Rd. 25a. Please provide the Q(100) at nodes L3 and L4. and the 100 Qs carried in Rd. 25a at these two locations. 8b-10
6. Design 100 yr. "undeveloped" flow for the ditches parallel to the east edge of SR113, north and south of Rd. 25a. 8b-11

Other Drainage RFI:

1. Cunningham Attachment 4 to its Jan. 31, 2020 WRTP SD Tech Memo shows a pipe discharge from the SRP No. 1 to connect to the USC west of H. Lorenzo. 8b-12
    1. What is the pipe size?
    2. Is the pipe sized for the 100 yr. SRP No. 1 discharge?
    3. Is the pipe located in Rd. 25a, or in an easement south of the road ROW?
2. At Rd. 102, the upstream Upper South Canal Q(100) is reported by the Rev. Mar. 2018 SUGA SDMP to be 602 cfs and HGL 39.8. The 602 cfs should be from two sources. Of the 602 cfs, what is the Q (100) component from the Willow Slough overflow, and what is the Q (100) component from combined SP-1A, SP-1B, Owyang South, and Rd. 25a? 8b-13

All these 100 yr. Qs and HGLs should be readily available and I request they be provided within a reasonable time to allow citizen review for public comment on the WRTP Draft EIR. Thanks for your assistance.

Bruce Jacks
Woodland'
530-650-1454

Amended RFI...added items related to Willow Slough 100 yr. overflow: Ref. markup of Fig. 10 from Rev. Mar. 2018 SUGA SD MP. Exhibit is immaged below and PDF attached.

1. Baseline storage (ac-ft) from Rd. 25a south to Willow Slough...west of Rd. 102 (orange on Fig. 10) 8b-14
2. Storage (ac-ft) in the proposed 23.9 ac inundation easement west of Rd. 102 identified as SLSP impact mitigation from Rd. 25a to approximately 1/2 mile south (blue area on Fig. 10). 8b-15
3. Ground elevation contour map with storage pool water surface contours used to calculate limits of the baseline and inundation easement. This should be a +/- map (ground vs 100 yr. WS) to cacluate the storage volume. 8b-16



4

RESPONSE TO COMMENT LETTER 8B

Comment Letter #2 (8b) submitted by Bruce Jacks on June 18, 2021

Comment 8b-1 Summary of Comment: The commenter asserts that information is lacking or not included in the WRTP Specific Plan, the Cunningham Engineering January 31, 2020 Stormwater Technical Memorandum, Oyang South record drawings for the Upper South Canal Extension, and the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* , which the commenter states is needed to comment on the WRTP Draft EIR storm drainage plan.

Response: The WRTP Draft EIR itself does not contain a storm drainage plan, nor does CEQA require such a plan to be included in an EIR. However, storm drainage facilities are proposed as part of the WRTP Specific Plan and the WRTP Draft EIR comprehensively analyzed the potential for implementation of the proposed WRTP Specific Plan to result in flooding, exceed the capacity of existing or planned stormwater drainage systems, or result in substantial sources of polluted runoff.

The City's Drainage Master Plan was updated in 2018 to address issues specific to the South Urban Growth Area, particularly as related to additional urban development projected in the City's updated General Plan, in the *Storm Drainage Facilities Master Plan South Urban Growth Area* (City of Woodland 2018). Design Standards include drainage facility capacity criteria designed to ensure the containment and/or conveyance of the design storm. The City's *Engineering Standards: Design Standards, Standard Details and Construction Specifications* (City of Woodland 2021) 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. All development projects in the City 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).

While the *Storm Drainage Facilities Master Plan South Urban Growth Area* identifies storm drainage solutions for existing and planned growth, it is a developed at a plan-level and serves as dynamic document to inform decisions and also be revised as conditions evolve. As noted above, future development, such as that under the WRTP Specific Plan, is subject to City review for consistency with the City's *Engineering Standards: Design Standards, Standard Details and Construction Specifications* (City of Woodland 2021) and the City's *Post Construction Standard Plan* (2015). These standards include design capacities for storm drains, open channels, bridges, culverts, regional storage facilities, and drains, as well as requirements to reduce post-construction runoff and control urban runoff pollution. The Specific Plan is designed and conditioned to avoid erosion, flooding, and storm drain capacity effects, including

through the implementation of Mitigation Measure 3.9-1a, requiring the preparation of additional storm drainage analysis for determining the amount of new development acreage beyond the previously identified 80 residential acres allowable in the South Urban Growth Area. Therefore, while the following responses to Comments 8b-2 through 8b-16 provide the technical input requested by the commenter, the WRTP Specific Plan EIR provides comprehensive analysis of potential impacts related to storm drainage, including the provision of Mitigation Measure 3.9-1a; no revisions to the EIR have been made or are necessary.

Comment 8b-2 Summary of Comment: The commenter requests the 100-year hydraulic grade line at the east discharge of the Oyang South Detention Pond to the Upper South Canal.

Response: The 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* does not model the Oyang development design. The modeling for the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* was done over a series of years from 2014 to 2016, with a report draft prepared in 2017 and a final prepared in 2018. This detention basin was added as part of the improvement plan process for the "Oyang South" development project. The maximum hydraulic grade line with the detention basin for the 100-year is 40.33 feet (North American Vertical Datum of 1988 [NAVD88]) in the Oyang South design; however, this is with higher inflow than ultimate development conditions. The comment is a request for additional data and does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8b-3 Summary of Comment: The commenter requests the 100-year hydraulic grade line at the west of the Upper South Canal at Harry Lorenzo Avenue.

Response: For the purposes of the WRTP Specific Plan and related planning needs, the City has undergone conceptual design review for plan-level considerations. Specific hydraulic grade line elevation at Upper South Canal at Harry Lorenzo Avenue will be determined at the time of design. Final design will be reviewed to ensure consistency with City design standards. No additional analysis for the purposes of the WRTP Specific Plan EIR or change to the WRTP Specific Plan EIR is required to address this comment.

Comment 8b-4 Summary of Comment: The commenter asks for clarification of the 100-year hydraulic grade line at the South Regional Pond Number 1.

Response: As shown on Figure 13 of the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*, the estimated 100-year hydraulic grade line at the South Regional Pond Number 1 outlet is 44.02 feet. The 'L' and 'O' storm drain lines, sized to convey the 10-year storm flows to the South Regional Pond Number 1, as identified in the 2020 Stormwater Technical Memorandum (Cunningham Engineering), have invert elevations of 44.50 feet, which is above the pond hydraulic grade line. The 2020 Stormwater Technical Memorandum (Cunningham Engineering) explains: "The inverts of Lines O and L at the [South Regional Pond] were set to the [South Regional Pond's] 100-year water surface elevation, as defined by the *Storm Drainage Facilities Master Plan South Urban Growth Area*. This ensures that the [hydraulic grade lines] will be independent of the tailwater conditions in the pond, and there will not be long-term standing

water in the drain lines." During the revision process for the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*, text on page 20 was not updated and is intended to state '44.02', rather than '46.8,' in accordance with Figure 13. No additional analysis or change to the WRTP Specific Plan EIR is required to address this comment.

Comment 8b-5 Summary of Comment: The commenter asks for clarification of the 100-year hydraulic grade line in the hydromodification basin north of County Road 25A and west of Harry Lorenzo Avenue.

Response: The basin north of County Road 25A and west of Harry Lorenzo is intended to mitigate for hydromodification and stormwater quality during the 2-year event. However, it will provide some attenuation greater than that. The final hydraulic grade line will be evaluated and determined at the detailed design stage. Any excess unattenuated flows exiting the hydromodification pond will be attenuated downstream by the existing North Regional Pond. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

Comment 8b-6 Summary of Comment: The commenter asks what the Oyang South detention pond 100-year discharge is to the Upper South Canal.

Response: As discussed above, the Oyang South design accommodated higher flow than ultimate conditions and also reflected a new detention basin. The reported Q100 peak flow from the Oyang South detention pond entering the downstream Upper South Canal is 171.8 cfs. This comment is a request for additional data. No additional analysis or change to the WRTP Specific Plan EIR is required to address this comment.

Comment 8b-7 Summary of Comment: The commenter asks for the 100-year discharge to the Upper South Canal east of Harry Lorenzo.

Response: The 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* modeled a peak 100-year flow of 118.7 cfs discharging from the South Regional Pond. The hydromodification pond located northwest of Harry Lorenzo Avenue and County Road 25A will also discharge into the Upper South Canal either immediately east or west (to be determined during design) of Harry Lorenzo Avenue. The 100-year outflows from the hydromodification pond are calculated to be 83.9 cfs. Based upon the preliminary design and current modeling, the total 100-year discharge to the Upper South Canal east of Harry Lorenzo is 118.7 + 83.9 = 202.6 cfs. This comment is a request for additional data. No additional analysis or change to the WRTP Specific Plan EIR is required to address this comment.

Comment 8b-8 Summary of Comment: The commenter asks for the 100-year discharge from the hydromodification pond north of County Road 25A, west of Harry Lorenzo.

Response: See Response to Comment 8b-7.

Comment 8b-9 Summary of Comment: The commenter requests the 100-year discharge at the west end of the Upper South Canal east of Harry Lorenzo.

Response: Please see response to Comment 8b-6.

Comment 8b-10 Summary of Comment: The commenter requests the 100-year overland flow into County Road 25A at nodes L3 and L4 (Cunningham Engineering January 31, 2020 Stormwater Technical Memorandum).

Response: 100-year flows for L3 and L4 are 66.3 and 102.0 cfs, respectively. However, much of this is conveyed by the underlying storm drain pipes sized for a minimum of a 10-year event. Thus, the resulting net overland flows into County Road 25A for L3 and L4 are 0.3 and 14.6 cfs, respectively.

Comment 8b-11 Summary of Comment: The commenter requests the 100-year flows in the pre-developed runoff condition for the ditches east of State Route 113 and north and south of County Road 25A.

Response: The 100-year flow for node L1 (north of County Road 25A) is 42.4 cfs. Node 01, south of County Road 25A, has a calculated 100-year flow of 9.6 cfs.

Comment 8b-12 Summary of Comment: The commenter asks the following questions about the discharge from the South Regional Pond (SRP) Number 1:

A. What is the pipe size?

B. Is the pipe sized for the 100-year SRP No. discharge?

C. Is the pipe located in County Road 25A or in an easement south of the road right-of-way?

Response: Per Attachment 4 of the Cunningham Engineering January 31, 2020 Stormwater Technical Memorandum, the discharge conveyance from the South Regional Pond was planned to be an open channel. The 70-foot wide channel (see Road Section T-T) is sized to convey the 100-year peak runoff rate, as indicated on page 4 of this Technical Memorandum. Since the preparation of the Cunningham Engineering January 31, 2020, Stormwater Technical Memorandum, the proposed design for this discharge conveyance has been refined to be a 60-inch pipe, rather than a channel. However, the design change will still convey the 100-year discharge. The pipe would be within an easement, via a gravel access road providing access from Harry Lorenzo Avenue.

Comment 8b-13 Summary of Comment: The commenter notes that, at Road 102, the Upper South Canal Q(100) is reported by the 2018 SUGA SDFMP to be 602 cfs and hydraulic grade line 39.8. The commenter asserts that the 602 cfs should be from two sources and asks, what component of the Q(100) is from the Willow Slough overflow and what component is from the combined SP-1A, SP-1B, Oyang South, and County Road 25A.

Response: Wood Rodgers modeling from the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* has extracted the hydrographs from the Upper South Canal at two locations to portray the timing and magnitude of inflows from development to the west and flow from Willow Slough overflow. These are shown in the response to comment 8a-11.

Comment 8b-14 Summary of Comment: The commenter requests the baseline storage (acre-feet) from County Road 25A south to Willow Slough, west of County Road 102.

Response: Conditions south of County Road 25A should not be characterized as "storage;" this is an accurate depiction of overland flow behavior. As described in previous responses, the stormwater flow is flowing and sloping from Willow Slough to County Road 25A and is attenuated slightly as it is flowing across the terrain.

Comment 8b-15 Summary of Comment: The commenter requests the storage (acre-feet) in the proposed 23.9-acre inundation easement west of County Road 102 identified as Spring Lake Specific Plan impact mitigation from County Road 25A to approximately one-half mile south, as shown on the blue area of Figure 10 in the Technical Memorandum.

Response: See response to comment 8b-14. Water is simultaneously flowing both in and out of the inundation area with velocity; therefore, it is not appropriate to refer to this as stored water.

Comment 8b-16 Summary of Comment: The commenter requests the ground elevation contour map with storage pool water surface contours used to calculate limits of the baseline and inundation easement. The commenter asserts that this should be a +/- map (ground versus 100-year WS [water surface]) to calculate storage volume.

Response: The requested map has not been prepared as part of this study. While such data exists in the modeling space, preparing such exhibits is not standard nor necessary to support stormwater master planning. The comment does not identify a technical error or other concern with the WRTP Specific Plan EIR or supporting analysis. No change to the EIR is required.

COMMENT LETTER #8C

BRUCE JACKS (JULY 2, 2021)

Letter 8c

July 2, 2021

Ms. Erika Bumgardner
WRTP Project Manager
City of Woodland
300 First St
Woodland, CA 95695

Re: Public review of WRTP Draft EIR response comments

Dear Ms. Bumgardner:

Thank you for the opportunity to provide input to the WRTP Draft EIR.

Prior to comments, it is noted that one critial document used to evaluate drainage impacts for the WRTP Draft EIR is the outdated Feb. 2017 South Urban Growth Area Storm Drainage Master Plan (SUGA SD MP). Ref. DEIR 3.9.4, pg. 3.9-13. There is an historical chain of drainage documents that led up to the SUGA SD MP which included the WRTP area. A summary of those docs including but not limited to is as follows: 8c-1

- Dec. 21, 2001 Fig. 6.3 Preliminary SLSP/Remainder Area Infrastructure Plan. That plan showed twin 54 inch SD draining the SLSP and Remainder Area which includes the WRTP. There was no interceptor channel at the south edge of Rd. 25a and Willow Slough overflow had not been identified as a threat.
- The 2004 Spring Lake Specific Plan Infrastructure Study Report
- The 2006 City of Woodland Storm Drainage Facilities Master Plan (SDFMP). This study determined the need for an interceptor channel to prevent Willow Slough overflow from impacting the SLSP and Remainder Area. As part of the SDFMP, tributary drainage sheds were delineated for the Farmers Central Trunk and South Interceptor Channel, now known as the Upper South Canal (USC). Multiple errors and omissions in the 2006 shed delineation have remained and been used as the basis for the Feb. 2017 and Rev. 2018 SUGA SD MP. Those errors and omissions are discussed as potential environmental impacts not addressed by the WRTP Draft EIR in these comments.





Summary of Map 4 "Existing" and Map 10, "Ultimate Shed" delineation errors and/or omissions:
Lands west of East St. and the RR are not tributary to the "Farmers Central Shed." The 2006 SDFMP Willow Slough Shed Spill (6.71 sq. mi. fails to correctly identify shed boundaries as follows:

1. 40+/- acres south of the city limits, west of West St. drains into the city at West St
2. 12+/- acres south of Rd. 24a between the RR and Coloma Way drive drains into the city. An 18" SD stubbed at Rd. 24a/6th St. was provided for this sub shed when 6th St. was constructed.
3. The remaining area of "Farmers Central Shed" on Map 4 drains south to a 14' x 5' RR box culvert located 0.5 mile south of Rd. 25a with ultimate discharge to Willow Slough.
4. Omission of an estimated 84+/- acres south of Willow Slough, west of Rd. 102 that appears to drain north to Willow Slough west of Rd. 102.

8c-2

Other comments:
The portion of the WRTP south of Rd. 25a and lands west of SR113 south of Rd. 25a were not part of the 2006 SDFMP shed area for the Upper South Canal. An estimated 105+/- ac south of Rd. 25a was added to the USC shed by the 2035 GP

- The Feb. 2017 SUGA SD MP. In late June 2017 at least two major HGL fatal flaws impacting the SLSP West Regional Pond and the Upper South Canal were noted by this commenter to city staff.
- The Rev. Mar. 2018 SUGA SD MP was issued to correct fatal flaws, but multiple errors and omissions remain that if reviewed may be determined to be environmental impacts to WRTP, the Upper South Canal and SLSP.

8c-3

The following is a summary of drainage issues inadequately addressed or ignored by the WRTP DEIR:

1. **Baseline data to evaluate environmental impacts of WRTP drainage is outdated**. Multiple references are made in the Draft EIR to the Feb. 2017 South Urban Growth Area Storm Drainage Master Plan (SUGA SD MP). Example: Section 3.9.4 Methodology pg. 3.9-13. The Feb. 2017 SUGA SD MP has been superseded by the Rev. Mar. 2018 SUGA SD MP. Environmental impacts from review of the Rev. 2018 SUGA SD MP may be different from the 2017 version.

   Assuming that the WRTP DEIR used the Feb 2017 SUGA SD MP data as its reference for Section 3.9.4 Environmental Impacts and Mitigation Measures (ref. DEIR pg. 3.9.13), this commenter concludes that WRTP environmental impacts have not been adequately addressed. Specifically:

8c-4

   a. 2017 SD MP Fig. 13 shows the Q 100 in the Upper South Canal (USC) upstream of Rd. 102 at 602 cfs with an HGL at elev. 40.2. This is a significant environmental impact since the low point in Rd. 25a is 39.8 at the Rd. 25a/Promenade Dr. intersection. The USC when approved for construction in June 2004 was designed with a 100 yr. HGL 38.14 upstream of Rd. 102 with one foot of freeboard measured from the elev. 39.14 north top bank/maintenance/patrol road. Fig. 13 clearly shows a significant environmental impact as the elev. 39.14 north bank/maintenance/patrol road will be under 1+ foot of water, and overland release at the crown of Rd. 25a will be about 5 inches deep routing north at Promenade Dr. to impact Spring Lake Specific Plan (SLSP) subdivisions.

      This is an obvious environmental impact. OLR including drainage from the WRTP exiting the USC and overtopping Rd. 25a at Promenade will combine with OLR from the 494+/- acre interior SLSP neighborhoods west of Rd. 102 between Farmers Central Rd. and Rd. 25a. High/low street gradient within the SLSP conveys OLR north at an estimated 0.05% hydraulic slope. OLR ultimately is concentrated at the west edge of Rd. 102 at Holland Circle, about 1300 ft. south of Farmers Central Rd. The Rd. 102 crown is elev. 37.6+/- at the low point which from aerial topography appears to be 100+ ft. long per Rd. 102 topo grid elevations on record drawings.

      The SLSP has planned to handle all interior OLR from the 494+/- ac, and maybe an unknown Q from Rd. 25a OLR at the west edge of Rd. 102 by large flat inlet grates connected to 100 yr. Rd. 102 box culvert structures at Heritage Pkwy, and Nicolson Circle. The problem with flat grate inlets during a 100 yr. event is debris blockage. From Fig. 13, box culvert 100 yr. flows at Heritage and Nicolson total 626 cfs. Using ballpark 100 yr. flow at 160% of 10 yr. flow, the combined OLR from the 494+/- ac could be 626 minus 391 (10 yr.) = 235 cfs plus an undefined Q from USC OLR at Rd. 25a that must be collected by flat inlet grates.

      If there is blockage of OLR inlet grates along Rd. 102, there will be 100 yr. ponding at the low point west edge of Rd. 102 at Holland Pl. Rd. 102 will be a broad crested weir with an unreported depth of flow over the elev. 37.6+/- low point crown.

8c-5

Any 100 yr. OLR from the USC will spill some quantity of tributary flow from WRTP north into SLSP neighborhoods, combine with OLR from the 494+/- ac interior SLSP shed and be routed to the Rd. 102 low point at Holland Cir. With eight SLSP building pads at elev. 37.7 to 37.8 at Briscoe, Holland, and Garrett, and a total of 67 pads elev. 37.7 to 38.7 (less than one foot protection per city design stds.), and a controlling OLR weir elev. 37.6+/- at Rd. 102, there would be a significant environmental impact by flood threat from combined WRTP, interior SLSP, and USC 100 yr. OLR. **This environmental impact flood threat which WRTP is tributary to has not been identified or mitigated**.

8c-5 (cont)

b. Fig. 13 from 2017 SD MP. The 602 cfs Q 100 in the USC upstream of Rd. 102 does not have sufficient backup detail. From supplemental detail provided by city staff to this commenter in 2019, the 100 yr. flow at the remnant Willow Slough is 1009 cfs with 170 cfs flowing east in the natural channel through a 6'W x 4'H box culvert at Rd. 102. The remaining 839 cfs overtops the Willow Slough north bank and is routed north overland in the ag field and mitigated by storage/detention prior to spilling into the USC west of Rd. 102. It is noted that a 40"+/- pipe west of Rd. 102 through the north bank would spill high Willow Slough flows north prior to full bank overtopping.

   The ag field was reported by Fig. 15 in the 2017 SUGA SD MP to provide historical Baseline storage that was to be augmented by an additional inundation easement providing total storage to mitigate the 839 cfs Willow Slough overflow to a not-defined cfs inflow at the USC. The undefined mitigation cfs is not reported in the SD MP, but it is assumed by the commenter to be some component of the USC 100 yr. 602 cfs shown on Fig. 13 in the SD MP. Pg. 20 in the 2017 SD MP reports the USC 100 yr. flow to be 354 cfs at approximately ½ mile west of Rd. 102.

   Combination of hydrographs for the Willow Slough overflow and USC upstream drainage from SLSP and WRTP would be helpful, but the 2017 SD MP fails to provide any detail of how the USC 100 yr. 602 cfs at Rd. 102 was calced and to define the breakdown of WRTP/SLSP and Willow Slough overflow share of the 602 cfs.

8c-6

c. 100 yr. Willow Slough mitigation storage in the ag field south of Rd. 25a./west of Rd. 102 lacks detail in the 2017 SD MP. **Inadequate storage/detention may be an environmental impact**. Baseline 100 yr. HGL at Rd. 102/Rd. 25a is elev. 39.03 per SD MP Fig. 10 and elev. 40.2 per 2017 SD MP Fig. 13 Ultimate Conditions. Additional mitigation storage south of Rd. 25a is required to reduce to the Willow Slough overflow rate to a Q that when combined with 100 yr. Q from SLSP and the WRTP, can be reduced to a flow that can be conveyed by the USC. Added storage south of Rd. 25a is dependent on:
   i. Original ground contour compared to OLR water surface. The SD MP provides no detail for source of the original ground contours. The best available source was likely 2008 DWR LiDAR topography which at best has 0.6 ft accuracy. Sources checked by the commenter disclose the DWR county wide topography was initially 3 foot contours. That topo could be enhanced to one foot contours by digitally using the LiDAR grid data. Even with the best possible accuracy, a 0.6 foot topo variance would produce a significant storage (mitigation) +/- differential over the Baseline and Ultimate Conditions inundation storage volume. Ref. Fig. 15 in the SD MP.

8c-7

ii. The storage volume calc in ag fields south of Rd. 25a west of Rd. 102 has other problems. In 2016 to 2017, an orchard was planted in the north ½ mile quadrant. This work may have altered land form contours and impacted the storage volume calc to mitigate Willow Slough overflows.

iii. The inundation easement required to memorialize the added storage volume south of Rd. 25a/west of Rd. 102 has not been acquired. The city has known at least since the first draft of the SUGA SD MP in 2005? (exact date not know) that an inundation easement is required. The 2017 SD MP Fig. 15 defines 23.9 ac west of Rd. 102 as the "added" area to be encumbered by an inundation easement. The commenter feels this 23.9 ac easement is inadequate because there is no authority to monitor grading and impact of future raised ground contours on the Baseline 135 ac ("ballpark est.") inundation area south of Rd. 25a shown on SD MP Fig. 15.

iv. **Recommendation**: **Review environmental impact from WRTP discharge to an overbank USC including but not limited to**: 1.) confirm Willow Slough overflow mitigation storage in the ag field south of Rd. 25a by ground field survey; 2.) secure an inundation easement over the entire 158+/- ac inundated south of Rd. 25a; 3.) propose a monitoring program to ensure ground contours in the inundation area are preserved.

8c-7 cont

Exhibits related to and supporting the discussion above are shown below:

Interior SLSP and portion of WRTP 494+/- acre shed draining to Rd. 102 box culverts at Heritage Pkwy and Nicolson Cir.

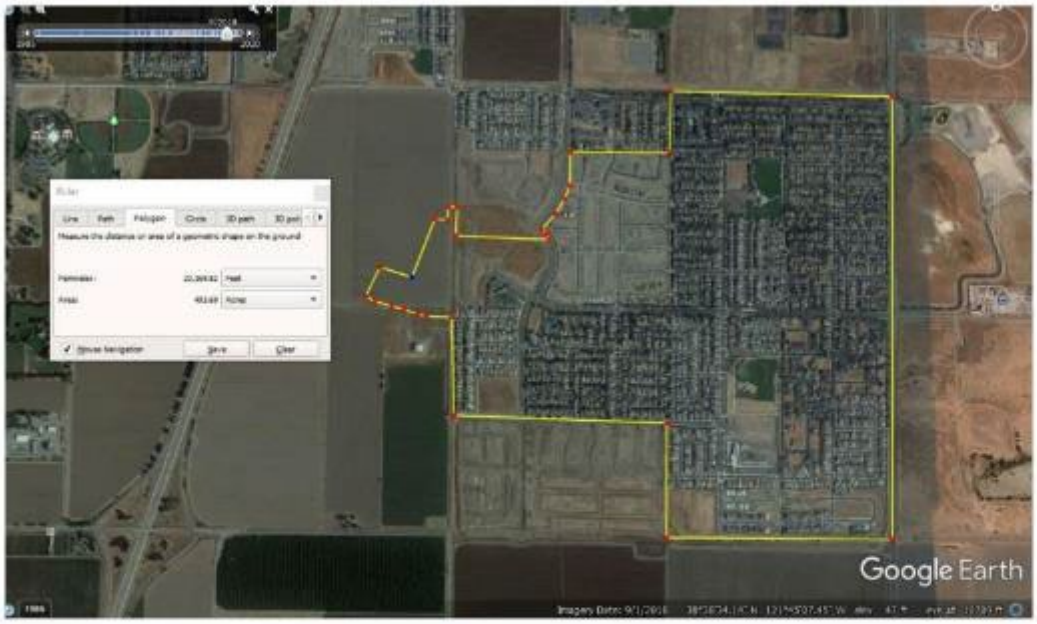
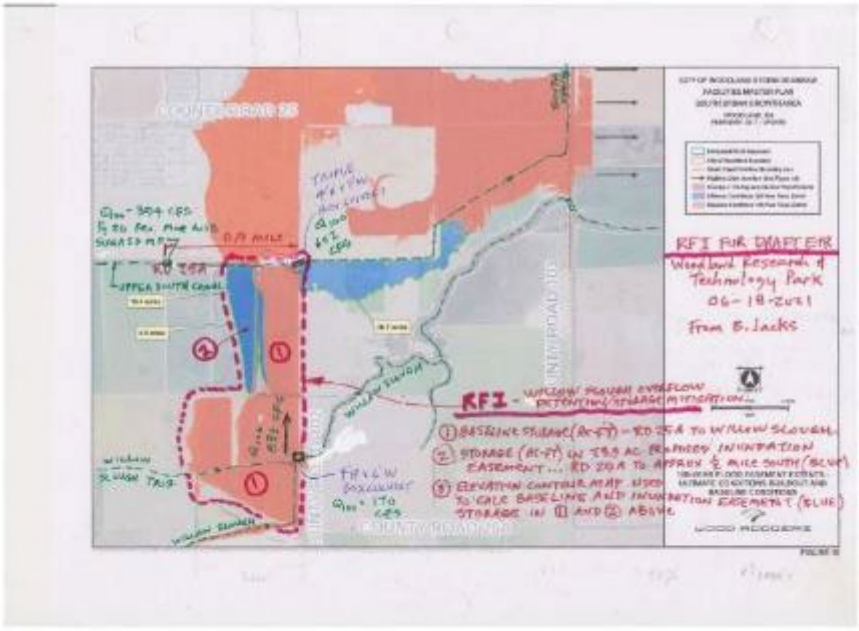


Exhibit of multiple SLSP building pads between Rd. 25a and Farmers Central Rd. "at risk" of 100 yr. flood impact from Willow Slough overflow and overtopping of Rd. 25a at Promenade Dr.



Exhibit of 2018 SUGA SD MP Fig. 15 with June 18, 2021 RFI questions to city staff (not answered).



All comments above are based on the Feb. 2017 SUGA SD MP.

8c-7 cont

The following WRTP Draft EIR comments are based on the Rev. Mar. 2018 SUGA SD MP

The Rev. Mar. 2018 SUGA SD MP was issued to correct at least two fatal flaws related to 100 yr. HGLs. One corrected flaw directly connected to the WRTP was reduction of the 100 yr. HGL at the Rd. 102 USC box culvert inlet structure from elev. 40.2 to 39.8. This reduction was needed to reduce the 100 yr. USC HGL to a level not higher than the elev. 39.8 low point at the crown of the Rd. 25a/Promenade Dr. intersection to prevent the USC 100 yr. HGL from overtopping Rd. 25a. Since the 100 yr. HGL in the USC = the crown of Rd. 25a, there is zero freeboard/zero safety factor to prevent overtopping and floodwater release north into the SLSP. 8c-7 cont

Direction by city staff to reduce the roughness coefficient in the USC from 0.070 to 0.030 was the design parameter to achieve the 0.4 ft HGL reduction. It is noted that the 100 yr. HGL in the USC is still 8 inches higher than the north top of bank/maintenance/patrol road and there is a negative 1.66 ft. freeboard measured from the city design standard of one foot freeboard measured from top of bank to 100 yr. HGL. (HGL 39.8 minus elev. 38.14 design std...one foot below top of bank).

1. **The Rev. Mar. 2018 SUGA SD MP should be the reference SD MP used for the WRTP Draft EIR.** The Mar. 2018 Rev. was issued to correct at least two fatal flaws related to 100 yr. HGLs at critical locations, but the revised SD MP still contains multiple errors, omissions, and potential fatal flaws that overlook and/or minimize or ignore possible environmental impacts. **Recommended additional studies to disprove or correct alleged SUGA SD MP errors by this commenter may trigger additional WRTP environmental review to fully evaluate impacts.** Possible errors and omissions in the Rev. Mar. 2018 SUGA SD MP include but are not limited to: 8c-9

    a. Additional review and/or survey of field conditions is needed to verify Rev. Mar. 2018 SUGA SD MP Baseline Conditions Watersheds (MP Fig. 4), & Ultimate Conditions Watersheds (MP Fig. 7).
        i. **SD MP Fig. 4 does not define if Baseline Sheds WRR2A, WRR2B, and WRR1 (total 320+/- ac) are identified to currently drain east under existing conditions to the Farmers Central Trunk shed.** It is known that WRR2A at one time had an unauthorized disposal connection to the Farmers Central Canal (FCC) at West St., but that Canal is filled. FCC was a highline ditch/irrigation conveyance, and as such it was never a drainage facility because it followed the high contour ridge of natural ground. 8c-10

            It is known that WRR2A (40+/- ac) naturally drains north into the city limits at West St. WWR2B (125+/- ac) drains east, then south at the west edge of WRR1 to at least the south limit of SP-1A, then south crossing Rd. 25a to a 14'x5' RR box culvert 0.5 mile south of Rd. 25a. WRR1 (270+/- ac) with the exception of 12+/- ac at the south edge of Rd. 24a also drains south to the 14'x5' RR box culvert which discharges to Willow Slough.

            In Summary, the Rev. 2018 SUGA SD MP Fig. 4 has errors that when corrected could cause environmental impacts linked to the WRTP.

        ii. **SD MP Fig. 7 in the Rev. Mar. 2018 SUGA SD MP includes large scale drainage diversion that constitutes a growth inducing environmental impact.** MP Fig. 7 Rev. Mar. 2018 is an improvement over the Feb. 2017 version as it defines the "Ultimate Conditions" area west of East St./RR tributary to the West Regional Pond/Farmers Central Trunk (FCT) shed. Defining the FCT shed on Fig. 7 is a technical positive for the WRTP as it diverts WRR2B (40+/- ac) and WRR1A (125+/- ac) from the Willow Slough shed by routing that 165+/- ac to the Farmers Central Trunk shed. That diversion reduces the Willow Slough overflow west of Rd. 102, for the "Ultimate Condition," but not for the interim condition 8c-11

where ag lands south of the city limits/west of the RR would continue to drain south and east to Willow Slough.

While diversion of the 155+/- ac SP-1C to the Farmers Central Trunk shed can be justified if the West Regional Pond (WRP) and FCT system is adequately sized, the cumulative 125+/- ac diversion of Sheds WRR2A and WRR2B provides an urban drainage connection for ag land outside the Urban Limit Line which is an growth inducing environmental impact. This is a fatal flaw in the SUGA SD MP that must be corrected.

8c-11 cont

iii. **SD MP Fig. 7 (Ultimate sheds) overlooks drainage sheds tributary to the remnant Willow Slough along the segment from the Willow Slough Bypass intercept to Rd. 102.**



At least one 84+/- ac shed area south of Willow Slough west of Rd. 102 tributary to Willow Slough is ignored. Additive drainage sheds may impact Willow Slough overflow upstream of Rd. 102a causing an increased environmental impact at the USC/Rd. 25a at Promenade Dr

8c-12

iv. **SD MP Figs. 4 and 7 fail to recognize the potential environmental impact of a Willow Slough spill over the north bank between the Willow Slough Bypass intercept and Rd. 102.** Willow Slough upstream of the Willow Slough Bypass is a 162 sq. mile watershed (Wood Rodgers Rev. 2018 SUGA SD MP). In Jan 1994, Borcalli & Associates calculated the 100 yr Bypass flow at 10,600 cfs and in its Yolo Co. Rd. 102 Bridge Relocation Analysis stated the overtopping event upstream face of the proposed bridge was 9,400 cfs.

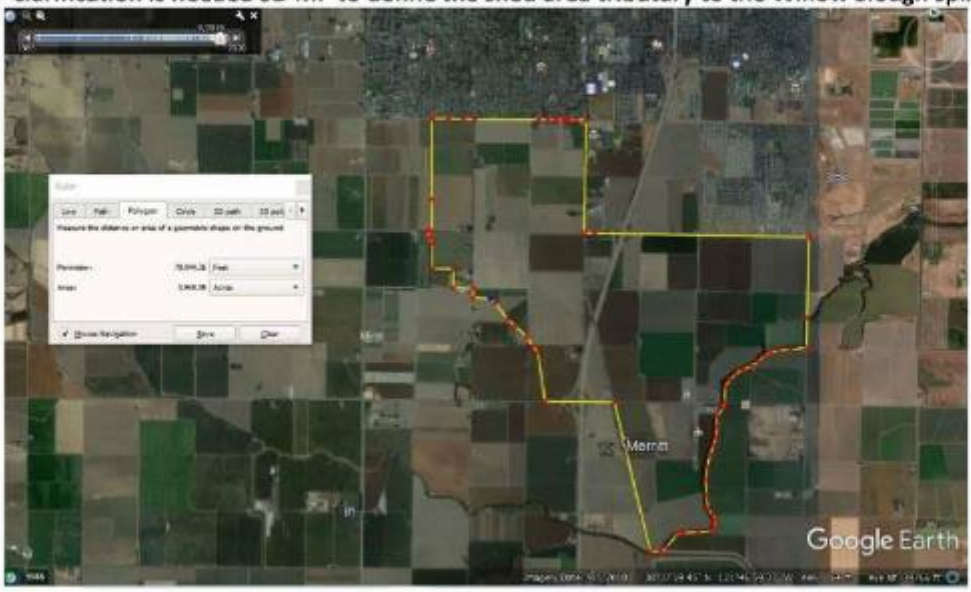
The 100 yr. 10,600 cfs Bypass peak flow was calculated using lesser rainfall standards than the upgraded 2008 Yolo County standards. Calculated today, the 100 yr. Q in the Bypass channel would likely be higher.

An additional problem noted by Borcalli was that since construction in the late 1940s, the Willow Slough Bypass levees had sunk up to two feet due to land subsidence due to groundwater extraction and in 1994 provided less than a 20 yr level of flood protection. Twenty five year later in 2021, subsidence may be greater further reducing the Bypass capacity.

In summary, while the majority of the upstream Willow Slough shed (10,600 cfs in 1994) may be conveyed by the Bypass Channel, there is at least one low north top of bank location 100+/- ft. west of the diversion that is a prime location for a significant spill north. **A spill from Willow Slough upstream of the Bypass connection is a significant environmental impact that could affect the capacity of the USC upstream of Rd. 102. The USC is the drainage conveyance for the WRTP and combined drainage flows could cause flood risk to the SLSP at Promenade Dr and upstream in the USC.**

8c-13

Estimated boundary of Baseline 3945+/- ac shed tributary to Willow Slough based on Rev. 2018 SUGA SD MP. This shed is assumed to be responsible for the 839 cfs Willow Slough spill at Rd. 102. SD MP clarification is needed SD MP to define the shed area tributary to the Willow Slough spill.



8c-13 cont

v. **SD MP Figs. 4 and 7 fail to recognize the environmental impact of a potential failure of the earthen plug at the Willow Slough Bypass intercept of the natural channel**. Failure of the earth plug that isolates the natural Willow Slough channel from the Willow Slough Bypass would send significant additional flow downstream in the remnant channel. This earth plug likely has not been certified as a levee, and for hydraulic analysis must be "failed" and removed to evaluate Q 100 impacts on the downstream natural channel.



Outlet pipes from natural Willow Slough to the remnant channel. Pipes measure about 72" on Google Earth.

The earth plug at the north bank is man-made and is fair to assume it is not certified per FEMA standards to qualify as a levee.

Split flow analysis at the Willow Slough Bypass should "fail" the earth plug.

Split flow may significantly increase the 100 yr. flow in the remnant Willow Slough Channel at Rd. 102 and resultant overflow spill upstream of Rd. 102

8c-14

vi. **SD MP Figs. 4 and 7 fail to recognize the environmental impact of potential discharge at the Willow Slough Bypass intercept through drainage structures and or pipes connecting the Bypass and the remnant channel.** From aerial photos, there appears to be two structures that connect the Willow Slough Bypass to the natural Willow Slough

8c-15

channel; 1.) a lower structure with its outlet likely near the channel flow line and 2.) twin pipes with a few feet of cover below north top of bank. There is no evidence in the SUGA SD MP that impacts of drainage conveyance through the earth plug that cuts off the natural Willow Slough has been considered.

The Upper pipes and lower structure may be controlled by a slide gate that could be open during a major flood event. If the slide gates are open during a major flood event, the remnant Willow Slough 1009 cfs Q 100 and 839 cfs spill at Rd. 102 calcs provided by Wood Rodgers to city staff may be significantly higher from supplemental flows at the Bypass connection.

Cumulative Q 100 flows from a split flow at the Willow Slough Bypass combined with shed areas north of Willow Slough shown on Figs. 4 and 7 could produce a larger spill than 839 cfs which would will impact the USC south and cause Rd. 25a overtopping at Promenade Dr. **The WRTP drains to the impacted USC causing increased environmental impacts affecting the SUGA SD MP and its stakeholders including the WRTP.**

8c-15 cont



Location Key

12:00...low point in north bank of Willow Slough and potential overflow

!:00...Twin outfall connection to remnant Willow Slough Channel and earthen plug.

2:00...North Willow Slough Bypass levee

3:00...Structure for irrigation water impoundment

3:00...Willow Slough Bypass downstream of impoundment structure

6:00...South Willow Slough Bypass levee. Estimated 9-10 ft. higher than north natural channel top of bank

vii. **SD MP Figs. 4 and 7 fail to recognize the environmental Impacts of failure of 1.) the impoundment structure in the Willow Slough Bypass about 50 ft. downstream of the intercept of the natural channel, 2.) existing irrigation control structures in the remnant channel from the Bypass intercept to Rd. 102, and at least one earth structure for vehicle crossing in natural Willow Slough 850+/- ft west of Rd. 102.** From aerial photos, significant water impoundment is noted in the remnant channel upstream of Rd. 102. Control structures in the remnant channel may fail and/or water impoundment could cause higher spills west of Rd. 102 if impoundments are not released prior to the winter storm season.

viii. **Other SD Studies of record**. The Jan 1994 Borcalli & Associates Hydrology, Hydraulics, and Scour Analysis for the Rd. 102 Bridge Replacement at the Willow Slough Bypass is a resource for previously calculated Willow Slough 100 yr. flows. In the 1994 study using lower rainfall standards than the current 2008 Yolo County update, the 100 yr. flow at Rd. 102 was calced to be 10,600 cfs. Failure of the earth dam allowing split flow at the

8c-16

remnant channel could be a significant environmental impact causing spill along low segments of the north bank which could impact the USC and upstream tributary properties including the WRTP.

8c-16 cont

2. **Other potential 2018 SUGA SD MP methodology that could cause a higher 100 yr. HGL at the Upper South Canal with resultant environmental impacts…spill at Rd. 25a/Promenade Dr. into the SLSP.**
   a. Partial or complete blockage of the 6'x 4" box culvert at the remnant Willow Slough/Rd. 102 could cause a higher spill north to the Upper South Canal. It is assumed the 2018 SD MP modeled full capacity at the remnant Willow Slough box culvert.
   b. Partial blockage of the upstream grate at the Upper South Canal triple 4' x 7' box culvert at Rd. 102 could cause higher backwater and significant spill north into SLSP at Promenade Dr. With the Rd. 25a/Rd. 102 intersection at elev. 40.2 to 40.3, the depth of flow at the Rd. 25a low point could be 0.5 **ft.** It is assumed that no grate blockage was modeled at the USC box culvert at Rd. 102. It is noted that the Yolo County std. for grate area at a drainage structure is 4 x the structure cross section. The USC grate area at the box culvert is 2+/- x the structure.
   c. Failure of the Cache Creek levee and resultant 100 yr. overflow and inundation east of Rd. 102 could produce a higher 100 yr. HGL in the USC. The 100 yr. storm is a series of storms over a 10 day period that could produce more significant environmental impacts should overflow from the Cache Creek shed coincide with a high USC flow.

8c-17

3. **Conversion of 4 acres of prime farmland outside the Urban Limit Line for use as a storm drainage detention basin to benefit urban development, the WRTP, is not consistent with the Yolo County to preserve prime agricultural lands.**

   The off-site siting of the South Regional Pond can be avoided by locating the detention facility within the limits of the WRTP. A reasonable alternative that would provide a net zero loss of development land within the limits of the 349+/- acre WRTP boundary is as follows:

   a. **Combine the South Regional Pond with the drainage detention facility on the north side of Rd. 25a west of Harry Lorenzo.** The footprint of a single pond will be significantly less than the footprint of two ponds and maintenance cost will be reduced. Estimated reduced footprint. Two ponds at 8.5 ac total minus one pond at 7.5 acre. Net loss on-site…7.5 single basin minus 4.5 single basin =(3.0 ac)
   b. **Underground the proposed open ditch on the east side of SR113 north of Rd. 25a, and along the north side of Rd. 25a to Road A.** Assumed 15 ft maint. rd. and 5 ft. buffer to Caltrans ROW. Estimated 2700' x 46' wide = 2.85 ac
   c. **Underground the proposed open ditch on the east side of SR113 south of Rd. 25a.** Assumed 15 ft maintenance. Rd and 5 **ft.** buffer to Caltrans ROW. Estimated 590 lf x 33' wide = 0.45 ac. Loss of on-site land to combined detention basins (3.0 ac). Gain of developable land on-site by conversion of open ditch to underground pipe. +3.3 ac.
   d. **Summary:** Shifting the South Regional Basin to the north side of Rd. 25a within the WRTP boundary and undergrounding the open ditches conveying drainage from SP-1B could be a net zero gain/loss of developable land within the WRTP boundary. This is a win-win. No loss of prime ag land, and reduced maintenance cost with no open ditches to maintain.

8c-18

Summary:

Flood protection for the WRTP and downstream environmental impacts.

1. Review of the WRTP Draft EIR indicates there are multiple possible causes of drainage impact not discovered or studied that could cause significant environmental impact to drainage facilities which the WRTP depends on for its drainage disposal.

   Although the WRTP has a Jan. 31, 2020 Storm Drainage Tech Memo and Preliminary Drainage Plan to protect development within its boundary from flooding, it is also part of the Remainder Area shown on the Spring Lake Specific Plan (SLSP) Fig. 6.3 Preliminary Drainage Infrastructure Plan approved on Dec. 18, 2001, and the subsequent 2006 SDFMP, the Feb. 2017 SUGA SD MP, and the Rev. Mar. 2018 SUGA SD MP.

   These studies beginning with the 2006 SDFMP contain foundational drainage shed delineation errors and/or omissions, and ignore potential split flow at the Willow Slough Bypass/Natural Channel connection that may impact flood protection at the SLSP and facilities the WRTP is dependent on for drainage disposal. The WRTP DEIR should examine each potential environmental impact described in this discussion prior to final approval.

2. There may be a reasonable alternate to siting the South Regional Pond on prime ag land outside the Urban Limit Line. Undergrounding two on-site ditches located north and south of Rd. 25a, and combining the SRP with the WRTP detention basin north of Rd. 25a may provide a near equal swap of developable land or a better open space buffer along the east SR113 boundary resulting in zero conversion of prime ag land outside the Urban Limit Line.

8c-19

8c-20

Respectfully submitted,

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Woodland, CA

RESPONSE TO COMMENT LETTER 8C

Comment 8c-1 Summary of Comment: The commenter notes that the *Storm Drainage Facilities Master Plan South Urban Growth Area* referenced in the WRTP Specific Plan Draft EIR is outdated, as the reference cites the 2017 version, but the plan was revised in 2018. The commenter also lists the documents pertaining to storm drainage planning up to the *Storm Drainage Facilities Master Plan South Urban Growth Area*. The commenter asserts that there are errors and omissions in the 2006 shed delineation, and that such errors or omissions remain in the February 2017 and revised 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*. The commenter asserts that such errors and omissions are potential environmental impacts not addressed by the WRTP Draft EIR and goes on to detail these items in Comments 8c-2 through 8c-20.

Response: The reference in the WRTP Specific Plan Draft EIR has been updated to cite the 2018 plan. This revision does not change the findings, conclusions, or recommendations of the Draft EIR. With regard to errors from the 2006 SDFMP, any specific comments on such are addressed below through responses to Comments 8c-2 through 8c-20.

Comment 8c-2 Summary of Comment: The commenter asserts that lands west of East Street and the railroad are not tributary to the "Farmers Central Shed" and that the 2006 *Storm Drainage Facilities Master Plan* Willow Slough Shed Spill (6.71 s. mi.) fails to correctly identify shed boundaries at specific listed locations.

Response: Wood Rodgers utilized the 2008 California Department of Water Resources topographic data to refine the drainage conditions for baseline conditions as described in more detail under response to Comment 8a-17.a. The first listed area south of County Road 24A and west of West Street (County Road 99) is indeed draining into the City under the baseline condition. It is, however, being redirected into the Farmers Central Corridor under developed conditions.

For the second item described in the comment, the baseline conditions is intended to represent a condition prior to the modifications of the intersection of County Road 24A and 6th Street. Therefore, the baseline condition is currently reflecting the land within the WRR1 watershed as flowing entirely south to County Road 25A to the west of the raised railroad embankment. The topographic information shows the land drops approximately 6 feet from north to south between County Road 24A and 25A. For the developed condition, land just south of County Road 24A was purposely directed to drain to the Farmers Central corridor to more efficiently drain this land to the West Regional Pond.

For the third item described under this comment, the delineations shown on Map 4 of the 2006 *Storm Drainage Facilities Master Plan* are outdated and were corrected with the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* as described under the response for Comment 8a-17.a.

For the fourth item listed for the summary of Map 4 and Map 10 (of the 2006 *Storm Drainage Facilities Master Plan*), the commenter claims that approximately 84 acres south of Willow Slough and west of County Road 102 drain north into Willow Slough west of County Road 102. This area was examined in more detail using the 2008 California Department of Water Resources (DWR) LiDAR. The topographic mapping shows that water will store in this field adjacent to County Road 102 and overflow at the south end of the field across County Road 102

before overtopping the raised bank of Willow Slough, and therefore the commenter's referenced 84 acres would not contribute to Willow Slough drainage. The last portion of this comment refers to the development of approximately 105 more acres than were previously included in the 2006 *Storm Drainage Facilities Master Plan*. The 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* does evaluate more developed area in the vicinity of Highway 113 and County Road 25A than prior reports as a result of the City modifying the Urban Limit Line. The 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* included this additional developed area and recommendations address the additional development; the WRTP Specific Plan is consistent with the additional anticipated development.

Comment 8c-3 Summary of Comment: The commenter asserts that the 2017 *Storm Drainage Facilities Master Plan South Urban Growth Area* contains two hydraulic grade line flaws that impact the Spring Lake Specific Plan West Regional Pond and the Upper South Canal, and were previously noted by this commenter to city staff in June 2017.

Response: Corrections were made to the plan and the revised report was issued in March 2018 to address issues surrounding the West Regional Pond and the Upper South Canal. The WRTP Specific Plan EIR was intended to cite the 2018 Storm Drainage Facilities Master Plan South Urban Growth Area and the analysis contained within the WRTP Specific Plan EIR has been reviewed accordingly. This revision does not change the findings, conclusions, or recommendations of the Draft EIR.

Comment 8c-4 Summary of Comment: The commenter asserts that errors and omissions remain in the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* that, if reviewed, may be determined to be environmental impacts to the WRTP, the Upper South Canal and Spring Lake Specific Plan (SLSP).

Response: This comment is a general restatement of sentiments expressed above. As no specific errors are identified under this general comment, each instance of a specific purported error is separately addressed in detail in responses to more detailed comments throughout Responses to Comments 8c-2, 8c-3, and 8c-5 through and 8c-20.

Comment 8c-5 Summary of Comment: The commenter reiterates the statement that the WRTP Specific Plan Draft EIR referenced the 2017, rather than revised 2018, *Storm Drainage Facilities Master Plan South Urban Growth Area*, and identifies the following concerns as reason for which the commenter believes environmental impacts were not adequately addressed within the WRTP Specific Plan Draft EIR. Such concerns expressed by the commenter are regarding flood waters overtopping County Road 25A from the south, flat inlet grates for overland release at County Road 102, the elevation of the overland release at the crown of County Road 102, and flood waters coming within less than one foot of elevation of existing building pads in the Spring Lake neighborhood.

Response: The WRTP Specific Plan EIR has been revised to cite the most current 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* and the analysis contained within the WRTP Specific Plan EIR has been reviewed accordingly. This revision does not change the analysis, findings, conclusions, or recommendations of the Draft EIR.

The first two paragraphs discuss conditions in the Upper South Canal just upstream of County Road 102. As previously described in responses to Comments 8a-6, 8a-11, and 8a-13, the peak

water surface elevation of 39.8 feet (NAVD88) will not overtop County Road 25A and, therefore, discussion of impacts to the Spring Lake Specific Plan housing and internal streets is not relevant. With the current design, inundation south of County Road 25A would occur as described in the 2018 *Storm Drainage Facilities Master Plan*. As described under the response to Comment 8a-11, the development flow reaches County Road 25A prior to the Willow Slough overflow, which has a higher peak and is the main driver of peak stage conditions.

The culverts beneath County Road 102 are sized to convey the 100-year flows. The receiving grates were oversized by a factor of two relative to the 100-year flows. The grate at Heritage Parkway and County Road 102 is flat, as the commentor notes; however, there is a second culvert located adjacent to Nicholson Circle with an angled grate. In addition, the culverts at the downstream end of Farmers Central Channel are protected by an angled debris rack. The overland release at County Road 102 is designed as a secondary release to convey flows over the road in the event that the grates are blocked by more than 50 percent of their capacity. The factor of safety designed into the system consists of underground capacity of 100-year flow conveyance and oversized grates. The secondary overland release elevation is below the finish floor elevation for all homes in Spring Lake. In the event that one grate is completely blocked, water will initially flow to the other two culverts, utilizing any available capacity, prior to overland release across County Road 102.

The WRTP Specific Plan area is tributary to the Spring Lake Specific Plan via three drainage corridors: (1) Farmers Central Channel (northern shed), (2) Heritage Parkway (central shed), and (3) Upper South Canal (southern shed). The summaries below describe to what extent post construction flows from the WRTP Specific Plan area contribute to the Spring Lake Specific Plan drainage system.

Farmers Central Channel: The northern portion of the WRTP Specific Plan area flows into the Farmers Central Channel, which is sized for 100-year flow conveyance including runoff from the WRTP and passes below County Road 102 through an unobstructed culvert.

Heritage Parkway: The contributing shed from the central portion of the WRTP is 20.1 acres. Spring Lake infrastructure was originally sized for this shed to be on the order of 31 acres. The contributing flow is 22.6 cfs (originally estimated to be 34.8 cfs). The entire corridor 100-year runoff flow is estimated to be 242 cfs; therefore, the WRTP Specific Plan contribution to this shed is less than 10 percent. The Heritage Parkway corridor is designed with dual storm drain pipes for 10-year flows and depressed pathways outside of the travel way for conveyance of the 100-year overland flows. The overland flows are conveyed to the oversized County Road 102 inlet grates to the culvert beneath County Road 102. The 100-year water surface elevation in Heritage Parkway is modelled to be 37.5 feet. These overland flows are not able to enter the adjacent subdivisions from Heritage Parkway due to higher elevations at the connecting streets (e.g., Campos Ave at elevation 38.3 feet and Erickson Way at elevation 38.1 feet). To illustrate the minor contribution from this WRTP shed, a calculation was conducted to determine the water surface elevation without said runoff. The result was a lowering of the water surface elevation in the Heritage Parkway corridor to an elevation of 37.4 feet, a reduction of 0.1 feet.

Upper South Canal: The WRTP and existing upstream flows from the southern shed are consistent with the *Storm Drainage Facilities Master Plan South Urban Growth Area*.

The WRTP Specific Plan is designed and conditioned to avoid inundation and storm drain capacity effects, including through the implementation of Mitigation Measure 3.9-1a, requiring the preparation of additional storm drainage analysis for determining the amount of new development acreage beyond the previously identified 80 residential acres allowable in the South Urban Growth Area. The WRTP Specific Plan EIR has been reviewed to consider the most current 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* and the analysis contained within the WRTP Specific Plan EIR has been reviewed accordingly. This revision does not change the findings, conclusions, or recommendations of the Draft EIR.

Comment 8c-6 Summary of Comment: The commenter identifies additional concerns of what the commenter asserts to be errors that result in environmental impacts not being adequately addressed within the WRTP Specific Plan Draft EIR. The commenter asserts that detail is lacking and requests more information on discerning the flood flows and volumes between Willow Slough and County Road 25A. The commenter also references a 40-inch pipe to connect to Willow Slough along the north bank and possibly contribute to worsening overflow conditions.

Response: Wood Rodgers has supplied the hydrographs depicting the development runoff and the combination with Willow Slough overflow under the response to Comment 8a-11. These hydrographs show how the development runoff precedes the Willow Slough overflow by several hours. In responses 8b-14 through 8b-16, Wood Rodgers has explained that the inundation area is flowing and not behaving as a detention basin based entirely on volume.

Regarding a connecting 40-inch pipe in a 100-year storm the north bank will be subject to overland flow conditions. The presence of the 40" pipe will not change the flow northward under the overland flow condition.

The WRTP Specific Plan EIR has been revised to cite the most current 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* and the analysis contained within the WRTP Specific Plan EIR has been reviewed accordingly. This revision does not change the analysis, findings, conclusions, or recommendations of the Draft EIR.

Comment 8c-7 Summary of Comment: The commenter asserts that detail regarding the 100-year Willow Slough storage is lacking detail in the 2017 SDFMP and that additional storage south of County Road 25A is required to reduce the Willow Slough overflow rate to a Q that, when combined with the 100-year Q from Spring Lake Specific Plan and the WRTP, can be reduced to a flow that can be conveyed by the Upper South Canal. The Commenter asserts that inadequate storage/detention and resultant detained flooding south of County Road 25A may be an environmental impact. Regarding detail that is lacking, the commenter asserts that the underlying topographic mapping is questionable. The commenter recommended that the March 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* be the reference plan used for the WRTP Specific Plan Draft EIR.

Response: Figure 8 of the March 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* defines the topographic mapping used for the plan. The first note (footnote) clearly states that the primary source of the topographic data is the LiDAR collected in 2008 by the California Department of Water Resources. The only LiDAR data collected in 2008 by the California

Department of Water Resources was collected as part of the Central Valley Floodplain Evaluation and Delineation Program. The commenter is not correctly representing the accuracy of the data used south of County Road 25A. The 2008 LiDAR was processed to provide one-foot contour intervals with a vertical accuracy of +/-0.33 feet. The accuracy standard does not imply that all points on the map are inaccurate by this amount. The expression of accuracy is a statistical representation of at least 95 percent of the entire data set meeting or exceeding this accuracy threshold. In other words, much of the data has a better accuracy than 0.33 feet +/-. From an aerially collected data standpoint, this was considered sufficient for mapping by the California Department of Water Resources as part of the Central Valley Floodplain Evaluation Delineation Program and was likewise considered adequate for the City's planning purposes.

The commenter reiterates the volumetric aspect of the inundation area and the importance of accurately understanding and representing volume. As explained in response to Comment 8a-17.c, stormwater south of County Road 25A is flowing and the land is sloping and not functioning as a storage basin. While the inundation area accounts for some volume as stormwater flows through it, the detention aspect is secondary to the hydraulic capacity of the overland flow path. The commenter's recommendations relating to new surveying are considered unnecessary given the accuracy of the topographic mapping used. The Spring Lake Capital Improvement Plan and Spring Lake fee program includes funding to acquire a flowage easement or flowage easements, as applicable. The City is currently in the process of negotiating (a) flowage easement(s). The comment relating to having a "monitoring program to ensure ground contours in the inundation area are preserved" is appreciated. The city has already been aware of all the land outside of the entire perimeter of the City, providing stormwater attenuation as part of the 2006 and 2018 SDFMP report documents and will address the actions of landowners if it becomes clear adverse impacts to the City by re-grading have occurred.

The above response addresses the data errors and omissions claimed by the commenter. The WRTP Specific Plan EIR has been revised to cite the most current 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* and the analysis contained within the WRTP Specific Plan EIR has been reviewed accordingly. However, the WRTP Specific Plan is designed and conditioned to avoid storm drain infrastructure capacity effects, including through compliance with City Engineering Standards and Mitigation Measure 3.9-1a, requiring the preparation of additional storm drainage analysis for determining the amount of new development acreage beyond the previously identified 80 residential acres allowable in the South Urban Growth Area. The revision to cite the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* does not change the findings, conclusions, or recommendations of the Draft EIR.

Comment 8c-8 Summary of Comment: The comment reiterates the City's adjustment to the flooding south of County Road 25A by lowering the n-value to 0.03, which results in zero freeboard.

Response: The City has the authority to set standards and deviate from them on a case-by-case basis without jeopardizing public safety. While zero freeboard is the result, this condition does not flood homes/properties north of County Road 25A and creates minor roadway inundation for a short time during the peak of the event with emergency vehicle access maintained along the north side

of the roadway. The design condition of the Upper South Canal meets the City design standard for a 100-year storm event with the approval of a design exception by the City Engineer. The City Engineer approved a design exception to allow zero freeboard based on the fact that the peak flow in the Upper South Canal is at elevation 39.8 for less than one hour and the length of road that is at elevation 39.8 is less than 50 feet.

Comment 8c-9 Summary of Comment: The commenter recommends additional studies to address the commenter's alleged errors contained within the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*, which are individually detailed in Comments 8c-10 through 8c-18.

Response: This comment does not elaborate on specific alleged errors. Please see responses to Comments 8c-10 through 8c-18.

Comment 8c-10 Summary of Comment: The commenter asserts that additional review and/or survey of field conditions is needed to verify Figures 4 and 7 of the March 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*. The commenter provides a list of specific alleged clarifications needed and/or errors related to each figure. See response to Comments 8c-11 and 8c-12 for detailed comments and responses pertaining to Figure 7. With regard to Figure 4, the commenter asserts that Figure 4 of the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* is either unclear and/or inaccurate for describing current drainage conditions of the WRR2A, WRR2B and WRR1 sheds.

Response: Please see response to Comment 8a-17.a, which describes the drainage for these watersheds in both baseline and ultimate conditions. The WRTP Specific Plan EIR has been revised to cite the most current 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* and the analysis contained within the WRTP Specific Plan EIR has been reviewed accordingly. This revision does not change the findings, conclusions, or recommendations of the Draft EIR.

Comment 8c-11 Summary of Comment: The Commenter asserts that Figure 7 of the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area* includes large scale drainage diversion that constitutes a growth inducing environmental impact. The commenter provides summary of the commenter's review of the updated Figure 7 from the 2017 version, including stating the opinion of how the update does and does not serve as an improvement. The commenter goes on to provide opinion on why diversion of the 155+/- ac SP-1C to the Farmers Central Trunk shed can be justified if the West Regional Pond (WRP) and Farmers Central Trunk system is adequately sized, the cumulative 125+/- ac diversion of sheds WRR2A and WRR2B provides an urban drainage connection for ag land outside the Urban Limit Line which is a growth inducing environmental impact. The commenter asserts that this is a fatal flaw in the *Storm Drainage Facilities Master Plan South Urban Growth Area* that must be corrected.

Response: For response regarding the drainage of the watersheds west of East Street are described for both baseline and ultimate conditions, please see response to Comments 8a-17.a and 8c-3.

The purpose of the master plan is to create a plan for planned future growth, which may involve redirecting flow as necessary to achieve this goal. The General Plan and the voter approved Urban Limit Line dictate development of drainage analyses.

Furthermore, the description of the representation of the WRR2A and WRR2B watersheds creating a growth inducing environmental impact is incorrect. Flows from all land outside of the city in an undeveloped state must be directed through city facilities safely and must be accounted for in an undeveloped state. The WRR2A and WRR2B watersheds were modeled as undeveloped in the ultimate conditions modeling and the downstream facilities were sized to account for this undeveloped runoff. If development of either WRR2A or WRR2B were to occur, it would likely require onsite detention to mitigate development impacts, regardless of where the flow is going. The modeling or accommodation of the runoff from these watersheds in an undeveloped state in no way relates to or facilitates the future development of these properties. The proposed ditch and/or pipe to drain these undeveloped parcels are shallow and smaller than what would be proposed if development were to occur. Separate environmental review and documentation would be required of any solution not otherwise analyzed as part of the currently proposed WRTP Specific Plan and through the WRTP Specific Plan EIR, as required under CEQA.

Comment 8c-12 Summary of Comment: Commenter asserts that *Storm Drainage Facilities Master Plan South Urban Growth Area* Figure 7 (Ultimate Sheds) overlooks drainage sheds tributary to the remnant Willow Slough along the segment from the Willow Slough Bypass intercept and County Road 102.

Response: See Response to Comment 8c-2

Comment 8c-13 Summary of Comment: Commenter asserts that *Storm Drainage Facilities Master Plan South Urban Growth Area* Figures 4 and 7 fail to recognize the potential environmental impact of a Willow Slough spill over the north bank between the Willow Slough Bypass intercept and County Road 102. The commenter elaborates on the peak flow conditions in the overall Willow Slough system and the potential for flow to exit Willow Slough and/or the Willow Slough Bypass through levees that are known to be sinking.

Response: Storm drainage that would result from the if Willow Slough were to overtop its north bank between the intercept point and County Road 102 would flow eastward toward County Road 102. The land on the north side of Willow Slough downstream of the intercept point is not in the drainage shed for the Willow Slough Remnant channel that heads northward and crosses County Road 102, one-half mile south of County Road 25A. The Willow Slough intersection with the County Road 102 bridge occurs three and one-half miles south of the Upper South Canal. Any overtopping of the channel at this point would have no impact on the Willow Slough Remnant channel.

Land subsidence generally occurs uniformly over the entire region, so concerns regarding sinking does not invalidate the findings of the *Storm Drainage Facilities Master Plan South Urban Growth Area* or any other storm related studies cited by the commenter.

The commenter further states that the low north top of bank location approximately 100 feet west of the diversion would be a prime location for a significant spill north. The City reviewed this location and found that the north bank of the Willow Slough upstream of the diversion point is uniform in elevation between the railroad and the diversion point. The city did not observe a low point where Willow Slough would likely overflow.

The City disagrees with the commenter's mapping suggestion regarding what areas are tributary to the Willow Slough spill at County Road 102. Per Figures 4 and 7 of the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*, sheds WRR1, WRR2A and WRRA2B drain eastward and cross County Road 102 without entering Willow Slough.

Comment 8c-14 Summary of Comment: This comment is a continuation of the comment under 8c-13, focusing on the earthen plug at the Willow Slough Bypass intercept of the natural channel.

Response: This earthen plug is maintained by Reclamation District 2035; if it is planned for removal in the future then appropriate analysis would be conducted at that time, as required.

Comment 8c-15 Summary of Comment: This comment is a continuation of the comment under 8c-13 and 8c-14, focusing on the operation and consideration of the existing conduit(s) within the earthen plug described under comment 8c-14.

Response: As part of Wood Rodgers' field visit and research it was determined that the pipes through the earthen plug are operated by Heidrick Farms, according to Reclamation District 2035. They are operated in a closed condition during flood season.

Comment 8c-16 Summary of Comment: SD MP Figs. 4 and 7 fail to recognize the environmental impacts of failure of 1.) the impoundment structure in the Willow Slough Bypass about 50 ft. downstream of the intercept of the natural channel, 2.) existing irrigation control structures in the remnant channel from the Bypass intercept to Road 102, and at least one earth structure for vehicle crossing in natural Willow Slough 850+/- ft west of Road 102.

Response: The failures of the facilities noted in this comment would not affect the assessment performed by Wood Rodgers based on the following discussion. The failure of the impoundment structure described as 50 feet downstream of the intercept of the natural channel appears to be a low flow dam across the upstream end of the Willow Slough Bypass channel. The failure of this structure would only force water to flow more efficiently into the Willow Slough Bypass, and would serve to divert more water away from the City. The existence of irrigation control structures within the remnant channel were considered negligible. The system was modeled as if they didn't exist, moving water more efficiently to County Road 102, resulting in a more conservative estimate of flow flowing toward County Road 25A. The flashboards associated with irrigation control structures are removed by the facility operators during the rainy season.

Comment 8c-17 Summary of Comment: The commenter suggests partial and/or complete failure of existing/designed drainage facilities should be accounted for, as detailed below, and suggests such failures could cause a higher 100-year hydraulic grade line at the Upper South Canal. The commenter identifies the following three specific locations:

a) partial or complete blockage of the box culvert at Willow Slough and County Road 102;

b) partial blockage of the upstream grate at the Upper South Canal box culvert at County Road 102; and

c) the failure of the Cache Creek levee system.

Response:

a) Typical blockage would occur as a result of the accumulation and migration of natural debris, such as woody vegetation. Under high flow conditions, woody debris will tend to float and/or create a lattice structure in front of the culvert that will have negligible blockage impacts under pressure flow conditions.

b) The designed inlet grate and crossing under County Road 102 for the Upper South Canal is the responsibility of the City. Wood Rodgers designed the grate for 50 percent blockage, as it has twice the open area as needed for full flow capacity. It should be noted that the City has a dedicated fund source for storm drain maintenance in the Spring Lake and WRTP specific plan areas and is actively maintained; it is therefore unlikely that a 50 percent blockage would occur and this percentage is an industry appropriate factor of safety. While Yolo County may have a standard of providing 4 times the flow opening, lands within Yolo County in general have more debris sources, and smaller culvert crossings, necessitating a heavier debris loading consideration.

   Closer examination of the lands which will flow into this channel reach should support that the inflow of debris is very low during low-flow and low-velocity events. In general, only leafy debris and litter should reach this inlet, most of which can pass through the grate and flow unobstructed downstream. Even if a 100-year event were to occur, the largest flow from Willow Slough would only travel at depths of less than 2 feet at velocities that are not high enough to carry larger woody debris very far across the inundation area.

c) With respect to the Cache Creek floodplain and simultaneous inundation, the areas to the west of County Road 102 are essentially above and outside of the Cache Creek floodplain. The published Federal Emergency Management Agency floodplain shows the 100-year base flood elevation of approximately 36.5 feet (NAVD88) to the east of County Road 102 adjacent to the City's wastewater treatment facility. With peak 100-year water surface elevations of 39.8 feet (NAVD88) in the Upper South Canal, there is over 3 feet of drop to allow local stormwater to flow eastward with no effect to the west of County Road 102.

Comment 8c-18 Summary of Comment: Commenter presents an alternative to the siting of the South Regional Pond consisting of combining it with the pond proposed on the north side of County Road 25A within the boundary of the WRTP and converting proposed drainage channels into underground storm drain pipes to recover developable land adjacent to State Route 113 and County Road 25A.

Response: The WRTP Specific Plan EIR examines the adverse physical effects of all changes proposed under the Specific Plan, including all on- and off-site infrastructure required to serve planned land uses. While the commenter offers an alternative drainage approach, the drainage approach summarized in the Specific Plan and Draft EIR is consistent with City drainage standards, and this drainage strategy is addressed comprehensively in the EIR. The City examined several drainage alternatives in developing the draft Specific Plan, including various pond locations, pipes versus channels, and construction costs were analyzed. In addition, the City reviewed the location of the South Regional Pond and acknowledges that it is outside of the Urban Limit Line

and analyzed the environmental impacts associated with development of the South Regional Pond at the proposed location. Replacement of converted farmland or an in-lieu fee (dependent upon project size) would be required by the County's agricultural conservation ordinance (Section 8-2.404 and Section 8.2-405 of the Yolo County Code), and mitigation measures for the loss of habitat are included in the project mitigation measures detailed in Section 3.3 of the EIR. Therefore, this impact was comprehensively considered and analyzed in the WRTP Specific Plan EIR and no changes are needed.

Comment 8c-19 Summary of Comment: This comment is a summary position founded on the issues raised in previous comments being unaddressed or faulty.

Response: The technical responses provided herein should provide the commenter with the assurance that the planning efforts and associated drainage analysis are thorough and reasonable.

Comment 8c-20 Summary of Comment: The commenter posits an alternative of placing all necessary detention on land within the City's General Plan rather than siting the South Regional Pond on "prime ag land"

Response: See response to 8c-18.

2.2.9 COMMENT LETTER #9:

PAUL KRAMER

Letter 9

Comments on the Woodland Research and Technology Park Specific Plan and Draft EIR

Paul Kramer, Woodland Resident, June, 2021

To the Woodland Planning Commission, City Staff, and City Consultants

My comments relate both to the Specific Plan and the Draft EIR prepared about it. They may be categorized as follows:

1. Safe interactions between cyclists and other vehicles using public streets and roads.
2. The timing of road improvements.
3. The Development Agreement.
4. Loss of Agricultural Lands.

9-1

Bicycle safety. I regularly ride my bicycle in Woodland, in Yolo County, and beyond. My cruising speeds range from 15 to 20 miles per hour. My mode of cycling is best accomplished on streets and roads, not on bike paths shared with pedestrians, dogs on long leashes, and children weaving to and fro; I would be a menace to them and they would be a menace to me. Under the California Vehicle Code, bicycles are treated in a similar way to cars. That is how I ride, stopping at stop signs and red lights, to the side of the outer lane or in a designated bike lane. For riders like me, off-street multi-use paths are not a substitute for properly designed on-street bike lanes.

I do appreciate the City's recent efforts to provide space for cars and bicycles to coexist on city streets. The improvements to Beamer Street and the planned refurbishment of Gibson Road west of East Street are two examples. In the Springlake area, however, things have not gone so well. Seeing the on the ground application of City plans and standards regarding cycling features gives me concerns about how the Research Park will turn out, both in the short and long terms.

9-2

While perhaps planned before Springlake, the relatively narrow bike lanes that were provided on Gibson Road from Highway 113 east to Road 102, are hard to defend. Gibson is heavily traveled. At the time that the center median and curbs were placed, there were no developments on the south side of Gibson that prevented a slightly wider roadway with more than the bare minimum width bike lanes. But we didn't provide them and now the bean counters will say it costs too much to fix it. (I've heard of plans to make the vehicle lanes narrower, which frees some space to stripe wider bike lanes but puts the cars closer to each other, not an optimal solution.) When the bike path is part asphalt and part concrete gutter, it's width is effectively reduced by half or a third wherever the gutter is full of debris or the asphalt subsides and creates a tire-deflecting mini-curb at the asphalt-concrete junction. The narrow bike lanes are especially hard to fathom between 113 and Pioneer, where one would expect Pioneer High students who live to the west of the campus to make use of the bike lane.

Exiting Gibson as soon as I possible after crossing 113—at Harry Lorenzo or Pioneer—doesn't improve things. Harry Lorenzo just south of Gibson isn't wide enough for cars to pass a bike with the required 3-foot spacing. It does not appear to be in a temporary state as there are concrete curbs and a median.

Pioneer to the north of Farmers Central appears to be waiting for the developers of the adjoining parcels to pay for street improvements. (Unless the plan is to mirror the segment between Gibson and Main Streets, another miscue.) In the meantime, there is no space for bikes traveling on that segment. The sidewalk on the east side is not an attractive option and there is nothing on the west side. I'm

guessing this was meant to be temporary but that unsafe temporary state has gone on for way too long. Thus my second point, below.

I understand that cyclists are permitted to "take the lane"—ride in the middle of the traffic lane such that cars cannot pass—when there is insufficient space to the side of the lane. I do that when necessary, without qualms. Why force me to do so, and make the cars behind me slow down and wait? Why create an unnecessary point of friction between drivers and cyclists? Some drivers seem to think that "Share the Road" means the bikes must get out of their way. And even I get a little upset when I'm forced to impede vehicular traffic for no good reason that I can discern. On East Street it is necessary, in a brand new neighborhood, it is not. There is, of course, the added danger that inexperienced cyclists and inexperienced or inattentive motorists, will not get this maneuver right.

Marston Drive, between Simpson St. and Miekle Ave. best illustrates my point. At each end of this segment, the entrances to the traffic circles are narrowed enough to force me to take the lane. Three islands were added at some point, as roundabouts (lite), to calm traffic and protect pedestrians crossing from one section of a path to another. The drive has adequate room for cyclists to cycle and cars to pass them, except near the islands, where a vehicle occupies nearly all of the roadway, leaving no room to pass a cyclist. When no cyclists are present, it is not clear that the islands will cause vehicles to slow down; speed bumps or table tops would be a better choice. Why create opportunities for cars and bikes to compete for the limited road width? Here is one example, illustrating that there is not enough room for a vehicle and a bike to pass through together:



9-2
(Cont'd)

The draft Specific Plan and its EIR make only vague statements about providing facilities that will encourage cycling as an alternative to vehicle trips. The design specifics of streets and intersections is left for determination as specific projects are presented. Given how that has worked out in Springlake, I don't have high hopes for the Research Park. My request is that the new Specific Plan call out at least a preference, if not a mandate, that streets and intersections be designed so that where a lane approaching an intersection or pedestrian island allows a vehicle and a bicycle to safely travel side by side, the intersection or island shall not pinch the traveled way such that they cannot travel side by side through the intersection or around the island. Doing so requires no additional road right-of-way. 9-3

Timing. As I describe above, we've been waiting for years for Pioneer Road between the entrance to the high school and Farmers Central to be improved to its final configuration. We suffer no or inadequate bicycle facilities and pinch two lanes for vehicle travel into single lanes in each direction, in the immediate vicinity of a school. Please make sure that this does not happen again in the Research Park. Perhaps the master developer can be made to advance the funds necessary to build similar improvements, subject to recovering them as the sub-developers pull their permits? 9-4

Development Agreement. As I've been discussing the above concerns with City staff, they have told me that changes cannot be made to the Springlake streets that are not yet constructed because the design standards are locked in place by various developer agreements. We are told that the Research Park will also be the subject of a developer agreement. That makes the design decisions made today hard to change in the future, unless, of course, changes would benefit the developer. But over the life of a project such as this, community standards can change, either because of changing values or to accommodate new, better, ways of providing for the public good. 9-5

I understand that developers want to lock in costs and entitlements. I also understand that the law authorizing the City to give away its right to regulate development intends that the developer who benefits from that gift provide benefits, not just those that would be required of any developer, but extra benefits. I don't see those benefits identified as of yet and request that they be identified with sufficient time for the public to review them.

Ag Lands. As the EIR indicates, the loss of agricultural lands will be mitigated by providing conservation easements at a ratio of 1:1. Yolo County is said to apply a 3:1 ratio. I agree that preventing other ag lands from falling into development does nothing to replace the lost ag lands and does not fully mitigate the impact. It is the only feasible mitigation available to us. Although not discussed in the draft EIR, converting other lands into viable ag land is extremely expensive and not feasible. The best approach, then, would be to cite their loss as a significant impact that cannot be fully mitigated, apply the mitigation requirement at a 3:1 ration, and override the remaining significant impact. 9-6

RESPONSE TO COMMENT LETTER 9

Comment 9-1 Summary of Comment: The commenter introduces the letter and provides a bullet list summary of the four overarching topics that the comment letter covers as they pertain to the WRTP Specific Plan and the Draft EIR. The comment letter goes on to provide detailed comments on each of these four topics, as summarized in Comments 9-2 through 9-7.

Response: Specific responses to comments related to each of the comment letter topics are provided below in responses to Comments 9-2 through 9-7.

Comment 9-2 Summary of Comment: The commenter describes their experience as a routine biker in Woodland and around Yolo County, and states their preference of biking on the road alongside cars rather than on off-street multi-use paths. The commenter states the difficulties they feel they have experienced biking in the City, including narrow bike lanes, when a bike path is part asphalt and part concrete, and when roads are not wide enough for cars to pass bicyclists at the required space of three feet, and expresses, despite plans and standards, concern for actual implementation of successful infrastructure and facilities to provide for bicycle circulation and safety. The commenter goes on to request that the WRTP Specific Plan clearly define a preference or requirement for intersections to be designed so that vehicles and bikes can safely travel side by side so that bikers do not have to "take the lane."

Response: This comment's description of current infrastructure and related assertions of inadequacy of bicycle infrastructure to support bike safety and circulation do not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR; these comments are noted.

Section 4.5 of the WRTP Specific Plan, "Roadway Network and Street Hierarchy," explains the WRTP Specific Plan Area's proposed roadway network and the travel mode prioritization for roadways based upon the street type and land use context. Street standards consider a street's relation to surrounding land uses, appropriate travel speeds, and the need to accommodate multiple travel modes and user abilities. The section also continues with detailed design for each of the roadways within the WRTP Specific Plan Area's primary roadway network. It is standard practice for bike lanes to be continuous through an intersection when there is a bike lane on either side of the intersection. The main exception to this standard practice occurs when intersection control is a roundabout or a traffic circle. The design intent is that the roadway width is narrowed and channelized in order to reduce speed through the intersection and assign right of way. If the roadway included width for a vehicle and bicycle next to each other, the design intent of the intersection control would not be accomplished.

Comment 9-3 Summary of Comment: The commenter expresses their concern over the timing of improvements, specifically those pertaining to roadway infrastructure to provide conditions in which vehicles and bicycles can safely coexist. The commenter suggests that up-front financing should be used to ensure timely roadway infrastructure improvements.

Response: Section 6.4, "Financing and Maintenance of Public Facilities," in the WRTP Specific Plan outlines the funding mechanisms that are applicable to the WRTP Specific Plan Area, which is to be detailed in the development agreement, Public Facilities Financing Plan for the WRTP

Specific Plan Area, and any reimbursement agreements. As noted on page 3.13-15 of the Draft EIR, in order to specify the manner in which the necessary infrastructure, public facilities, and other programs or services as provided in the WRTP Specific Plan will be constructed and/or operated and financed, among other matters, the City and the project applicant will enter a development agreement. The terms and conditions of the development agreement is required to be consistent with the goals and policies of this Specific Plan and shall set forth and require financing strategies, sources, and mechanisms to ensure short-term and long-term funding for implementation and monitoring of the TDM/VMT measures. As a successful circulation network that accommodates multiple modes of transportation continuously is key to the successful TDM/VMT measures, this accounts for concerns such as implementation of roadway improvements for the safe sharing of roadway rights-of-way between vehicles and bikes, among other modes of transportation. Each phase of development will be required to provide adequate facilities for bicycles, pedestrians and automobiles.

Comment 9-4 Summary of Comment: The commenter requests the Specific Plan development agreement.

Response: The development agreement will be published and available for public review.

Comment 9-5 Summary of Comment: The commenter recommends that, to address the significant impact of a Loss of Important Farmland and Conversion of Agricultural Land to Nonagricultural Urban Uses, the Draft EIR implements a 3:1 ratio of mitigation (for every acre converted to urban development, three acres of mitigation will be required).

Response: Impact 3.2-1 of the Draft EIR addresses the potential for the WRTP Specific Plan to result in a loss of Important Farmland and conversion of agricultural land to nonagricultural urban uses. As determined by the analysis in the Draft EIR, Implementation of the WRTP Specific Plan and off-site improvements would result in the permanent conversion agricultural land, including Important Farmland, to urban uses. This impact was found to be significant and, as stated on page 3.2-18 of the Draft EIR, the WRTP Specific Plan would comply with City and County municipal code requirements for the loss of farmland and require permanent protection of agricultural land proportional to that proposed for conversion to urban use, at a ratio of 1:1 for land within the City's limits and a ratio of 3:1 for land outside of the City's limits (per County ordinance and Yolo Local Agency Formation Commission policy). As a part of the WRTP Specific Plan process, per various review and approval mechanisms detailed in Section 7.2.1 of the WRTP Specific Plan, land within the WRTP Specific Plan Area will be annexed into the City's jurisdiction. As such, the applicable municipal code requirement for the loss of farmland within the WRTP Specific Plan area is the City Municipal Code 15.33, thereby requiring one acre of conserved farmland for every acre of converted farmland. Section 8-2.404 of the Yolo County Code requires three acres of conserved farmland to one acre of converted land. As detailed in the Draft EIR, this would be applicable to conversion of land outside of the City's jurisdiction, including the proposed South Regional Pond. No change has been made to the analysis and no additional mitigation is proposed.

2.2.10 COMMENT LETTER #10:

SHERYL PATTERSON

Letter 10

Sheryl Patterson
Attorney at Law

June 11, 2021

Sent via e-mail: researchpark@cityofwoodland.org

Mayor and City Council
City of Woodland

RE: Research and Technology Park Specific Plan and EIR

Dear Mayor and City Council:

I live in Spring Lake and moved here seven years ago from Davis where I lived for 20 years. I am an environmental and land use attorney working for another city in the region. I have over 20 years' experience with developing specific plans, processing entitlements for major development projects, and review of environmental impact reports. I also served on the Davis Planning, Open Space, and Economic Development Commissions. I have monitored the progress of the Research and Technology Park Specific Plan over the past few years and would like to offer a few comments. 10-1

Specific Plan

I have reviewed the Research and Technology Park Specific Plan and I am very impressed with its scope, land use plan, and proposed zoning to create a mixed-use community that will be complementary to the Spring Lake neighborhood. Spring Lake housing is near build-out, but it lacks smaller lot housing that first-time homebuyers can afford. Fortunately, that need will be met with the type of housing planned for the Research and Technology Park. Providing on-site housing that is affordable for the employees will help reduce traffic impacts. The land use plan complements the existing Spring Lake development by locating the lower density housing across from the existing housing that has the same density and locating the higher density housing closer to the employment center and the Town Center.

The jobs that will be created will serve both Woodland residents and graduate students from UC Davis. And the focus on agricultural-related research rather than chip manufacturing and software development will set it apart from the typical Bay Area technology parks and will enhance Yolo County's reputation for food production innovation. While medical and bio-tech uses will also be allowed, the expectation is that those users will most likely locate at the planned Aggie Square development next to the UC Davis medical campus in Sacramento. 10-2

The land use plan includes commercial uses which could compete with development of the Spring Lake commercial node along Parkland, which is referred to as the "Spring Lake Village Center." However, the additional Research and Technology Park residents could help facilitate realization of that planned Spring Lake project. The other interior commercial sites in the

Spring Lake Specific Plan were a mistake because without a sufficient number of vehicle trips, retail at those locations is not financially feasible. Instead, the Research and Technology Park commercial sites will help serve the needs of Spring Lake residents with uses that may not be available at the Bel Air shopping center. The Research and Technology Park Village Center around the central green park will be a feature that Spring Lake residents can also enjoy.

The City's 2035 General Plan designated this area for urbanization as a new growth area. Therefore, the conversion of agricultural land for urban uses has already been approved, although mitigation for that loss of agricultural land range at between a 1 to 1 ratio and a 3 to one ratio depending on location is required. Either a conservation easement or payment of an in-lieu fee will be used to permanently preserve agricultural land. The location of the drainage detention basin south of the project and the urban limit line is a compatible open space land use with adjoining agricultural land, even though it serves the development north of the urban limit line. The location of the needed stormwater retention basin off-site allows for more development within the Research and Technology Park, thereby accommodating more jobs and housing within the City's urban limit line, which is "smart growth."

Rather than primarily low density residential development like the Spring Lake Specific Plan, the Research and Technology Park Specific Plan includes a large employment center along the freeway. This new research park will attract UC Davis professors who want to conduct research off campus so they can own the food related patents they create, as well as offer good paying jobs for UC Davis and Woodland Community College graduates and existing Woodland residents. The shared mobility hub and obligation to help fund transit service between UC Davis and the Research and Technology Park will help facilitate use of alternative transportation options for UC Davis students and Davis residents who work at the Park. Also, Highway 113 has plenty of capacity to accommodate vehicular travel between the two cities.

In summary, I support adoption of the Research and Technology Park Specific Plan.

10-2 (Cont'd)

Environmental Impact Report

I have read the EIR and most of the impacts and mitigation measures are standard effects from new development on agricultural land. The EIR includes appropriate measures to reduce the project's impacts. Although there will be significant and unavoidable impacts after mitigation due to the change in land use, this development is consistent with the City's 2035 General Plan and EIR. In summary, I have no comments on the Research and Technology Park Specific Plan EIR.

10-3

Sincerely,

Sheryl Patterson

Sheryl Patterson
Attorney at Law

Cc: Erika Bumgardner, Principal Planner/Business Development Liaison, City of Woodland

RESPONSE TO COMMENT LETTER 10

Comment 10-1 Summary of Comment: The commenter introduced their role in the regional community and professional experience as an environmental and land use attorney in the region.

Response: This comment does not pertain to the adequacy or completeness of the Draft EIR. Specific comments and responses pertaining to the WRTP Specific Plan and Draft EIR are provided below in Comments 10-2 and 10-3.

Comment 10-2 Summary of Comment: The commenter summarized the WRTP Specific Plan, including listing how the WRTP Specific Plan will contribute to the City of Woodland. The commenter closes review of the Specific Plan with a note of support for the adoption of the WRTP Specific Plan.

Response: The City is appreciative of the detailed review and for the comments related to support for the WRTP Specific Plan.

Comment 10-3 Summary of Comment: The commenter states that the EIR includes appropriate measure to reduce impacts and that the development is consistent with the City's 2035 General Plan and EIR. The commenter notes that they have no comments on the Draft EIR.

Response: The City is appreciative of the detailed review and for the comments related to support for the WRTP Specific Plan.

2.2.11 COMMENT LETTER #11:

DOROTHY ROSENBERG

Letter 11

From: researchpark <researchpark@cityofwoodland.org>
Sent: Friday, July 02, 2021 8:37 AM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>
Subject: FW: Woodland residents asking for increased sustainability goals for the proposed project

From: Dorothy Rosenberg <deeddr@gmail.com>
Sent: Thursday, July 01, 2021 6:00 PM
To: researchpark <researchpark@cityofwoodland.org>
Subject: Woodland residents asking for increased sustainability goals for the proposed project

To the City of Woodland:

My name is Dorothy Rosenberg and I live and work here in Woodland. I'm an architect with a portfolio of sustainable projects including CHPS, LEED and the Living Building Challenge certification systems. I am currently Living Future Accredited.

Earlier this week I began circulating a letter on Change.org, an on-line petition website. This petition has only been up for 3 days and has already garnered 35 signatures. My hope is that more people will sign. I started the petition to ask the City of Woodland to use the proposed research and technology park to implement sustainability goals that are higher than the baseline California Building Code requirements. I support the work that has been done on the draft plan wholeheartedly. My focus is solely on the sustainability goals for the development as a whole and the commercial/industrial buildings and homes that will be erected there.

I know that through early planning and goal setting, increased sustainability goals do not necessarily result in cost increases. It is not my goal to deter development or hamstring the project. Building projects that are Zero Net Energy, Zero Net Carbon or water independent can be done, are being done all over the world. The key is always early planning and research. For example, an integrated water management system that incorporates a system of bio-swales throughout the entire development will have a lower net cost than individual site water mitigation. This system can create amenity for people and wildlife through good design and appropriate plantings. Currently there is no requirement for commercial buildings to offset energy use through on site solar power or other alternative non-combustible onsite generation, but we could make this a requirement. There are Federal Tax credits for commercial solar, and with the lowering cost of solar power, depreciation of equipment and lower energy bills the payback period could be minimal.

In addition, we have seen the effects of climate change already here in the Central Valley. Higher sustainability goals could make this new development more resilient in the face of

11-1

power outages, fires, drought and higher temperatures. Appropriate sun shading, operable windows on commercial buildings, night time cooling protocols, building design approaches that are appropriate for our climate, are all low-cost & high-benefit building components and systems. The changing climate is our new reality. We have a huge opportunity to respond appropriately. Let's make the future of Woodland sustainable and let's start with this new project.

11-1 (Cont'd)

Thank you very much for your excellent work on this exciting new project.

Sincerely,

--
Dee Rosenberg, PA, LFA



530-219-9774

RESPONSE TO COMMENT LETTER 11

Comment 11-1 Summary of Comment: The commenter describes the petition she created online to encourage the City to implement sustainability goals related to the WRTP Specific Plan that go beyond the baseline California Building Code requirements. The commenter provides a description of financial incentives that may encourage a City to increase sustainability efforts. Furthermore, the commenter states that by implementing higher sustainability goals for commercial, industrial, and residential buildings, it will contribute to the resiliency of the City concerning climate change and related events.

Response: The City appreciates the detailed review and indication for support for sustainability measures. While this comment does not pertain to the adequacy or completeness of the environmental analysis contained in the Draft EIR, the City has presented some response language for additional context.

Please note that Policy 2.L.2 of the City's 2035 General Plan designates the WRTP Specific Plan Area as a New Growth Area, SP-1A, and provides guidance for SP-1A to be an area for "…sustainable development through the use of renewable energy sources and water conservation tools with the goal of striving to achieve zero net energy at the building and neighborhood level to the extent feasible." The WRTP Specific Plan Guiding Principles are anchored in this guidance and include multiple principles that address sustainability including Guiding Principle 4, "Sustainable and Resilient," 5, "Gathering Place," 6, "Connectivity/Mobility", and 7, "Healthy Community," all of which support various aspects of sustainability and energy reducing principles. Chapters 2 and 3 of the WRTP Specific Plan also include policies and design guidelines and standards that address sustainability, including land use planning and design, open space, and greenhouse gas reduction measures. Specifically, Specific Plan Policies 2.2.3.1 requires new development be consistent with the objective and targets of the City's Climate Action Plan with the goal of striving to achieve zero net energy at the building and neighborhood level, and Policies 2.2.3.2 and 2.2.3.3 address resource efficiency and electric/alternative fuel vehicle infrastructure within the WRTP Specific Plan Area to future advance the sustainability goals of the WRTP Specific Plan. As noted in Section 3.3.3, Climate Action Plan Consistency, of the WRTP Specific Plan, all project shall strive to meet net zero energy consumption through the incorporation of conservation measures above Title 24 standards and shall, at minimum, demonstrate consistency with Cal Green Tier 1 standards. Furthermore, as required by the design standards and design guidelines for all residential districts, outlined in Section 3.5.12 of the WRTP Specific Plan, all housing units shall be pre-wired for electric vehicle and solar PV systems, further supporting efforts to exceed California Building Code requirements and incorporate sustainable design into the WRTP.

2.2.12 COMMENT LETTER #12:

JIM SMITH

Letter 12

From: Jim Smith <newsie2001@yahoo.com>
Sent: Saturday, May 22, 2021 7:10 AM
To: researchpark <researchpark@cityofwoodland.org>
Subject: Comment regarding Research Park proposal

Overall, the plan looks good.
My single comment has to do with carbon offsets for use of cement/concrete.
Concrete is a strong contributor to greenhouse gas emissions and I don't think the plan addresses how to mitigate the emissions over the life of the project.
It's true that much of the entire project is centered-around sustainability and energy-emission reductions, but I believe there needs to be a provision that as the project grows over the coming years, new construction should be required to prove that whatever concrete is used in that construction should be mitigated through whatever means necessary.

12-1

Thank you
Jim Smith,
707-301-3761
515 Ashley Ave., Woodland, Calif., 95695
email: newsie2001@yahoo.com

RESPONSE TO COMMENT LETTER 12

Comment 12-1 Summary of Comment: The commenter acknowledges the WRTP Specific Plan's sustainability and energy-emissions reductions focus, but provides one recommendation of change for the Draft EIR to require that new construction mitigate the use of cement/concrete over the life of the project.

Response: Addressing the greenhouse gas emissions related to materials for new development and infrastructure, including but not limited to cement/concrete, is a valuable option for future development within the Specific Plan Area to apply to reduce greenhouse gas emissions and implement sustainable development consistent with WRTP Specific Plan Policies, including Policy 2.2.3.1 requiring new development be consistent with the objective and targets of the City's Climate Action Plan with the goal of striving to achieve zero net energy at the building and neighborhood level, and Policy 2.2.3.2 to encourage and incentivize building construction that consumes less energy, water, and other resources.

Section 3.5, "Climate Change, Greenhouse Gas Emissions, and Energy," of the Draft EIR (page 3.5-15) evaluates the WRTP Specific Plan's fair share contribution to the emissions reduction required by the State's emissions reduction targets. As explained in this analysis, consistent with CEQA Guidelines Section 15183.5(b), the WRTP Specific Plan was determined to be consistent with the City's 2035 Climate Action Plan, and the Climate Action Plan identifies reduction measures that would achieve reductions that would, based on substantial evidence, avoid a cumulatively considerable contribution to the significant cumulative impact of global climate change. Therefore, as provided by CEQA Guidelines section 15183.5(b), the WRTP Specific Plan would not result in an incremental contribution to a cumulative effect. Per Specific Plan Policy 2.2.3.1, development under the WRTP Specific Plan will be required to demonstrate consistency with the City's Climate Action Plan as it is updated in the future to ensure the City stays on target to achieve future State GHG emissions targets, thereby providing for the consideration of additional reductions required and achievable in future years. No additional mitigation is required.

2.2.13 COMMENT LETTER #13:

A. TAKIEU

Letter 13

From: T.K.T. AU <atakieu@gmail.com>
Sent: Thursday, July 01, 2021 8:38 PM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>
Subject: Draft EIR Woodland Research and Technology Park

Hello Erika Bumgardener,

Brief comments regarding the DEIR for WRTP:

Climate Change:
The term "heat island" appears only 8 times in the DEIR for the Specific Plan. Is this topic something that is not taken seriously at the stage of design? If so, maybe revisit the topic as average temperatures in the West are increasing. No definition is provided. Are heat island models available for the proposal?
Primary strategy repeatedly mentioned is to utilize large canopy trees. This may be limiting due to height restrictions around solar panels. 13-1

The consideration/mention,or lack thereof, smart growth strategies is worrisome. The expansive black parking lots in the renderings is appalling. Policy 3.H.3 requires further depth in explanation and should explicitly mention strategies such as parking garages, or pedestal buildings, or some form of vertical parking element to reduce surface area of low albedo materials. Shall the proposed development needs to reconsider the use of parking garages, sections on air pollution may need to be revisited. 13-2

Ambient Noise:
Increased traffic at 113 and 25 A ramps are concerning, especially with increased width/lanes. Will there be mitigation measures beyond the boundaries of the specific plan that will address areas affected by sound funnels, especially due to traffic/street racing (noise and safety)? 13-3

Alternatives:
Are maps/visual plans available for the Alternatives? 13-4

RESPONSE TO COMMENT LETTER 13

Comment 13-1 Summary of Comment: The commenter notes that the term "heat island" in the Draft EIR is found only eight times and is concerned that this topic is not adequately evaluated and considered in the project. The commenter asks if heat island models are available for use in the Draft EIR, and states that the policy of promoting tree canopy across the communities in the City is limiting due to height restrictions around solar panels.

Response: The comment does not pertain to the adequacy or completeness of the Draft EIR. Chapter 2 of the WRTP Specific Plan contains policies and design standards related to sustainability and measures to reduce energy demand and greenhouse gas emissions. In addition, Section 3.5.3.B contains design standards and design guidelines for sustainable design applicable to all zones within the WRTP; while specific strategies will be developed as appliable to and feasible for individual future projects, strategies identified include the use of street trees, shading devices, cool pavements, and cool roofs, to reduce heat gain and reduce the urban heat island effect, as well as employment of heat recovery ventilation within residential or non-residential buildings, which rather than venting warm exhaust air outside, captures the exhaust air and uses it to preheat incoming air. Section 3.3 of the Draft EIR evaluates potential impacts related to air quality, including the concern for heat island effects, to address the CEQA Guidelines checklist question of whether a project would expose sensitive receptors to substantial pollutant concentrations. In addition, Section 3.5 of the Draft EIR evaluated potential impacts of the WRTP Specific Plan related to climate change, greenhouse gas emissions, and energy, using thresholds for determining the significance of impacts based on Appendix G of the CEQA Guidelines, as amended.

Comment 13-2 Summary of Comment: The commenter states that there is a lack of smart growth strategies contained and implemented in the Draft EIR. The commenter identifies Policy 3.H.3. Parking Lot Design (page 3.13-11) and recommends that the policy include specific strategies to reduce surface area of low albedo materials. The commenter states that sections related to air pollution would have to be revisited if changes were made to reconsider the use of parking garages.

Response: Policy 3.H.3 is a policy of the City's 2035 General Plan and is provided in the referenced section to establish the regulatory framework within which the WRTP Specific Plan is analyzed in the EIR. City review of future project applications, including inclusion of appropriate design features and materials available at the time of future applications, would ensure consistency with the City's policies and those of the WRTP Specific Plan. It is too early in the planning process to identify specific parking areas and types associated with each proposed land use designation; however, the acreages associated with future parking areas were not omitted and are instead represented by emissions estimates for the overarching land uses proposed for the Project site: Research and Development, Light Industrial, Parks and Open Space, Mixed Use, Regional Commercial, and Residential. As explained in response to comments 3-20 and 3-21, the potential construction and operational emissions associated with buildout of the WRTP Specific Plan were updated to eliminate the discrepancy in buildout square footage noted by the commenter, and to include parking and landscaping areas. The emissions were estimated using the most current version of CalEEMod (Version 2023.1.1.14), applying the same methodology as detailed in the Draft EIR Section 3.3.4 and as detailed in Appendix B to the Draft EIR, but

with updated land use detailed to match those of the Final WRTP Specific Plan Land Use Table 2.1 and to account to parking and landscaping as appropriate. Based on the updated modeling, Based on the updated modeling, the total construction and total operational emissions are less than those presented in the Draft EIR. Although the land use square footage was increased by approximately 1.2 percent, anticipated construction and operational emissions reflect the most current emission factor and energy use data, as appropriate for the land uses to be developed under the WRTP Specific Plan, with development starting at the earliest in 2024. This updated modeling does not change the significance findings of, nor the need for mitigation as provided in, the Draft EIR. Furthermore, Mitigation Measure 3.3-3c ensures that future sensitive receptors are not exposed to substantial toxic air contaminants from operational sources due to proximity to operational sources of toxic air contaminants associated with specific future land uses, which could theoretically include high-volume parking garages; as such, the potential air quality impacts are comprehensively addressed in the Draft EIR and no changes are required.

Comment 13-3 Summary of Comment: The commenter expresses concern on the impact to ambient noise from the project, specifically pertaining to increased traffic at State Route 113 and County Road 25A. The commenter asks if additional mitigation measures will address areas beyond the boundaries of the WRTP Specific Plan to address areas affected by sound funnels, especially due to traffic/street racing.

Response: Mitigation measures identified within the WRTP Specific Plan EIR would be applicable to address any identified impacts, whether within the bounds of the WRTP Specific Plan Area or beyond such boundaries. Proposed improvements at State Route 113 and County Road 25A were specifically included as off-site improvements as part of the Draft EIR project description and analyzed comprehensively for each impact area throughout the Draft EIR. These improvements are identified to maintain adequate level of service traffic conditions as buildout of the Spring Lake Specific Plan Area occurs and should the WRTP Specific Plan be approved and buildout occur. These improvements do not present a safety hazard. Impact 3.11-2 of the Draft EIR evaluated traffic noise due to improvements at the State Route 113 and County Road 25A interchange and determined that these improvements would slightly increase traffic noise at the nearest sensitive receiver located to the southwest of the interchange. However, the traffic noise along State Route 113 would be the dominant noise source and would mask the slight noise increase due to the interchange movements, and this impact would be less than significant. Street racing, as brought up by the commenter, is an illegal activity that is addressed through the City of Woodland Police Department, and not considered a result of the proposed WRTP Specific Plan or offsite improvements. No additional mitigation is proposed.

Comment 13-4 Summary of Comment: The commenter asks if maps/visual plans of the Project Alternatives are available for public review.

Response: The range of alternatives identified and considered are described on pages 4-4 through 4-8 of the Draft EIR. No maps or addition visual plans specific to the Project Alternatives are included in the Draft EIR.

2.2.14 COMMENT LETTER #14:

RANDI THORNTON

Letter 14

From: Randi Thornton <randi.thornton8@gmail.com>
Sent: Wednesday, June 30, 2021 7:27 PM
To: researchpark <researchpark@cityofwoodland.org>
Subject: Why does the plan not include school site?

Hello,

As a resident of Springlake, I find it concerning that the plan for the research park does not include a school site.

We live less than half a mile from Springlake elementary school and as it is my children are not guaranteed a spot in that school. In fact I have heard from parents who live here who have children waitlisted wondering what they are going to do if they don't get in. I have no doubt it will become even more difficult to get in if there is no school site planned for the research park. Packing other schools to the gills is not the answer. 14-1

Please update the plan to include a school site.

Thank you,
Randi Thornton
Concerned resident of Springlake

RESPONSE TO COMMENT LETTER 14

Comment 14-1 Summary of Comment: The commenter expresses their concern over a school site not being included in the WRTP Specific Plan, as their own children are waitlisted to attend Spring Lake Elementary School. The commenter worries that the Plan Area could experience the same issue and create spill-over effects that would impact schools within the WJUSD.

Response: Please see the responses to comments 6-1 through 6-6.

2.2.15 COMMENT LETTER #15:

BRENDA TROTMAN

Letter 15

-----Original Message-----
From: BR Tr <mom4ana@aol.com>
Sent: Thursday, July 01, 2021 10:03 AM
To: researchpark <researchpark@cityofwoodland.org>; Marco Lizarraga <Marco.Lizarraga2@cityofwoodland.org>
Cc: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>; Ken Hiatt <Ken.Hiatt@cityofwoodland.org>; Tom Stallard <Tom.Stallard@cityofwoodland.org>; Mayra Vega <Mayra.Vega@cityofwoodland.org>; Rich Lansburgh <Rich.Lansburgh@cityofwoodland.org>; Steve Harris <Steve.Harris@cityofwoodland.org>; Chris Holt <Chris.Holt2@cityofwoodland.org>
Subject: Springlake School

We need a school in the plans for the business park! It doesn't makes sense to be bring families to Spring Lake and not put enough schools in the area?! 15-1

Brenda Trotman

Sent from my iPhone

RESPONSE TO COMMENT LETTER 15

Comment 15-1 Summary of Comment: The commenter expresses their concern over a school site not being included in the WRTP Specific Plan.

Response: Please see the responses to comments 6-1 through 6-6.

COMMUNICATIONS RECEIVED AFTER THE CLOSE OF THE COMMENT PERIOD

This section of the Final EIR contains summaries of communications received after the close of the public review period for the WRTP Specific Plan Draft EIR and the City's responses to these comments.

CORRESPONDENCE FROM BRUCE JACKS, RECEIVED 7/4/2021:

From: Erika Bumgardner
To: Gerken, Matthew; McFerran, Suzanne
Cc: Brent Meyer; "nick.ponticello@ponticellainc.com"
Subject: [EXTERNAL] FW: WRTP...correction to pg. 7 of my comments
Date: Monday, July 5, 2021 8:20:39 AM
Attachments: 16254435592402blob.jpg

Please see below...

From: Bruce Jacks <brucejacks@sbcglobal.net>
Sent: Sunday, July 04, 2021 5:13 PM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>
Subject: WRTP...correction to pg. 7 of my comments

Erika:

If corrections to DEIR comments are permitted, a check of my submitted comments on July 2, 2021 contain and error on page 7. The yellow highlighted cummulative total is corrected from 125+/- to 165+/- acres. See screen shot below.

Kind regards,

Bruce Jacks

where ag lands south of the city limits/west of the RR would continue to drain south and east to Willow Slough.

While diversion of the 155+/- ac SP-1C to the Farmers Central Trunk shed can be justified if the West Regional Pond (WRP) and FCT system is adequately sized, the cumulative 165+/- ac diversion of Sheds WRR2A and WRR2B provides an urban drainage connection for ag land outside the Urban Limit Line which is an growth inducing environmental impact. This is a fatal flaw in the SUGA SD MP that must be corrected.

iii. **SD MP Fig. 7 (Ultimate sheds) overlooks drainage sheds tributary to the remnant Willow Slough along the segment from the Willow Slough Bypass intercept to Rd. 102.**



At least one 84+/- ac shed area south of Willow Slough west of Rd. 102 tributary to Willow Slough is ignored. Additive drainage sheds may impact Willow Slough overflow upstream of Rd. 102a causing an increased environmental impact at the USC/Rd. 25a at Promenade Dr.

iv. **SD MP Figs. 4 and 7 fail to recognize the potential environmental impact of a Willow Slough spill over the north bank between the Willow Slough Bypass intercept and Rd. 102.** Willow Slough upstream of the Willow Slough Bypass is a 162 sq. mile watershed (Wood Rodgers Rev. 2018 SUGA SD MP). In Jan 1994, Borcalli & Associates calculated the 100 yr Bypass flow at 10,600 cfs and in its Yolo Co. Rd. 102 Bridge Relocation Analysis stated the overtopping event upstream face of the proposed bridge was 9,400 cfs.

The 100 yr. 10,600 cfs Bypass peak flow was calculated using lesser rainfall standards than the upgraded 2008 Yolo County standards. Calculated today, the 100 yr. Q in the Bypass channel would likely be higher.

An additional problem noted by Borcalli was that since construction in the late 1940s, the Willow Slough Bypass levees had sunk up to two feet due to land subsidence due to groundwater extraction and in 1994 provided less than a 20 yr level of flood protection. Twenty five year later in 2021, subsidence may be greater further reducing the Bypass capacity.

In summary, while the majority of the upstream Willow Slough shed (10,600 cfs in 1994) may be conveyed by the Bypass Channel, there is at least one low north top of bank location 100+/- ft. west of the diversion that is a prime location for a significant spill north. **A spill from Willow Slough upstream of the Bypass connection is a significant environmental impact that could affect the capacity of the USC upstream of Rd. 102. The USC is the drainage conveyance for the WRTP and combined drainage flows could cause flood risk to the SLSP at Promenade Dr and upstream in the USC.**

RESPONSE TO BRUCE JACKS CORRESPONDENCE OF 7/4/2021

Summary: The commenter made a correction to a previous comment made during the comment period. Within what is identified as Comment 8c-11 for this Final EIR, the commenter revised the referenced "cumulative 125+/- ac diversion of Sheds WWR2A and WWR2B" from what was listed in the comment as 125+/- ac to 165+/- acres.

Response: See Response to Comment 8c-11. The response is unchanged based on the revisions in this correspondence.

2.2.16 CORRESPONDENCE FROM BRUCE JACKS, RECEIVED 7/22/2021:

From: Bruce Jacks <brucejacks@sbcglobal.net>
Sent: Thursday, July 22, 2021 12:07 AM
To: Erika Bumgardner <Erika.Bumgardner@cityofwoodland.org>; Brent Meyer <Brent.Meyer@cityofwoodland.org>
Cc: Ken Hiatt <Ken.Hiatt@cityofwoodland.org>; Nick Ponticello <nick.ponticello@ponticelloinc.com>
Subject: Rev. 2018 SUGA SD MP...new information + possible expanded (+1,201 add) remnant Willow Slough spill shed

Erika and Brent:

Since spring 2017, I've read the SUGA SD MP many times, and each time, something new jumps out as incorrect or something randomly occurs to me to check out. The newest issue that I feel needs to be addressed to determine impacts to the SLSP and WRTP is a possible significant omission of tributary shed to the remnant Willow Slough shed that spills north at Willow Slough / Rd. 102.

I've attached a summary of my findings and supporting exhibits for yourreview.

Respectfully,

Bruce Jacks
Woodland

July 22, 2021

Erika Bumgardner, Brent Meyer
City of Woodland Community Development
300 First St.
Woodland, CA 95695

Re: Rev. 2018 SUGA SD MP and interaction with the WRTP

Erika and Brent:

Since spring 2017, I've read the SUGA SD MP many times, and each time, something new jumps out as incorrect, or something randomly occurs to me to check out. The newest issue that I feel needs to be addressed to determine impacts to the SLSP and WRTP is a possible significant omission of tributary shed to the remnant Willow Slough shed that spills north to the South Interceptor Channel south of Rd. 25a / west of Rd. 102.

The following is a summary of my latest identified issue which dates back at least 15 years to the 2006 CoW SDFMP:

1. **Significant shed delineation errors and omissions have been memorialized by the 2006 SDFMP and the subsequent Feb. 2017 and Rev. Mar. 2018 SUGA SD MP.**
    a. **An 84+/- acre (0.13 sq. mile) shed south of Willow Slough and west of Rd. 102 was omitted from the remnant Willow Slough spill shed boundary.** B. Jacks reported this possible error (to be verified) by public comment to the WRTP Draft EIR.
    b. **An estimated 1,117+/- acre (1.75 sq. mile) shed SW of the 2018 SUGA SD MP Baseline Conditions Watersheds Fig.4 was omitted from the Baseline remnant Willow Slough shed.** I have done an independent shed analysis using historical and current USGS maps, inspection of current aerial photographs, and field verification of a 68"x43" (54" equivalent) culvert structure at SR113 / 3260+/- ft south of Rd. 27 that conveys an estimated 780−/- acres from the west to the east side of SR113. That 780−/- ac sub shed combines with 337+/- acres north of Willow Slough / west of the RR for a total 1,117+/- acres that appears to drain under the RR at a 24+/-ft RR drainage structure 1500 ft north of Willow Slough. There may be another RR drainage structure 1800 ft north of Willow Slough also. Runoff from this 1,117+/- acres appears to ultimately be routed to the remnant Willow Slough and the undersized 6'w x 4'h box culvert at Rd. 102. I understand this report of possible error must be verified.
2. **The potential total omitted shed tributary to remnant Willow Slough is 1,201+/- ac** which is a significant impact to the Baseline and Ultimate Conditions Willow Slough spill north west of Rd. 102.

If verified that these added two sheds totaling 1,201 +/- acres are tributary to the Willow Slough spill north at Rd. 102, there will be a substantial amount of time and cost to rework the SUGA SD MP. In addition, the Willow Slough spill at Rd. 102 would likely increase significantly and cause 100 yr. overtopping at the Rd. 25a / Promenade intersection.

If the added 1,201 +/- acre shed is confirmed, this is a significant example of errors and omissions that should be corrected by the city drainage consultant at no cost to the city. Verification of drainage shed boundaries is Hydrology 101 and it requires much more than analysis of aerial topography as described in the SUGA SD MP. It took me very little effort by "boots on the ground" to locate the 68"x43" culvert crossing SR113, and study other available data. I further note that Caltrans is very good with its drainage analysis and historically does not make errors in its shed delineation.

I've attached some exhibits to illustrate my findings, and am confident the city will fully investigate to confirm the field condition and impact, if any, from a design storm Willow Slough spill west of Rd. 102. As I've told the city before, I have a solution worth evaluating to reduce and possibly eliminate the Willow Slough spill north. Another benefit would be the possible elimination of the required inundation easement on the Russell property west of Rd. 102.

Respectfully,

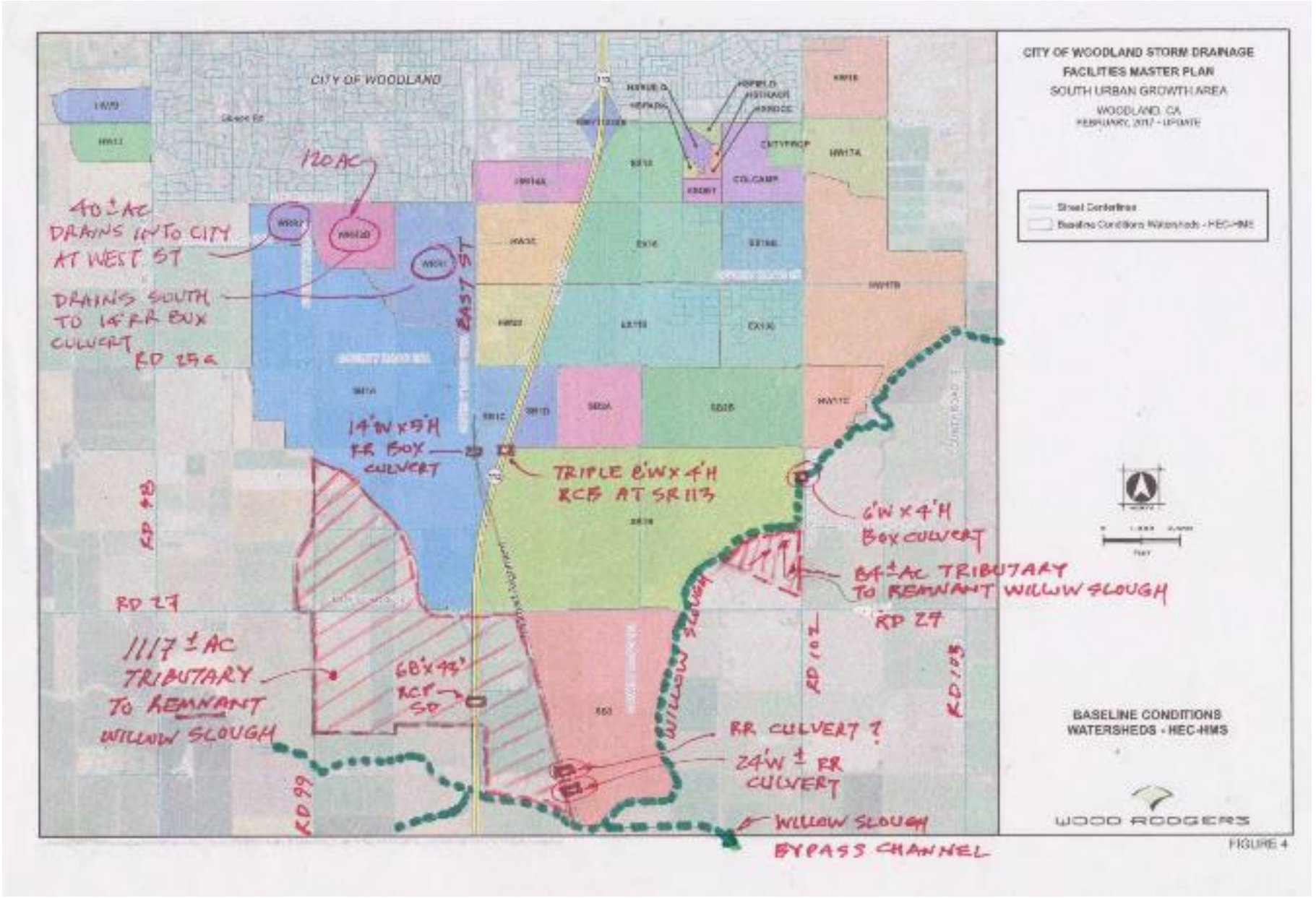
Bruce Jacks

Bruce Jacks
Woodland, CA

Attachments: Fig. 4 Rev. Mar. 2018 SUGA SD MP marked up to show two added shed areas totaling 1,201 +/- acres
USGS Map with 1,117+/- acre remnant Willow Slough tributary shed west of RR
Aerial photo with locations of 68"x43" culvert at SR113, 24"−/- RR culvert, and possible RR culvert
Picture of the 68"x43" SR113 culvert at the east frontage road
Aerial pics showing culvert locations at SR113 and RR for remnant Willow Slough tributary sheds

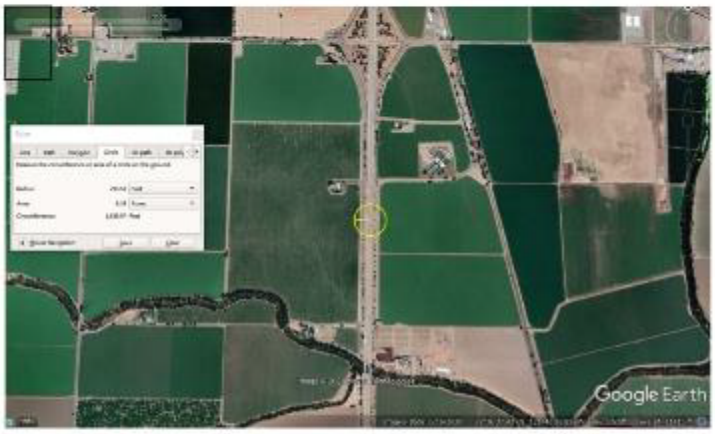
68" x 43" Culvert crossing SR113 3260+/- ft south of Rd. 27



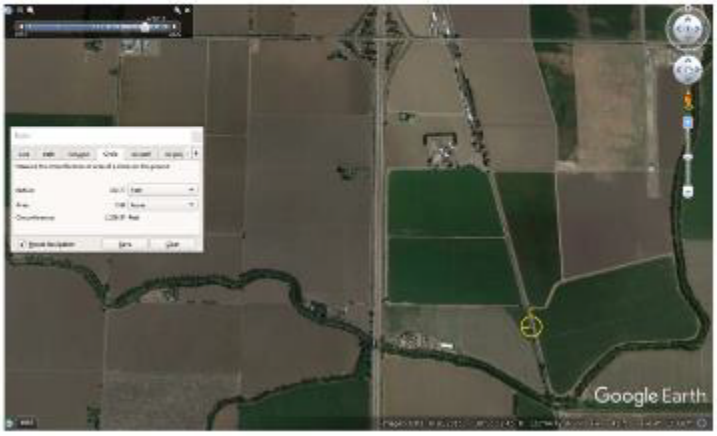

CITY OF WOODLAND
CITY OF WOODLAND STORM DRAINAGE FACILITIES MASTER PLAN
SOUTH URBAN GROWTH AREA
WOODLAND, CA
120 AC
40 ± AC DRAINS INTO CITY AT WEST ST
DRAINS SOUTH TO 14' FR BOX CULVERT
RD 25A
EAST ST
14'W x 5'H FR BOX CULVERT
TRIPLE 8'W x 4'H RCB AT SR 113
6'W x 4'H Box CULVERT
84 ± AC TRIBUTARY TO REMNANT WILLOW SLOUGH
RD 27
1117 ± AC TRIBUTARY TO REMNANT WILLOW SLOUGH
68'x42' RCP SD
RR CULVERT ?
24'W ± FR CULVERT
WILLOW SLOUGH BYPASS CHANNEL
RD 99
RD 102
RD 105
BASELINE CONDITIONS WATERSHEDS - HEC-HMS
WOOD RODGERS
FIGURE 4

Aerial photograph showing locations (yellow circles) of:

1. 68" x 43" SD crossing at SR113
2. Estimated 24 ft. wide RR culvert 1500+/- ft.north of Willow Slough
3. Location of possible culvert at RR 1800 +/- ft north of Willow Slough

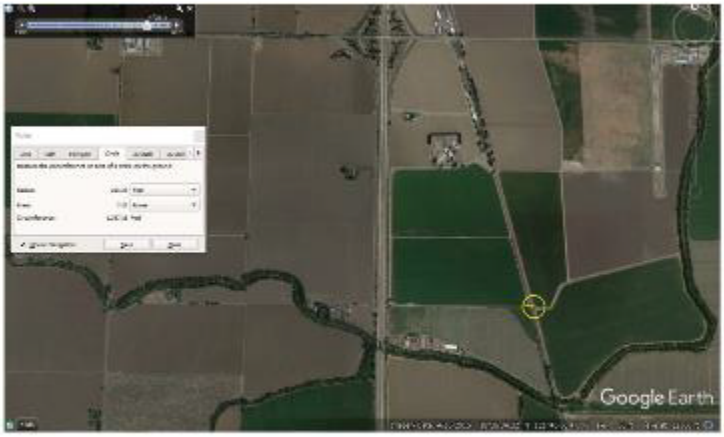


Location of 68" x 43" SD (54" SD equivalent crossing at SR113…3260+/- ft. south of Rd. 27. Note; there is an inlet over the SD pipe in the SR113 median.



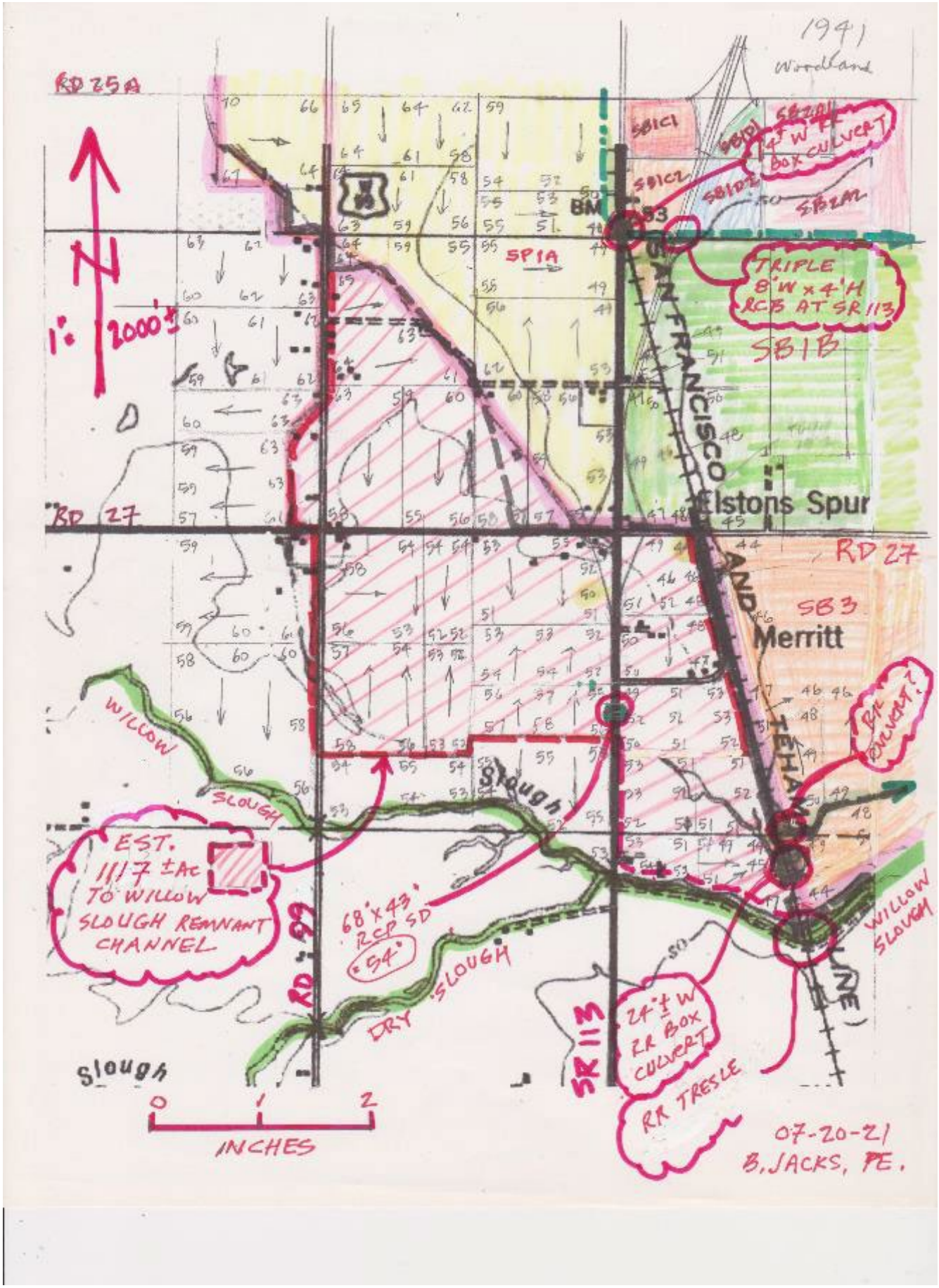
Location of 24 +/- ft. wide RR culvert 1500+/- ft NW of RR trestle at Willow Slough.

Drains estimated 1,117 acre upstream east and west of the RR and SR113 shed to remnant Willow Slough



Possible culvert crossing at RR, 1800+/- ft. north of Willow Slough

Prepared by B. Jacks for the City of Woodland 07-21-2021


1941
Woodland
RD 25A
SB1C1
SB1C2
SB1D1
SB1D2
14' W x 4' H BOX CULVERT
SB2M
SB3
SP1A
TRIPLE 8'W x 4'H RCB AT SR 113
SB1B
1" = 2000'
SAN FRANCISCO
Elstons Spur
RD 27
SB3
AND
Merritt
TEHAMA
WILLOW SLOUGH
EST. 1117 ± AC TO WILLOW SLOUGH REMNANT CHANNEL
68"x43" RCP SD
54"
RD 93
DRY SLOUGH
SR 113
24'± W RR BOX CULVERT
RR TRESLE
WILLOW SLOUGH
0 1 2
INCHES
07-20-21
B. JACKS, PE.

RESPONSE TO BRUCE JACKS CORRESPONDENCE OF 7/22/2021.

Summary of Comment: The commenter identified a new drainage area with a size of 1,117 acres that the commenter asserts should have been included in the Willow Slough remnant analysis.

Response: The City's consultant performed 2018 SUGA SD MP storm drain analysis using the latest (at the time of the study) LiDAR data (2008 Department of Water Resources) that produced a more accurate shed analysis than the historical and current USGS maps utilized by the commenter. Furthermore, the City's consultant conducted a field visit to examine the issues brought up by the commenter. A re-examination of the 2018 SUGA SD MP analysis along with the 2021 field visit of the area of concern (1,117+/- acres), verified that the estimated 1,117+/- acreage does not route to the Willow Slough Remnant channel. Surface runoff in the 1,117+/- acres in question generally flows in a southerly and easterly direction and does not flow northwards to influence the surface runoff in the Upper South Canal. All runoff from the 1,117+/- acres will flow under the railroad approximately 1,500 north of the main Willow Slough channel and will flow southwards along the eastern side of the railroad tracks and enter the main Willow Slough channel. Approximately 500 feet to the east of the railroad tracks, the Willow Slough flows entirely into the Willow Slough Bypass, flowing past the plug that separates the Willow Slough Remnant channel from the main Willow Slough channel. Surface flows during the rainy season from the 1,117+/- acres ends up in the Willow Slough Bypass and does not flow northwards toward the City of Woodland.

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3 ERRATA

This chapter identifies revisions to the Draft EIR. The changes are presented in the order in which they appear and identified by page number. Text deletions are shown in strikeout (~~strikeout~~) and additions are underlined (<u>underlined</u>). These edits provide clarifications or additional supportive information and do not change the analysis or conclusions of the Draft EIR.

3.1 EXECUTIVE SUMMARY

- Draft EIR page 0-7:

  The following changes to revise the total acreage of parkland included as a part of the Specific Plan:

  1. "The WRTP Specific Plan would provide for a variety of housing types and non-residential land uses, as well as parks and open space and supportive public facilities and infrastructure. As described in Section 2.3 of the WRTP Specific Plan, "Land Use Plan," and for the purpose of analysis in this EIR, at build out, the land use plan is estimated result in the development of approximately 1,600 new dwelling units, 2.2 million square feet of non-residential building space, the opportunity for up to 5,000 employees, and ~~21.8~~<u>17.6</u> acres of parks and other types of open space."

- Draft EIR page 0-11 to 0-12 and 0-23 to 0-24:

  The following changes to refine Mitigation Measures 3.3-2b and 3.11-1 are hereby made to Table ES-1 in the Executive Summary:

Table ES-1. Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
IMPACT 3.3-2. Result in a Cumulatively Considerable Net Increase of Criteria Air Pollutant and Precursor Emissions. Construction associated with future development of the WRTP Specific Plan Area and off-site improvement areas would generate emissions of criteria air pollutants that could violate an ambient air quality standard or contribute substantially to an existing or predicted air quality violation through incremental emissions of PM and ozone precursors (ROG and NOX). Future development in the WRTP Specific Plan Area would also result in long-term emissions generated from day-to-day operational activities associated with residential and non-residential land uses. Operational emissions are anticipated to exceed YSAQMD thresholds of significance for ozone precursors, ROG, and NOX. YSAQMD	S	Mitigation Measure 3.3-2a – Implement Construction Best Management Practices. New development shall incorporate the following construction best management practices, those included in an updated set of mitigation recommendations prepared by the YSAQMD, 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).	SU

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
recommends that all incremental emission sources be mitigated to the greatest extent possible in order to achieve and maintain ambient air quality standards. YSAQMD provides recommended construction mitigation measures for lead agencies to incorporate, to the extent feasible. WRTP Specific Plan consistency with 2035 General Plan and CAP policies would reduce potentially significant impacts, but not to a level that would be below relevant thresholds. Consistent with the findings of the 2035 General Plan and CAP EIR, the impact is considered significant.		f. Plant vegetative ground cover in disturbed areas as soon as possible. g. Cover inactive storage piles. h. Sweep streets if visible soil material is carried out from the construction site. i. Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel. j. Limit all idling of vehicles and equipment that use gasoline or diesel fuel to five minutes maximum. k. 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 3.3-2b: Construction-Related Mobile Emissions Reductions for NO_X and PM_{10} Emissions. Construction contractors shall adhere to the following requirements: a. Maintain all construction equipment properly according to manufacturer's specifications. b. Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road). c. ~~Comply~~ with ~~the State On-Road Regulation by using on-road~~ For all off-road heavy-duty equipment greater than 50 horsepower, utilize equipment that meet or exceed CARB's Tier 4 Final standards for ~~on~~ off-road heavy-duty diesel engines. d. Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier 4 Final engines, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. e. Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day. f. Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled. g. Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools,	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		such as saws, drills and compressors, and using electric tools whenever feasible. h. Limiting the amount of daily grading disturbance area. Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area. i. Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use. j. Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications. k. Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts. l. Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees. Mitigation Measure 3.3-2c: Require the Use of Ultra-Low VOC (10 g/L or less) Architectural Coatings for Construction-related Application Construction contractors shall be required to use architectural coatings that are ultra-low VOC (10 g/L or less) in all possible applications. These products are identified by manufacturers as "super-compliant." For construction-related applications, the product manufacturer, product name, product code, and intended use shall be identified on the construction design drawings for approval prior to the issuance of a building permit. Mitigation Measure 3.3-2d: Ban Wood-burning Stoves and Fireplaces in New Development Wood burning or pellet stoves and fireplaces shall not be permitted. Natural gas or propane fired fireplaces shall be clearly delineated on plans submitted to obtain building permits.	
3.11 Noise and Vibration **IMPACT 3.11-1. Generation of a Substantial Temporary (Construction-related)** Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies. Future development and implementation of the WRTP Specific Plan would result in exposure of existing	S	Mitigation Measure 3.11-1– Implement Construction Noise Reduction Strategies 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	SU

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
and anticipated noise sensitive land uses (if occupied during construction of the remaining properties within the WRTP Specific Plan Area) to noticeable increases from construction activities. Consistent with the findings of the 2035 General Plan and CAP EIR, this impact is considered significant**.**		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 two (2)~~5~~ minutes. c. Where construction work is within 445 feet of properties with existing, occupied noise-sensitive uses, construction shall be prohibited on weekends and holidays and construction should start no earlier than 8 a.m. d. Where construction work is within 445-feet of an existing off-site residence, installation of continuous noise curtains shall be required between the construction site and those residences. e. 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 44~~00~~ 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;	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
		• 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. f. 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.	

3.2 PROJECT DESCRIPTION

- Draft EIR page 2-7:

  The following changes to revise the total acreage of parkland included as a part of the Specific Plan:

  "The proposed WRTP Specific Plan Land Use Diagram, Exhibit 2-3, identifies land use designations as defined in Section 3.2, "Zoning Classifications," of the WRTP Specific Plan. Table 2-1 summarizes the proposed land uses. The WRTP Specific Plan would provide for a variety of housing types and non-residential land uses, as well as parks and open space and supportive public facilities and infrastructure. As described in Section 2.3 of the WRTP Specific Plan, "Land Use Plan," and for the purpose of analysis in this EIR, at build out, the land use plan is estimated result in the development of approximately 1,600 new dwelling units, 2.2 million square feet of non-residential building space, the opportunity for up to 5,000 employees, and 21.8 acres of parks and other types of open space."

- Draft EIR page 2-10:

  The following changes to revise the total acreage of parkland, as summarized in Table 2-1, included as a part of the Specific Plan:

Table 2-1. WRTP Specific Plan Land Use Program

Land Use Designation (Zone)	Land Uses	Assumed Residential Density (units / acre)	Land Area (gross acres)	Assumed Floor Area Ratio	Dwelling Units	Non-residential Square Footage[1]
Village Center Open Space (includes Pedestrian Promenade) (VCOS)4	Primarily recreation, with some commercial uses allowed.	n/a	11.6	0.5	n/a	32,000
Open Space (OS)	Parks, open spaces, and greenways primarily for the use of passive recreation and stormwater management.	n/a	6.0~~10.2~~	n/a	n/a	n/a

Land Use Designation (Zone)	Land Uses	Assumed Residential Density (units / acre)	Land Area (gross acres)	Assumed Floor Area Ratio	Dwelling Units	Non-residential Square Footage[1]
Subtotal Parks / Open Space	**n/a**	**n/a**	**17.6~~21.8~~**	**n/a**	**n/a**	**32,000**

- Draft EIR page 2-18:

  The following changes to revise the acreage reserved for a potential school site within the WRTP Specific Plan Area as part of the Specific Plan:

  "Up to a 12~~0~~-acre portion of the Medium Density Residential zone south of Parkland Avenue and east of Road B ~~at the southwest corner of Parkland Avenue and Harry Lorenzo Avenue~~ will be reserved for a potential school site."

3.3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.3.1 DRAFT EIR SECTION 3.3, AIR QUALITY

- Draft EIR page 3.3-28 in Section 3.3, Air Quality:

  Mitigation Measure 3.3-2b has been refined to clearly distinguish the requirement for the use of equipment greater than 50 horsepower to be powered with engines that meet Tier 4 Final emissions standards and to incorporate additional feasibly mitigation to further reduce construction-related emissions. Item 'c.' of Mitigation Measure 3.3-2b has been revised as such, and items 'd.' through ''l.' added to Mitigation Measure 3.3-2b:

  Mitigation Measure 3.3-2b: Construction-Related Mobile Emissions Reductions for NO_X and PM_{10} Emissions.

  Construction contractors shall adhere to the following requirements:

  [bullets 'a.' and 'b.' are not revised from the Draft EIR]

  …

  c. ~~Comply with the State On-Road Regulation by using on-road~~ For all off-road heavy-duty equipment greater than 50 horsepower, utilize equipment that meet or exceed CARB's Tier 4 Final standards for ~~on~~ off-road heavy-duty diesel engines.

  d. Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier 4 Final engines, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

e. Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.

f. Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled.

g. Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible.

h. Limiting the amount of daily grading disturbance area. Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.

i. Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use.

j. Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.

k. Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.

l. Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.

3.3.2 DRAFT EIR SECTION 3.4, BIOLOGICAL RESOURCES

- Draft EIR page 3.4-11 in Section 3.4, Biological Resources:

Table 3.4-4 of the Draft EIR has been updated to reflect the current listing status of the tricolored blackbird, which was changed under the California Endangered Species Act since the publication of the Notice of Preparation in 2017 and drafting of the Draft EIR.

Table 3.4-4. Special-Status Wildlife Species with Potential to Occur within the WRTP Specific Plan Area and Off-site Improvement Areas

Species	Listing Status – Fed.[1]	Listing Status – State[2]	Habitat	Potential for Occurrence in the WRTP Specific Plan Area and Off-site Improvement Areas
Tricolored Blackbird* Agelaius tricolor (nesting)	_	~~C~~T, SSC	Forages in agricultural lands and grasslands; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	**Unlikely to nest.** There is no suitable breeding habitat in the study area or within 1,300 feet of the study area but could forage in the study area. A large, active nesting colony is documented southeast of the study area on the north side of Willow Slough, approximately 2 miles from the Specific Plan Area. There are 23 CNDDB occurrence records of this species in Yolo County.

3.3.3 DRAFT EIR SECTION 3.9, HYDROLOGY, FLOODING, AND WATER QUALITY

- Draft EIR page 3.9-13 in Section 3.9, Hydrology, Flooding, and Water Quality:

  The Methodology section has been updated to cite to the 2018 *Storm Drainage Facilities Master Plan South Urban Growth Area*, as the most current version of the plan and intended citation. The analysis throughout the section was reviewed for accuracy in the context of this 2018 plan This revision does not change the findings, conclusions, or recommendations of the Draft EIR.

3.3.4 DRAFT EIR SECTION 3.11, NOISE AND VIBRATION

- Draft EIR page 3.11-22 to 3.11-23 in Section 3.11, Noise and Vibration,

  Mitigation Measure 3.11-1 has been updated as follows to include additional feasible actions to reduce potential construction-related noise associated with future construction activities associated with implementation of the WRTP Specific Plan. One edit has also been included to clarify that the intent of the mitigation measure already included in the Draft EIR requiring written noise to all known occupied noise-sensitive uses would occur for activities within 445 feet (not 400, as inadvertently stated in the Draft EIR as a typo) of the edge of the project site boundary.

  Mitigation Measure 3.11-1– Implement Construction Noise Reduction Strategies

  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 <u>two (2)</u>~~5~~ minutes.

  c. <u>Where construction work is within 445 feet of properties with existing, occupied noise-sensitive uses, construction shall be prohibited on weekends and holidays and construction should start no earlier than 8 a.m.</u>

  d. <u>Where non-residential construction work is within 445-feet of an existing off-site residence, installation of continuous noise curtains shall be required between the construction site and those residences.</u>

  e. 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 44<u>5</u>~~00~~ 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.

f. 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.

3.3.5 DRAFT EIR SECTION 3.12, PUBLIC SERVICES AND RECREATION

► Draft EIR page 3.12-4 in Section 3.12, Public Services and Recreation:

Table 3.12-2 has been revised to reflect updated data from the Woodland Joint Unified School District Annual Enrollment Projection Report supporting documentation regarding enrollment and capacity (DecisionInsight 2021), and the description of what is shown in Table 3.12-2 has been revised as follows to fix a typo and reflect the intended wording and what is actually contained in Table 3.12-2:

"Table 3.12-2 shows ~~2019-2020~~2022-2023 enrollment, ~~design~~ District capacity, and estimated remaining capacity for each school. As shown on Table 3.12-2, these schools are currently operating below design capacity."

Table 3.12-2. Woodland Joint Unified School District Enrollment, ~~2019-2020~~2022-2023

School Name	Grade	Enrollment	~~District~~ Capacity [b]	Estimated Remaining Capacity
Spring Lake Elementary School	TK-~~4~~[a]6	~~236~~346	~~472~~400	~~312 (472)~~[b]54
Tafoya Elementary School	TK-6	~~794~~784	~~1,120~~937	~~324~~153
Woodland Prairie Elementary School	TK-6	~~754~~755	~~960~~770	~~200~~15
Douglass Middle School	7-8	~~850~~808	~~1,312~~1,283	~~433~~475

School Name	Grade	Enrollment	~~District~~ Capacity [b]	Estimated Remaining Capacity
Pioneer High School	9-12	~~1,541~~1,635	~~2,304~~1,817	~~760~~182

Note: Student enrollment in the District changes daily as more students enroll and others leave; therefore, this information does not necessarily reflect exact current enrollment.

~~[a] When construction is fully complete, Spring Lake Elementary School will serve grades transitional kindergarten through sixth grade.~~

~~[b] Capacity shown for Spring Lake Elementary School includes current capacity with Phase 1 of construction complete, as well as increased capacity when construction is fully complete, anticipated for the year 2021.~~

~~Source: California Department of Education 2020, City of Woodland 2016~~Woodland Joint Unified School District 2023; DecisionInsite 2021

- Draft EIR page 3.12-16 in Section 3.12, Public Services and Recreation:

  The text has been updated as follows to reflect the updated enrollment and capacity data, as noted above, from DecisionInsight 2021:

  The WRTP Specific Plan Land Use Plan provides for a new elementary school in the area zoned for medium density residential, south of Parkland Avenue and east of Road B, should it be determined necessary by the WUJSD to support the anticipated student yield from development within the WRTP Specific Plan Area. Should residential development occur within the WRTP Specific Plan Area prior to the construction of this school, students within the WRTP Specific Plan Area would attend Spring Lake Elementary School, Tafoya Elementary School, Woodland Prairie Elementary School, Douglass Middle School, and Pioneer High School. As shown in Table 3.12-2, these schools are ~~substantially~~ below capacity. Furthermore, projections through 2030 indicate that, with 2,800 new residential units becoming occupied and generating growth in the number of students districtwide, Tafoya Elementary School, Douglass Middle School, and Pioneer High School all maintain capacity, indicating ~~and it is likely~~ that the nearby existing schools could accommodate all anticipated elementary school, middle school, and high school students at build out of the WRTP Specific Plan Area (DecisionInsight 2021).

- Draft EIR page 3.12-17 in Section 3.12, Public Services and Recreation:

  The total park acreage provided by the Specific Plan, as summarized in Table 3.12-6, has been revised:

Table 3.12-6. WRTP Specific Plan Parkland Acreage Calculations

Projected Residential Population	City of Woodland 2035 General Plan Standard (6 acres per 1,000 residents)	Total Proposed Parkland (acres)	Total Surplus (+) or Deficit (-) of Parkland Acreage Compared with Requirement
4,386	26.3	~~21.8~~17.6	-8.74~~.5~~

- Draft EIR page 3.12-18 in Section 3.12, Public Services and Recreation:

  The total park acreage provided by the Specific Plan has been revised:

  > "The WRTP Specific Plan would provide a total of ~~21.8~~17.6 acres of parks and open space for the use of new residents, visitors, and employees in the WRTP Specific Plan Area."

4 REFERENCES

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APPENDIX A

Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program
Woodland Research & Technology Park Specific Plan

State Clearinghouse #2017062042

August 2023



CITY OF WOODLAND CALIFORNIA



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MITIGATION MONITORING AND REPORTING PROGRAM

CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENT

Where a California Environmental Quality Act (CEQA) document has identified significant environmental effects, Public Resources Code Section 21081.6 requires adoption of a "reporting or monitoring program for the changes to the project which it has adopted or made a condition of a project approval to mitigate or avoid significant effects on the environment."

This Environmental Mitigation Monitoring and Reporting Program (MMRP) has been prepared to provide for the monitoring of mitigation measures required of the Woodland Research & Technology Park (WRTP) Specific Plan (proposed project), as set forth in the Final Environmental Impact Report (EIR).

The City of Woodland (City) is the Lead Agency that must adopt the MMRP for development and operation of the project. This report will be kept on file with the City of Woodland at the Woodland Community Development Department, 300 First Street, Woodland, CA 95695.

The CEQA Statutes and Guidelines provide direction for clarifying and managing the complex relationships between a lead agency and other agencies with implementing and monitoring mitigation measures. In accordance with CEQA Guidelines Section 15097(d), "each agency has the discretion to choose its own approach to monitoring or reporting; and each agency has its own special expertise." This discretion will be exercised by implementing agencies at the time they undertake any of portion of the project, as identified in the EIR.

PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

The intent of the MMRP is to ensure the effective implementation and enforcement of adopted mitigation measures. The MMRP is intended to be used by City staff and others responsible for project implementation.

This document identifies the individual mitigation measures, the party responsible for monitoring implementation of the measure, the timing of implementation, and space to confirm implementation of the mitigation measures.

ROLES AND RESPONSIBILITIES

The City of Woodland will oversee monitoring and documenting the implementation of mitigation measures. The City or its construction contractor is responsible for fully understanding and effectively implementing all of the mitigation measures contained within this MMRP. Certain mitigation measures also will require that the applicant coordinate or consult with one or more other public agencies in implementing mitigation measures specified herein.

CHANGES TO MITIGATION MEASURES

Any substantive change in the MMRP is required to be reported in writing. Modifications to the mitigation measures may be made by the City, subject to one of the following findings, and documented by evidence included in the public record:

a. The mitigation measure included in the Final EIR and the MMRP is no longer required because the significant environmental impact identified in the Final EIR has been found not to exist, or to occur at a level which makes

the impact less than significant as a result of changes in the project, changes in environment conditions, or other factors.

OR,

b. The modified or substitute mitigation measure provides a level of environmental protection equal to, or greater than that afforded by the mitigation measure included in the Final EIR and the MMRP; and,

c. The modified or substitute mitigation measure or measures do not have significant adverse effects on the environment in addition to, or greater than those which were considered by the responsible hearing parties in their decisions on the Final EIR and the proposed project; and,

d. The modified or substitute mitigation measures are feasible, and the City, through measures included in the MMRP or other City procedures, can ensure implementation.

SUPPORT DOCUMENTATION

Findings and related documentation supporting the findings involving modifications to mitigation measures shall be maintained in the project file with this MMRP and shall be made available to the public upon request.

This MMRP will be kept on file at:

City of Woodland
Woodland Community Development Department
300 First Street
Woodland, CA 95695
(530) 661-5820

MITIGATION MONITORING AND REPORTING PROGRAM FOR THE WOODLAND RESEARCH AND TECHNOLOGY PARK SPECIFIC PLAN

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
3.3 Air Quality **IMPACT 3.3-1.** Conflict with or Obstruct Implementation of the Applicable Air Quality Plan.	**Mitigation Measure 3.3-1a – Implement Mitigation Measures 3.3-2a through 3.3-2d**	**Implementation:** Project applicant(s) and construction contractor(s). **Timing:** Prior to construction activities and prior to issuance of a building permit (only for Mitigation Measure 3.3-2d).		
3.3 Air Quality **IMPACT 3.3-2.** Result in a Cumulatively Considerable Net Increase of Criteria Air Pollutant and Precursor Emissions.	**Mitigation Measure 3.3-2a – Implement Construction Best Management Practices.** New development shall incorporate the following construction best management practices, those included in an updated set of mitigation recommendations prepared by the YSAQMD [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 vegetative ground cover in disturbed areas as soon as possible. g. Cover inactive storage piles. h. Sweep streets if visible soil material is carried out from the construction site. i. Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel. j. Limit all idling of vehicles and equipment that use gasoline or diesel fuel to five minutes maximum.	**Implementation:** Project applicant(s) and construction contractor(s). **Timing**: During construction activities.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	k. 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.			
3.3 Air Quality IMPACT 3.3-2. (Continued) Result in a Cumulatively Considerable Net Increase of Criteria Air Pollutant and Precursor Emissions.	**Mitigation Measure 3.3-2b: Construction-Related Mobile Emissions Reductions for NO_x and PM_{10} Emissions.** Construction contractors shall adhere to the following requirements: a. Maintain all construction equipment properly according to manufacturer's specifications. b. Fuel all off-road and portable diesel-powered equipment with CARB [California Air Resources Board]-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road). c. For all off-road heavy-duty equipment greater than 50 horsepower, utilize equipment that meet or exceed CARB Tier 4 Final standards for off-road heavy-duty diesel engines. d. Requiring off-road construction equipment to be zero-emission, where available, and all diesel-fueled off-road construction equipment, to be equipped with CARB Tier 4 Final engines, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. e. Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day. f. Requiring on-road heavy-duty haul trucks to be model year 2010 or newer if diesel-fueled. g. Providing electrical hook ups to the power grid, rather than use of diesel-fueled generators, for electric construction tools, such as saws, drills and compressors, and using electric tools whenever feasible. h. Limiting the amount of daily grading disturbance area. Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area. i. Forbidding trucks from idling for more than two minutes and requiring operators to turn off engines when not in use. j. Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications. k. Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.	**Implementation:** Project applicant(s) and construction contractor(s). **Timing**: During construction activities.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	l. Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.			
3.3 Air Quality IMPACT 3.3-2. (Continued) Result in a Cumulatively Considerable Net Increase of Criteria Air Pollutant and Precursor Emissions.	**Mitigation Measure 3.3-2c: Require the Use of Ultra-Low VOC (10 g/L [grams per liter] or less) Architectural Coatings for Construction-related Application.** Construction contractors shall be required to use architectural coatings that are ultra-low VOC (10 g/L or less) in all possible applications. These products are identified by manufacturers as "super-compliant." For construction-related applications, the product manufacturer, product name, product code, and intended use shall be identified on the construction design drawings for approval prior to the issuance of a building permit.	**Implementation**: Project applicant(s) and construction contractor(s). **Timing**: During construction activities.		
3.3 Air Quality IMPACT 3.3-2. (Continued) Result in a Cumulatively Considerable Net Increase of Criteria Air Pollutant and Precursor Emissions.	**Mitigation Measure 3.3-2d: Ban Wood-burning Stoves and Fireplaces in New Development.** Wood burning or pellet stoves and fireplaces shall not be permitted. Natural gas or propane fired fireplaces shall be clearly delineated on plans submitted to obtain building permits.	**Implementation**: Leaseholder(s) and developer(s). **Timing**: Demonstrate compliance prior to issuance of building permit.		
3.3 Air Quality IMPACT 3.3-3. Expose Sensitive Receptors to Substantial Pollutant Concentrations.	**Mitigation Measure 3.3-3a: Implement Mitigation Measure 3.3-2b - Construction-Related Mobile Emissions Reductions for NO_X and PM_{10} emissions.**	**Implementation**: Project applicant(s) and contractor(s). **Timing**: During construction activities.		
3.3 Air Quality IMPACT 3.3-3. (Continued) Expose Sensitive Receptors to Substantial Pollutant Concentrations.	**Mitigation Measure 3.3-3b: Implement Guidelines in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective, and subsequent Technical Advisory.** New development that would result in substantial TAC [toxic air contaminant] emissions directly or indirectly (e.g., industrial sources) or that would expose sensitive receptors to substantial TAC concentrations (e.g., residential land uses located near existing TAC sources) shall implement CARB's [2005] Air Quality and Land Use Handbook: A Community Health Perspective (Handbook) guidance concerning land use compatibility	**Implementation**: Leaseholder(s) and developer(s). **Timing**: Demonstrate compliance prior to issuance of a grading permit.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	with regard to sources of TAC emissions, or CARB guidance as it may be updated in the future.			
3.3 Air Quality **IMPACT 3.3-3.** (Continued) Expose Sensitive Receptors to Substantial Pollutant Concentrations.	**Mitigation Measure 3.3-3c: Conduct Project-Level Analysis and Implement Mitigation for Sources of TACs.** For projects with the potential to generate substantial TAC emissions or expose sensitive receptors to substantial TAC pollutant concentrations, the City will require a site-specific analysis for construction and/or operational activities, and appropriate mitigation, as necessary, to ensure that sensitive receptors are not exposed to substantial pollutant concentrations. In communication with the YSAQMD, the City will require, if necessary, a site-specific analysis for operational activities to determine whether health risks attributable to future proposed projects in relation to proposed, planned, and/or existing sensitive receptors would exceed applicable thresholds of significance. Site-specific analysis may include screen level analysis, dispersion modeling, and/or a health risk assessment, consistent with applicable guidance from the YSAQMD. Analyses shall take into account regulatory requirements for proposed uses. The City will require the project applicant(s) to identify and implement feasible mitigation measures to reduce any potentially significant effect and communicate with the YSAQMD to identify measures to reduce exposure of sensitive receptors to substantial pollutant concentrations to levels consistent with thresholds recommended by the YSAQMD applicable at the time the project is proposed. If the YSAQMD does not have applicable thresholds at the time of this analysis, the thresholds will be a probability of contracting cancer for the Maximally Exposed Individual equal to 10.0 in a million or more attributable to the project, or a non-cancer risk of 1.0 Hazard Index (chronic or acute) or more attributable to the project. If the project would exceed applicable thresholds recommended by the YSAQMD or the substitute thresholds outlined above, mitigation will be required to reduce the impact to a less-than-significant level. Agreed upon feasible mitigation actions shall be documented as a project condition of approval. If the results of analysis for the operational activities of any future development project within the WRTP Specific Plan Area determine that the performance standard for this mitigation would be exceeded, actions shall be taken to reduce potential operational impacts which may include, but not necessarily be limited to: • locating air intakes and designing windows to reduce particulate matter exposure by, for example, not allowing windows facing the source to open; • providing electrification hook-ups for TRUs to avoid diesel-fueled TRUs continuing to operate at loading docks during loading and unloading operations; • requiring the TAC-generating activity (e.g., loading docks) be located away from sensitive receptors;	**Implementation**: *For Construction:* Project applicant(s) and contractor(s). *For* Operations*:* Leaseholder(s) and developer(s). **Timing**: *For Construction:* Prior to and during construction. *For Operations:* Demonstrate compliance with design features prior to issuance of a grading permit. Demonstrate compliance with operational ongoing operational actions prior to issuance of a building permit and maintain and provide records of compliance for operational-related measures throughout operations.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	• incorporating exhaust emission controls on mobile and/or stationary sources (e.g., filters, oxidizers); • develop and implement a dock management system at the time of occupancy to minimize on-site idling below regulatory limits; • require all on-site user owned and operated trucks with transportation refrigeration units to be capable of plugging into power at loading docks and require plug-in when at the loading dock; • utilize on-site cargo and material handling equipment that is the lowest emitting equipment available at the time of occupancy; • evaluate the potential to electrify a portion of entirety of an on-site user-owned and operated truck fleet; • evaluate the potential to consolidate delivery or haul truck trips to increase the load and decrease vehicle trips; • provide building air filtration units with a Minimum Efficiency Reporting Value (MERV) that is adequate to address adjacent sensitive land uses according to performance standards of this mitigation measure; • ensure adequate distance between existing and planned sensitive receptors and gasoline dispensing facilities, based on the proposed size and design of any gasoline-dispensing facilities; • utilize vegetated buffers between substantial TAC-generating source locations and sensitive receptors. If analysis demonstrates that construction activities associated with development of on-site WRTP Specific Plan land uses or off-site improvement components would exceed the performance standards identified in this mitigation measure, actions shall be taken to reduce potential construction-related impacts which may include, but not necessarily be limited to: • installing diesel particulate filters or implementing other CARB-verified diesel emission control strategies on all construction equipment to reduce diesel PM emissions; • using equipment during time when receptors are not present (e.g., when school is not in session or during non-school hours, or when office buildings are unoccupied); • establishing staging areas for the construction equipment that are as far as possible from sensitive receptors; • rerouting construction trucks away from congested streets or sensitive receptor areas; • communicating requirements through daily kick-off meetings and signage that off-road diesel equipment operators shut down their engines rather than idle for more than five minutes;			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	• documenting that all off-road equipment is compliant with the CARB in-use off-road diesel vehicle regulation; • establishing an electrical supply to the construction site and use electric-powered equipment instead of diesel-powered equipment or generators, where feasible; • using haul trucks with on-road engines instead of off-road engines; • equipping nearby buildings with High Efficiency Particle Arresting (HEPA) filters systems at all mechanical air intake points to the building to reduce the levels of diesel PM that enter buildings; • planning construction phasing so that future construction activities continue to move further away from occupied land uses; and • planning construction phasing to complete mass site grading, which typically generates the largest portion of diesel PM emissions, prior to occupancy of the project site.			
3.3 Air Quality **IMPACT 3.3-4.** Generation of Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People.	**Mitigation Measure 3.3-4: Reduce Exposure of Sensitive Receptors to Odorous Emissions.** The City of Woodland shall require, as part of plans for development within the WRTP Specific Plan Area, the implementation of strategies to avoid exposure of sensitive receptors to objectionable odors: a. Project applicant(s) for residential development in areas adjacent to ongoing agricultural operations shall include a disclosure clause advising buyers and tenants of the potential adverse odor impacts in the deeds to all residential properties. Residential subdivisions shall provide notification to buyers in writing of odors associated with existing dairies, agricultural burning, and decay of agricultural waste. b. For existing odor-producing sources, sensitive receptors shall be sited as far away as possible from the existing sources. c. For new project-generated odor-producing sources, sensitive receptors shall be sited as far away as possible from the new sources. d. Apply SMAQMD [Sacramento Metropolitan Air Quality Management District] Recommended Odor Screening Distances in the siting of land uses. e. As an alternative to these buffer distances, indoor air filtration systems could be implemented to reduce exposure to odors. For odor-producing sources, activities would be maintained within ad enclosed space and appropriate air filtration systems would be implemented to reduce odors expelled from the building. For developments that would host sensitive receptors, design would include air site layout, landscaping, and indoor air filtration systems to minimize exposure to odors.	**Implementation**: Project applicant(s). **Timing**: Demonstrate compliance prior to issuance of a building permit.		
3.4 Biological Resources	Mitigation for impacts to nesting common raptors is included under Mitigation Measure 3.4-2a (Avoid Direct Loss of Protected Bird Nests).	**Implementation**:		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
IMPACT 3.4-1. Impacts on Special-Status Species: Swainson's Hawk, White-tailed Kite, and Burrowing Owl.	**Mitigation Measure 3.4-1a: Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite** a. In accordance with AMM [Avoidance and Minimization Measure] 16 of the Yolo HCP/NCCP [Habitat Conservation Plan / Natural Community Conservation Plan], the City will require project proponent/s to retain a qualified biologist to conduct species-specific surveys and identify any nesting habitat present within 1,320 feet of the footprint of a proposed project, prior to any ground disturbing activities necessary to implement proposed development and infrastructure projects. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. b. If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the City will require project proponent/s to retain a qualified biologist to conduct preconstruction surveys for active nests consistent with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 1 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Yolo Habitat Conservancy and CDFW [California Department of Fish and Wildlife]. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project-related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the City, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk or white-tailed kite are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees (documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks. c. For covered activities that involve pruning or removal of a potential Swainson's hawk or white-tailed kite nest tree, the City will require project proponent/s to conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.	Project applicant(s) and contractor(s). **Timing**: Prior to and during construction activities.		

<table>
<tr><th>Impact</th><th>Mitigation Measure</th><th>Implementation Responsibility/Timing</th><th>Compliance Verification</th><th>Date Completed</th></tr>
<tr><td>3.4 Biological Resources
IMPACT 3.4-1. (Continued)
Impacts on Special-Status Species: Swainson’s Hawk, White-tailed Kite, and Burrowing Owl.</td><td>Mitigation Measure 3.4-1b: Comply with Yolo HCP/NCCP Requirements for Compensation for Loss of Swainson’s Hawk Foraging Habitat
Before any ground-disturbing activities, the City will require project proponent/s to identify and quantify (in acres) Swainson’s hawk habitat (as defined in the Yolo County HCP/NCCP Appendix A, Covered Species Accounts [Yolo HCP/NCCP 2018]) in and within 1,320 feet of a project footprint. The City will require project proponent/s to submit the Yolo HCP/NCCP Application Form for non-member agency projects and Member Agency Reporting Form for member agency projects, as applicable, and will pay applicable fees to the Yolo Habitat Conservancy as specified in the appropriate form.</td><td>Implementation:
Project applicant(s) and contractor(s).
Timing:
Prior to and during construction activities.</td><td></td><td></td></tr>
<tr><td>3.4 Biological Resources
IMPACT 3.4-1. (Continued)
Impacts on Special-Status Species: Swainson’s Hawk, White-tailed Kite, and Burrowing Owl.</td><td>Mitigation Measure 3.4-1c: Minimize Take and Adverse Effects on Western Burrowing Owl
Suitable habitat for the western burrowing owl is present within the WRTP Specific Plan Area and the Caltrans off-site improvement area. There is no suitable habitat for burrowing owl in the South Regional Pond off-site improvement area. In accordance with AMM18 of the Yolo HCP/NCCP, the City will require project proponent/s to retain a qualified biologist to conduct species-specific surveys within 30-days but no less than 14 days prior to any ground disturbing activities necessary to implement proposed development and infrastructure projects, consistent with Appendix L of the Yolo HCP/NCCP, which follows CDFW guidelines.
If burrowing owls are identified during the species-specific pre-project survey, the City will require project proponent/s to minimize activities that will affect occupied habitat, as follows. Occupied habitat is considered fully avoided if the project footprint does not impinge on a non-disturbance buffer around the suitable burrow. For occupied burrowing owl nest burrows, this non-disturbance buffer could range from 150 to 1,500 feet (Table 4-2 of the Yolo HCP/NCCP, Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls), depending on the time of year and the level of disturbance, based on current guidelines. A copy of this table is provided below in Section 3.4 of this EIR, as Table 3.4-8.
Table 3.4-8. Recommended Restricted Activity Dates and Setback Distances by Level of Disturbance for Burrowing Owls (Yolo HCP/NCCP 2018)
<table>
<tr><th>Time of Year</th><th>Low (Feet)</th><th>Medium (Feet)</th><th>High (Feet)</th></tr>
<tr><td>April 1 – April 15</td><td>600</td><td>1,500</td><td>1,500</td></tr>
<tr><td>August 16 – October 15</td><td>600</td><td>600</td><td>1,500</td></tr>
<tr><td>October 16 – March 31</td><td>150</td><td>300</td><td>1,500</td></tr>
</table>
Source: Yolo Habitat Conservancy 2018</td><td>Implementation:
Project applicant(s) and contractor(s).
Timing:
Prior to and during construction activities.</td><td></td><td></td></tr>
</table>

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	The Yolo HCP/NCCP generally defines low, medium, and high levels of disturbances of burrowing owls as follows. • Low: Typically 71-80 dB, generally characterized by the presence of passenger vehicles, small gas-powered engines (e.g., lawn mowers, small chain saws, portable generators), and high tension power lines. Includes electric hand tools (except circular saws, impact wrenches and similar). Management and enhancement activities would typically fall under this category. Human activity in the immediate vicinity of burrowing owls would also constitute a low level of disturbance, regardless of the noise levels. • Moderate: Typically 81-90 dB, and would include medium- and large-sized construction equipment, such as backhoes, front end loaders, large pumps and generators, road graders, dozers, dump trucks, drill rigs, and other moderate to large diesel engines. Also includes power saws, large chainsaws, pneumatic drills and impact wrenches, and large gasoline-powered tools. Construction activities would normally fall under this category. • High: Typically 91-100 dB, and is generally characterized by impacting devices, jackhammers, compression ("jake") brakes on large trucks, and trains. This category includes both vibratory and impact pile drivers (smaller steel or wood piles) such as used to install piles and guard rails, and large pneumatic tools such as chipping machines. It may also include large diesel and gasoline engines, especially if in concert with other impacting devices. Felling of large trees (defined as dominant or subdominant trees in mature forests), truck horns, yarding tower whistles, and muffled or underground explosives are also included. Very few covered activities are expected to fall under this category, but some construction activities may result in this level of disturbance. In accordance with AMM18 of the Yolo HCP/NCCP, the project proponent may qualify for a reduced buffer size, based on existing vegetation, human development, and land use, if agreed upon by CDFW and USFWS (Yolo Habitat Conservancy 2018). If the project does not fully avoid direct and indirect effects on nesting sites (i.e., if the project cannot adhere to the buffers described above), the City will require the project proponent/s to retain a qualified biologist to conduct preconstruction surveys and document the presence or absence of western burrowing owls that could be affected by the covered activity. Prior to any ground disturbance related to covered activities, the qualified biologist will conduct the preconstruction surveys within three days prior to ground disturbance in areas identified in the planning-level surveys carried out in preparation of this EIR as having suitable burrowing owl burrows, consistent with CDFW preconstruction survey guidelines (Appendix L of the Yolo HCP/NCCP, *Take Avoidance Surveys*) (Yolo Habitat Conservancy 2018). The qualified biologist will			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	conduct the preconstruction surveys three days prior to ground disturbance. Time lapses between ground disturbing activities will trigger subsequent surveys prior to ground disturbance. If the biologist finds the site to be occupied by western burrowing owls during the breeding season (February 1 to August 31), the City will require project proponent/s to avoid all nest sites, based on the buffer distances described above, during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups that forage on or near the site following fledging; occupancy of burrowing owl habitat during preconstruction surveys is confirmed at a site when at least one burrowing owl or sign (fresh whitewash, fresh pellets, feathers, or nest ornamentation) is observed at or near a burrow entrance). Construction may occur inside of the disturbance buffer during the breeding season if the nest is not disturbed and the project proponent develops an AMM plan that is approved by the Conservancy, CDFW, and USFWS prior to project construction, based on the following criteria: • The Conservancy, CDFW, and USFWS approves the AMM plan provided by the project proponent. • A qualified biologist monitors the owls for at least three days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction). • The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities. • If the qualified biologist identifies a change in owl nesting and foraging behavior as a result of construction activities, the qualified biologist will have the authority to stop all construction-related activities within the non-disturbance buffers described above. The qualified biologist will report this information to the Conservancy, CDFW, and USFWS within 24 hours, and the Conservancy will require that these activities immediately cease within the non-disturbance buffer. Construction cannot resume within the buffer until the adults and juveniles from the occupied burrows have moved out of the project site, and the Conservancy, CDFW, and USFWS agree. If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the project proponent may remove the nondisturbance buffer, only with concurrence from CDFW and USFWS. If the burrow cannot be avoided by construction activity, the biologist will excavate and collapse the burrow in accordance with CDFW's 2012 guidelines to prevent reoccupation after receiving approval from the wildlife agencies. If evidence of western burrowing owl is detected outside the breeding season (December 1 to January 31), the City will require the project proponent/s to establish a non-disturbance buffer around occupied burrows, consistent with Table 4-2 of the Yolo HCP/NCCP (Yolo Habitat Conservancy 2018), as determined by a qualified biologist. Construction activities within the disturbance buffer are allowed if the following criteria are met to prevent owls from abandoning			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	important overwintering sites: A qualified biologist monitors the owls for at least three days prior to construction to determine baseline foraging behavior (i.e., behavior without construction). The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. • If there is any change in owl roosting and foraging behavior as a result of construction activities, these activities will cease within the buffer. If the owls are gone for at least one week, the project proponent may request approval from the Conservancy, CDFW, and USFWS for a qualified biologist to excavate and collapse usable burrows to prevent owls from reoccupying the site if the burrow cannot be avoided by construction activities. The qualified biologist will install one-way doors for a 48-hour period prior to collapsing any potentially occupied burrows. After all usable burrows are excavated, the buffer will be removed and construction may continue. Monitoring must continue as described above for the nonbreeding season as long as the burrow remains active. A qualified biologist will monitor the site, consistent with the requirements described above, to ensure that buffers are enforced and owls are not disturbed. If burrowing owls are detected during the nonbreeding season, instead of establishing buffers and monitoring for behavior, the qualified biologist in consultation with the Conservancy may determine that passive relocation (i.e., exclusion) of owls is necessary, in which case the project proponent will develop a burrowing owl exclusion plan in consultation with CDFW biologists. Exclusion and burrow closure will not be conducted during the breeding season for any occupied burrow. The methods will be designed, as described in the species monitoring guidelines (California Department of Fish and Game 2012 [see California Department of Fish and Wildlife 2012]) and consistent with the most up-to-date checklist of passive relocation techniques maintained by the Yolo Habitat Conservancy. This may include the installation of one-way doors in burrow entrances by a qualified biologist during the nonbreeding season. These doors will be in place for 48 hours and monitored twice daily to ensure that the owls have left the burrow, after which time the biologist will collapse the burrow to prevent reoccupation. Burrows will be excavated using hand tools. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure, such as piping, into the burrow to prevent collapsing until the entire burrow can be excavated and it can be determined that no owls are trapped inside the burrow. The Yolo Habitat Conservancy may allow other methods of passive or active relocation, based on best available science, if approved by the wildlife agencies. Artificial burrows will be constructed prior to exclusion and will be created less than 300 feet from the existing burrows on lands that are protected as part of the reserve system.			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
3.4 Biological Resources **IMPACT 3.4-2.** Impacts on Special-Status Species: Special-status and Migratory Nesting Birds and Raptors.	**Mitigation Measure 3.4-2a: Avoid Direct Loss of Protected Bird Nests** While not required as mitigation for a significant impact under CEQA, the following would be required for compliance with the MBTA and California Fish and Game Code: • To the extent feasible, the City will require that construction activities be carried out during the nonbreeding season (between September 1 and January 31) for protected bird species in this region to avoid and minimize impacts to common migratory nesting birds. • For any ground disturbance activity necessary to implement proposed development and infrastructure projects that would occur during the nesting season (between February 1 and August 31), the City will require the project applicant to conduct a preconstruction survey. The preconstruction survey shall be conducted by a qualified biologist before any activity occurring within 500 feet of suitable nesting habitat for any protected bird species. The survey shall be timed to maximize the potential to detect nesting birds, and should be repeated within 10 days of the start of project-related activity. • If an active common bird species protected by the Migratory Bird Treaty Act or California Fish and Game Code nest is found, the qualified biologist shall establish a buffer around the nest. No project activity shall commence within the buffer area until a qualified biologist confirms that the nest is no longer active. The size of the buffer shall be determined in consultation with CDFW. Buffer size is anticipated to range from 50 to 500 feet, depending on the nature of the project activity, the extent of existing disturbance in the area, and other relevant circumstances as determined by a qualified biologist in consultation with CDFW. • Monitoring of all protected nests by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.	**Implementation**: Project applicant(s) and contractor(s). **Timing**: Prior to and during construction activities.		
3.4 Biological Resources **IMPACT 3.4-2.** (Continued) Impacts on Special-Status Species: Special-status and Migratory Nesting Birds and Raptors.	**Mitigation Measure 3.4-2b: Implement Mitigation Measure 3.4-1b**	**Implementation**: Project applicant(s) and contractor(s). **Timing**: Prior to and during construction activities.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
3.4 Biological Resources **IMPACT 3.4-3.** Impacts on Special-Status Species: Loss of Valley Elderberry Longhorn Beetle (VELB) Larvae and Habitat.	**Mitigation Measure 3.4-3: Minimize Take and Adverse Effects on Habitat of Valley Elderberry Longhorn Beetle** • In accordance with AMM 12 of the Yolo HCP/NCCP, the City will require project proponent/s to retain a qualified biologist who is familiar with valley elderberry longhorn beetle and evidence of its presence (i.e., exit holes in elderberry shrubs) to map all elderberry shrubs in and within 100 feet of a proposed project footprint with stems that are greater than one inch in diameter at ground level during the project design phase. To avoid take of valley elderberry longhorn beetle fully, the City will require project proponent/s to design projects to avoid mapped elderberry shrubs, if feasible. To avoid effects on shrubs, the City will require that project proponent/s maintain a buffer of at least 100 feet from any elderberry shrubs with stems greater than one inch in diameter at ground level. AMM1 of the Yolo HCP/NCCP, Establish Buffers, describes that a lesser buffer may be approved by the Conservancy, USFWS, and CDFW if they determine that the covered species is avoided to an extent that is consistent with the project purpose. • For elderberry shrubs that cannot be avoided with a designated buffer distance as described above, the qualified biologist will quantify the number of stems one inch or greater in diameter to be affected, and the presence or absence of exit holes. The Conservancy will use this information to determine the number of plants or cuttings to plant on a riparian restoration site to help offset the loss, consistent with Section 6.4.2.4.1 Valley Elderberry Longhorn Beetle, of the Yolo HCP/NCCP (Yolo Habitat Conservancy 2018). Additionally, prior to construction, the City will require that the project proponent/s transplant elderberry shrubs identified within the project footprint that cannot be avoided. • Transplantation will only occur if a shrub cannot be avoided and, if indirectly affected, the indirect effects would otherwise result in the death of stems or the entire shrub. If the project proponent/s choose/s, in coordination with a qualified biologist and the City, not to transplant the shrub because the activity would not likely result in death of stems of the shrub, then the qualified biologist will monitor the shrub annually for a five-year monitoring period. The monitoring period may be reduced with concurrence from the wildlife agencies if the latest research and best available information at the time indicates that a shorter monitoring period is warranted. If death of stems at least one inch in diameter occurs within the monitoring period, and the qualified biologist determines that the shrub is sufficiently healthy to transplant, the City will require the project proponent/s to transplant the shrub as described in the following paragraph, in coordination with the qualified biologist. If the shrub dies during the monitoring period, or the qualified biologist determines that the shrub is no longer healthy enough to survive transplanting, then the Conservancy will offset the shrub loss consistent with the preceding paragraph.	**Implementation:** Project applicant(s) and contractor(s). **Timing:** Surveys will take place prior to ground disturbing activities. If required, the project proponent will transplant elderberry plants when the plants are dormant, approximately November through the first two weeks of February, after they have lost their leaves.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	• The City will require project proponent/s to transplant the shrubs into a location in the HCP/NCCP reserve system that has been approved by the Conservancy. Elderberry shrubs outside the project footprint but within the 100-foot buffer will not be transplanted. Transplanting will follow the following measures: a. Monitor: A qualified biologist will be on-site for the duration of the transplanting of the elderberry shrubs to ensure the effects on elderberry shrubs are minimized. b. Timing: The project proponent will transplant elderberry plants when the plants are dormant, approximately November through the first two weeks of February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. c. Transplantation procedure: Cut the plant back three to six feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. Replant the trunk and stems measuring one inch or greater in diameter. Remove leaves that remain on the plants. d. Relocate plant to approved location in the reserve system, and replant as described in Section 6.4.2.4.1, *Valley Elderberry Longhorn Beetle* of the Yolo HCP/NCCP (Yolo Habitat Conservancy 2018).			
3.4 Biological Resources **IMPACT 3.4-4.** Impacts on Special-Status Species: Loss of Bat Roosts, and Special-status Bats.	**Mitigation Measure 3.4-4: Avoid Direct Loss of Bat Roosts and Special-status Bats** For any project activity necessary to implement proposed development and infrastructure projects that would require removal of roost habitat (i.e. trees or structures) and would occur during the maternity season (between May 1 and August 31), the City will require the project applicant to conduct a preconstruction survey for special-status bats. Camera inspection as well as an emergence (exit survey with night optics) and/or acoustic survey shall be conducted in the summer prior to construction/land disturbance, which provides the best opportunity to determine if roosting bats are present. If bats are found during the preconstruction survey(s), then removal of roost habitat will be delayed until the end of maternity season (August 31) or until the young are capable of flights, as determined by a qualified bat biologist and in consultation with CDFW. Any removal of highly suitable roost habitat should be conducted during the shoulder season, September 1 to October 31, to avoid harm to the species. If a highly suitable roost tree or structure is to be removed, trees and/or structures surrounding the roost habitat should be removed first, allowing any bats that may be present time to leave the area. A qualified monitor shall be present during removal of the habitat tree or structure.	**Implementation:** Project applicant(s) and contractor(s). **Timing:** Prior to construction/land disturbance.		
3.4 Biological Resources	**Mitigation Measure 3.4-5: Avoid Loss of and Degradation of Federally Protected Waters**	**Implementation:**		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
IMPACT 3.4-5. Impacts on Wetlands: Loss and Degradation of State or Federally Protected Wetlands.	• If the implementation of the WRTP Specific Plan would result in ground disturbance on the agricultural or roadside ditches, the City will require project proponent/s to conduct 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 implementation of the WRTP Specific Plan would result in fill of waters of the United States, the City will require that project proponent/s 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 implementation of the WRTP Specific Plan involves work in areas containing waters disclaimed by the USACE, the City will require that the applicant obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board pursuant to the Porter Cologne Act. • The City will require that the applicant 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.	Project applicant(s) and contractor(s). **Timing:** Before any ground disturbing activities for any planned project development in areas within the project footprint containing wetland features or other waters of the United States and on an ongoing basis, as required by the permits herein.		
3.6 Cultural and Tribal Cultural Resources **IMPACT 3.6-1.** Cause a Substantial Adverse Change in the Significance of Archaeological Resources as defined in CEQA Guidelines Section 15064.5.	**Mitigation Measure 3.6-1: Treatment of Unanticipated Archaeological Discoveries** Project applicants for future projects proposed under the WRTP Specific Plan would be required to implement the following procedures during any ground-disturbing activities: a. Prior to ground-disturbing activities necessary to implement proposed development and infrastructure projects, contractors shall receive cultural resource sensitivity training to identify potential archaeological resources and that all work should cease within 150 feet of prehistoric cultural resources that may be discovered during project implementation. b. During ground-disturbing activities necessary to implement proposed development and infrastructure projects, if any prehistoric or historic subsurface resources are discovered, all work within 150 feet of the resources shall be halted and a qualified archaeologist 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). • 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 [Code of Federal Regulations] 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	**Implementation:** Project applicant(s) and contractor(s). **Timing:** Prior to and during any construction ground disturbing activities.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	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. c. If any find is determined to be a unique archaeological resource according to CEQA Guidelines Section 15064.5, representatives from the City and the archaeologist shall 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. d. 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.			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
3.6 Cultural and Tribal Cultural Resources **IMPACT 3.6-2. Disturb Human Remains, including those Interred Outside of Formal Cemeteries.**	**Mitigation Measure 3.6-2: Treatment of Human Remains** 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.	**Implementation:** Project applicant(s) and contractor(s). **Timing:** In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery during construction.		
3.7 Geology, Soils, Minerals and Paleontological Resources	**Mitigation Measure 3.7-1: Conduct Construction Personnel Education, Stop Work if Paleontological Resources are Discovered, Assess the Significance of the Find, and Prepare and Implement a Recovery Plan, as Required.** To minimize the potential for destruction of, or damage to potentially unique, scientifically important paleontological resources during earth-moving activities, the measures described below shall be implemented by project applicants and contractors for future projects proposed under the WRTP Specific Plan within the Riverbank or	**Implementation:** Project applicant(s) and contractor(s). **Timing**: Before and during excavation and other		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
IMPACT 3.7-1. Possible Damage to or Destruction of **Unique Paleontological Resources.**	Modesto Formations (in the southern portion of the WRTP Specific Plan Area and the proposed South Regional Pond area) before and during construction activities. • Prior to the start of earthmoving activities that would disturb 1 acre of land or more within the Riverbank or Modesto Formations (in the southern portion of the WRTP Specific Plan Area and the proposed South Regional Pond area), 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. This worker training may either be prepared and presented by an experienced field archaeologist at the same time as construction worker education on cultural resources or prepared and presented separately by a qualified paleontologist. • 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. 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.	earth disturbing activities.		
3.8 Hazards and Hazardous Materials **IMPACT 3.8-1.** 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.	**Mitigation Measure 3.8-1: Prepare a Remedial Action Plan, and Conduct Phase I and/or II Environmental Site Assessments and Implement Required Measures if Stained or Odiferous Soil is Discovered.** To reduce health hazards associated with potential exposure to hazardous substances in the WRTP Specific Plan Area and the off-site South Regional Pond, implement the following measures before the start of ground-disturbing activities in areas of debris piles, pole-mounted transformers, where demolition will occur, and other areas where evidence of hazardous materials contamination is observed or suspected through either obvious or implied evidence (i.e., stained or odorous soil): • Prepare a remedial action plan that identifies any necessary remediation activities including excavation and removal of contaminated soils and redistribution of clean fill material at the diesel above-ground storage tank associated with the agricultural well on the East Central Parcel, and other areas within the WRTP Specific Plan Area, if necessary. All above-ground storage tanks shall be removed in accordance with State and local regulations. The remedial action plan shall include measures for the safe transport, use, and disposal of contaminated soil and building debris removed from the project site. During construction, project applicants for future projects proposed under the WRTP Specific Plan and the off-site South Regional Pond shall be required to comply with the remedial action plan and all applicable federal, State, and local laws.	**Implementation**: Project applicant(s) and contractor(s). **Timing**: Before the start of ground-disturbing activities in areas of debris piles, pole-mounted transformers, where demolition will occur, and other areas where evidence of hazardous materials contamination is observed or suspected through either obvious or		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	The remedial action plan shall outline measures for specific handling and reporting procedures for hazardous materials and disposal of hazardous materials removed from the project site at an appropriate off-site disposal facility. • In the event that contaminated groundwater is encountered during site excavation activities, the contractor shall report the contamination to the appropriate regulatory agencies, dewater the excavated area, and treat the contaminated groundwater to remove contaminants before discharge into the sanitary sewer system. • If stained or odiferous soil is discovered during project-related construction activities, project applicants for future projects proposed under the WRTP Specific Plan and the off-site South Regional Pond shall retain a registered environmental assessor to conduct a Phase I ESA, and if necessary, Phase II ESAs and/or other appropriate testing. Recommendations in the Phase I and II ESAs to address any contamination that is found shall be implemented before initiating ground-disturbing activities in these areas. • Notify the appropriate federal, State, and local agencies if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) or if known or previously undiscovered underground storage tanks are encountered during construction activities. Any contaminated areas shall be remediated in accordance with recommendations made by the EMD, Central Valley RWQCB, DTSC, and/or other appropriate federal, State, or local regulatory agencies. • Retain a licensed contractor to remove all septic systems in accordance with local, State, and federal regulations. • Retain a Cal-OSHA certified Asbestos Consultant before demolition of any buildings in the WRTP Specific Plan Area to investigate whether any asbestos-containing materials or lead-based paints are present, and could become friable or mobile during demolition activities. Provide a copy of the report to YSAQMD. If any materials containing asbestos or lead-based paints are found, they shall be removed by an accredited contractor in accordance with EPA and Cal-OSHA standards as required by YSAQMD. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal-OSHA asbestos and lead worker construction standards. The materials containing asbestos and lead shall be disposed of properly at an appropriate off-site disposal facility. • Properly close and abandon all on-site groundwater wells in accordance with Yolo County requirements	implied evidence (i.e., stained or odorous soil).		
3.8 Hazards and Hazardous Materials **IMPACT 3.8-2.** Emit Hazardous	**Mitigation Measure 3.8-2: Notify and Consult with Affected Schools, and Implement a Hazardous Materials Business Plan (if Required).** Project applicants for future retail, commercial, or industrial projects proposed under the WRTP Specific Plan and supportive infrastructure improvements that would involve the long-term use of hazardous materials for project operation shall notify the Woodland	**Implementation**: Project applicant(s) and contractor(s).		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School.	Christian School, the Pioneer High School, and the Woodland Joint Unified School District, as appropriate based upon project location relative to school locations, in writing, and shall consult with appropriate school or district personnel about the types of activities that would occur and their estimated timing. Examples of the types of hazardous materials that could be used during proposed operational activities shall be provided. The written notification shall be provided at least 30 days before the commencement of any construction activities. Future businesses within the WRTP Specific Plan Area that handle and/or store a hazardous material or a mixture containing a hazardous material in amounts greater than the specified threshold quantities in Chapter 6.95, Section 25505 of the California Health & Safety Code shall prepare a Hazardous Materials Business Plan. The plan shall provide emergency plans and procedures that the businesses will follow in the event of a release or threatened release of a hazardous material, along with the other requirements of Section 25505 including an inventory of hazardous materials, site plan showing material storage areas and ingress and egress points for emergency vehicles, and employee safety training.	**Timing**: Written notification shall be provided at least 30 days before the commencement of any construction activities. For operations requiring a Hazardous Materials Business Plan, the plan shall be approved prior to the issuance of a permit to operate.		
3.9 Hydrology, Flooding, and Water Quality **IMPACT 3.9-1.** Substantially Increase the Rate or Amount of Surface Runoff Resulting in Flooding, Create or Contribute Runoff Water which would Exceed the Capacity of Existing or Planned Stormwater Drainage Systems, Provide Substantial Additional Sources of Polluted Runoff.	**Mitigation Measure 3.9-1: Prepare Additional Storm Drainage Analysis for determining Amount of New Development Acreage Beyond the Previously Identified 80 Residential Acres Allowable in the South Urban Growth Area and Submit to the City for Review and Approval.** The WRTP shall be required to fund an additional stormwater drainage analysis that utilizes the revised baseline conditions modeling and includes detailed information defining the operational capacity of the newly-installed infrastructure. A model will then be created that incorporates the pump station, detention, and conveyance improvements that have already been constructed, and then incorporates the full buildout of the Spring Lake Specific Plan Development. At that point, the fully developed acreage of the WRTP Specific Plan will be added to determine the new developable acreage (in terms of stormwater drainage) that can be accommodated with current infrastructure. The additional drainage analysis will also be required to determine what additional storm drainage infrastructure is needed to support full buildout of the WRTP Specific Plan. Building permits for development beyond the identified currently developable acreage will only be approved with confirmation that the required storm drainage and water quality treatment infrastructure is in place.	**Implementation:** Fee requirements pertain to Project Applicant(s)/ Leaseholder(s) / Developer(s) Implementation of the analysis shall be the requirement of the City of Woodland and its contractor **Timing:** Prior to issuance of building permits for development beyond the identified currently developable acreage [80 residential acres, per Section 3.9 of the Draft EIR].		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
3.11 Noise and Vibration **IMPACT 3.11-1.** Generation of a Substantial Temporary (Construction-related) Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies.	**Mitigation Measure 3.11-1– Implement Construction Noise Reduction Strategies** 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 two (2) minutes. c. Where construction work is within 445 feet of properties with existing, occupied noise-sensitive uses, construction shall be prohibited on weekends and holidays and construction should start no earlier than 8 a.m. d. Where construction work is within 445-feet of an existing off-site residence, installation of continuous noise curtains shall be required between the construction site and those residences. e. 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 445 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.	**Implementation:** Project applicant(s) and contractor(s). **Timing:** Prior to and during any construction ground disturbing activities.		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
	f. 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.			
3.11 Noise and Vibration **IMPACT 3.11-2.** Generation of a Substantial Permanent (Long-term Operations) Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies.	**Mitigation Measure 3.11-2– Reduce Noise Exposure from Transportation and Non-Transportation Sources** Future development within the WRTP Specific Plan Area shall be required to meet allowable outdoor and indoor noise exposure standards. Noise mitigation measures that may be approved to achieve these noise level targets include but are not limited to the following: • Construct facades with 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 setbacks and/or sound 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	**Implementation**: Project applicant(s) and contractor(s). **Timing**: Demonstrate compliance with noise standards prior to issuance of a grading permit.		
3.11 Noise and Vibration **IMPACT 3.11-3.** Generation of Vibration.	**Mitigation Measure 3.11-3a – Implement Vibration Reduction Measures** g. 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. h. 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.	**Implementation**: Project applicant(s) and contractor(s). **Timing**: For construction that would require use of piles for foundations, prior to and during construction. For operations that would generate substantial long-term vibration, demonstrate compliance prior to		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
		the issuance of a permit to operate.		
3.11 Noise and Vibration **IMPACT 3.11-3.** (Continued) Generation of Vibration.	**Mitigation Measure 3.11-3b – Implement Mitigation Measure 3.11-1**	**Implementation:** Project applicant(s) and contractor(s). **Timing:** Prior to and during any construction ground disturbing activities.		
3.13 Transportation and Circulation **IMPACT 3.13-1.** Conflict with A Program, Plan, Ordinance, or Policy Addressing the Circulation System, including Transit, Roadway, Bicycle, and Pedestrian Facilities.	**Mitigation Measure 3.13-1a: The Draft WRTP Specific Plan Finance Plan shall incorporate a Transit Contribution.** While not required as mitigation for a significant impact under CEQA, the following would be required for planning purposes to ensure transit equipment, infrastructure, and service is adequately funded to provide necessary service to the WRTP Specific Plan Area: The project applicant shall contribute its fair-share of the cost associated with providing transit service to the WRTP Specific Plan Area. It is anticipated that new transit vehicles may be required to provide additional service to the WRTP Specific Plan Area. However, the final determination of additional capital equipment or other costs shall be determined by the City of Woodland in coordination with YCTD and as identified in the Master TDM/VMT Program. The fair-share cost or a plan for providing the fair-share cost over time shall demonstrate funding is adequate to provide the necessary transit service or range of services required to meet the demand in the WRTP Specific Plan Area, as determined through the WRTP Specific Plans required coordination with YCTD and UC Davis. The funding mechanism(s) for transit and other TDM measures shall be outlined in the WRTP Specific Plan Finance Plan, and development projects shall be required to commit to contributing fair-share costs prior to the issuance of respective building permits by the City of Woodland.	**Implementation**: Fee requirements pertain to Project Applicant(s)/ Leaseholder(s) / Developer(s) **Timing**: Demonstrate binding commitment to contributing fair-share costs prior to the issuance of a building permit by the City of Woodland.		
3.13 Transportation and Circulation **IMPACT 3.13-1.** (Continued) Conflict with A Program, Plan, Ordinance, or Policy Addressing the	**Mitigation Measure 3.13-1b: On-site Transit Stops.** While not required as mitigation for a significant impact under CEQA, the following would be required for planning purposes to ensure proposed transit infrastructure provides for adequate service to the WRTP Specific Plan Area: The WRTP Specific Plan calls for development of a shared mobility hub in the Village Center. The project applicant shall develop detailed plans, to be reviewed and approved by the City of Woodland and YCTD [Yolo County Transportation Department] and construct the shared mobility hub improvements in the Village Center and identify the	**Implementation**: Fee requirements pertain to Project Applicant(s)/ Leaseholder(s) / Developer(s) **Timing**:		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
Circulation System, including Transit, Roadway, Bicycle, and Pedestrian Facilities.	specific locations of sheltered transit stops with bus turnouts at other locations. It is anticipated that other stops would be located near the business park uses north and west of the Village Center. The City of Woodland and YCTD shall approve the location, design, and implementation timing of the sheltered transit stops and bus turnouts prior to the prior to approval of the first final map or as otherwise required by the City. If transit stops are located on-street for segments of roadways that do not have designated curbside on-street parking that can be designated for a bus stop (i.e., only travel lanes, bike lanes), the street cross-sections shall be modified to provide for a curbside bus stop, or multiple stops if needed for bus operations.	Demonstrate binding commitment to contributing fair-share costs prior to the issuance of a building permit by the City of Woodland.		
3.13 Transportation and Circulation **IMPACT 3.13-2.** Substantially Increase Hazards Due to a Design Feature or Incompatible Uses.	**Mitigation Measure 3.13-2: Implement a Construction Traffic Control Plan** Prior to any construction activities for the WRTP Specific Plan, the applicant shall prepare a detailed Construction Traffic Control Plan and submit it for review and approval by the City Department of Public Works. The applicant and the City shall consult with Caltrans, Yolobus, and local emergency service providers for their input prior to approving the Plan. The plan shall ensure that acceptable operating conditions on local roadways and freeway facilities are maintained during construction. A copy of the construction traffic control plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways. At a minimum, the plan shall include: • The number of truck trips, time, and day of street closures • Time of day of arrival and departure of trucks • Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting • Provision of a truck circulation pattern • Provision of a driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas) • Maintain safe and efficient access routes for emergency vehicles • Maintain safe and efficient access routes for farming equipment and vehicles • Manual traffic control when necessary • Proper advance warning and posted signage concerning street closures • Provisions for pedestrian safety	**Implementation**: Project applicant(s) **Timing**: Plan preparation and submittal to the City prior to any construction activities. A copy of the construction traffic control plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct roadways.		
3.14 Utilities **IMPACT 3.14-1.** Increased Demand for Water Supply	**Mitigation Measure 3.14-1: Prepare and Submit a Water Supply Conveyance Improvement Plan in Compliance with Applicable Standards and Construct Water Supply Conveyance Infrastructure Prior to Occupancy.**	**Implementation**: Project applicant(s) **Timing**:		

Impact	Mitigation Measure	Implementation Responsibility/Timing	Compliance Verification	Date Completed
Conveyance Facilities.	While not required as mitigation for a significant impact under CEQA, the following would be required for planning purposes to ensure the water supply infrastructure is designed and sized to provide adequate service to the WRTP Specific Plan: Before approval of the final subdivision map and issuance of building permits, project applicants for projects proposed under the WRTP Specific Plan shall prepare a detailed water conveyance infrastructure improvement plan that depicts the locations and appropriate sizes of all required conveyance infrastructure, in conjunction with other site-specific improvement plans. Proposed on-site water facilities shall be designed and sized to provide adequate service to the project site for the amount of development identified in the tentative subdivision map, based on City of Woodland Engineering Standards. A final water conveyance infrastructure improvement plan shall be approved by the City of Woodland Engineering Division before approval of the final subdivision map by the City of Woodland Planning Division and issuance of building permits from the City of Woodland Building Division. All required infrastructure shall be in place prior to occupancy of development anticipated under the proposed project.	Plan approval to occur Prior to approval of a final subdivision map and issuance of any building permits for a use proposing to connect to public water utilities. All required infrastructure shall be in place prior to occupancy of development for which the plan applies.		
3.14 Utilities **IMPACT 3.14-2.** Increased Demand for Wastewater Collection and Conveyance Facilities.	**Mitigation Measure 3.14-2: Prepare Additional Analysis to Verify the Spring Lake Specific Plan Pump Station Capacity Prior to Development Beyond 87 Percent of the WRTP Specific Plan Area.** While not required as mitigation for a significant impact under CEQA, the following would be required for planning purposes to ensure the existing wastewater conveyance infrastructure has the capacity to provide adequate service to the WRTP Specific Plan Area: Prior to any development beyond 87 percent of the WRTP Specific Plan, the WRTP shall fund additional analysis to verify that the Spring Lake Specific Plan Pump Station has adequate capacity to provide for sewer flows from full buildout of the WRTP Specific Plan. If additional capacity is required, it may be provided by upsizing the pumps as part of the City's regular maintenance work of replacing the pumps. If the increased capacity is not provided by the City's maintenance work, then the WRTP Specific Plan will be responsible for funding improvements at the pump station to provide the additional required capacity.	**Implementation**: Fee requirements pertain to Project Applicant(s)/ Leaseholder(s) / Developer(s) Analysis requirements pertain to the City of Woodland and its contractor(s), leaseholders **Timing**: Prior to issuance of building permits for development beyond 87 percent of the WRTP Specific Plan development square footage.		

Table Notes:

[1]Technical guidance for designing bioretention facilities is available from the Central Coast LID Initiative. The guidance includes design specifications and plant lists appropriate for the Central Coast climate. (https://www.centralcoastlidi.org/projects.php)

AMM = Avoidance and Minimization Measure

Cal-OSHA = California Occupational Safety and Health Administration

CARB = California Air Resources Board

CDFW = California Department of Fish and Wildlife

Central Valley RWQCB = Central Valley Regional Water Quality Control Board

CEQA = California Environmental Quality Act

CFR = Code of Federal Regulations

City = City of Woodland

Conservancy = Yolo Habitat Conservance

dB = decibel

DTSC = California Department of Toxic Substances Control

EIR =Environmental Impact Report

EMD = Environmental Management Department

ESA = Environmental Site Assessment

g/L -= grams per liter

HCP = Habitat Conservation Plan

HEPA = High Efficiency Particle Arresting

LID = low impact development

MERV = Minimum Efficiency Reporting Value

NCCP = Natural Community Conservation Planning

NO_X = nitrogen oxide

PM = particulate matter

PM_{10} = particulate matter with aerodynamic diameter less than 10 microns

PPV = peak particle velocity

SMAQMD = Sacramento Metropolitan Air Quality Management District

TAC = toxic air contaminant]

TDM = Transportation Demand Management

TRU = transport refrigeration unit

UC Davis = University of California, Davis

USFWS = U.S. Fish and Wildlife Service

VdB = vibration decibel(s)

VELB = Valley Elderberry Longhorn Beetle

VMT = vehicle miles traveled

VOC = Volatile Organic Compound

WRTP = Woodland Research & Technology Park

YCTD = Yolo County Transportation Department

YSAQMD = Yolo Solano Air Quality Management District

REFERENCES

California Air Resources Board. 2005 (April). *Air Quality and Land Use Handbook: A Community Health Perspective.*

California Department of Fish and Wildlife. 2012 (May). Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency. Sacramento, CA.

CARB. *See* California Air Resources Board.

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