DRAFT

ENVIRONMENTAL IMPACT REPORT (APPENDICES)

FOR THE

LATHROP GENERAL PLAN UPDATE

(SCH: 2021100139)

MAY 2022

Prepared for:

City of Lathrop
Community Development Department, Planning Division
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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ENVIRONMENTAL IMPACT REPORT
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Prepared for:

City of Lathrop
Community Development Department, Planning Division
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330
planning@ci.lathrop.ca.us
209-941-7290

Prepared by:

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El Dorado Hills, CA 95762

Appendix A

Notice of Preparation and NOP Comments

CITY OF LATHROP
GENERAL PLAN UPDATE

Notice of Preparation and Scoping Meeting
Lathrop General Plan Update Environmental Impact Report

Date:	October 8, 2021
To:	State Clearinghouse, Agencies, Organizations and Interested Parties
Subject:	Notice of Preparation and Scoping Meeting for the Lathrop General Plan Update Environmental Impact Report
Scoping Meeting:	**October 27, 2021, 4:00 p.m.**
Comment Period:	**October 8, 2021 to November 8, 2021.**

The City of Lathrop (City) will serve as Lead Agency in the preparation of a programmatic Environmental Impact Report (EIR) for the City of Lathrop General Plan Update (Plan).

The purpose of this notice is (1) to serve as a Notice of Preparation (NOP) of an EIR pursuant to the State CEQA Guidelines Section 15082, (2) to advise and solicit comments and suggestions regarding the scope and content of the EIR to be prepared for the proposed project, and (3) to notice the public scoping meeting. The proposed project is a long-term General Plan consisting of policies that will guide future development activities and City actions. No specific development projects are proposed as part of the Plan. Information regarding the project description, project location, and topics to be addressed in the Draft EIR is provided below. Additional project documents and information are available at the City of Lathrop, Community Development Department, Planning Division located at City of Lathrop 390 Towne Centre Drive. Lathrop, CA 95330, and on-line at: www.lathrop.generalplan.org

For questions regarding this notice, please contact Mark Meissner, Community Development Director at 209-941-7290, or by email planning@ci.lathrop.ca.us

Notice of Preparation 30-Day Comment Period

The City, as Lead Agency, requests that responsible and trustee agencies, and the Office of Planning and Research, respond in a manner consistent with Section 15082(b) of the CEQA Guidelines. Pursuant to Public Resources Code Section 21080.4, responsible agencies, trustee agencies and the Office of Planning and Research must submit any comments in response to this notice no later than 30 days after receipt. In accordance with the time limits established by CEQA, the NOP public review period will begin on October 8, 2021 and end on November 8, 2021.

In the event that the City does not receive a response from any Responsible or Trustee Agency by the end of the review period, the City may presume that the Responsible Agency or Trustee Agency has no response to make (State CEQA Guidelines Section 15082(b)(2)). All Comments in response to this notice must be submitted in writing at the address below, or via email, by the close of the 30-day NOP review period, which is 5:00 PM on November 8, 2021:

Mark Meissner
Community Development Director
Community Development Department, Planning Division
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330
planning@ci.lathrop.ca.us

**It is noted that additional opportunities for public comment on the Lathrop General Plan Update and pending Draft EIR will be provided. These documents are anticipated to be available for public review by December of 2021.*

Scoping Meeting

The City will hold a scoping meeting to provide an opportunity for agency representatives and the public to assist the City in determining the scope and content of the EIR.

The scoping meeting will be held on **Wednesday, October 27, at 4:00 p.m. at:**

City Hall Council Chambers
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

For comments before or after the meeting or additional information, please Mark Meissner, Community Development Director at 209-941-7290 or by email: planning@ci.lathrop.ca.us

Project Location and Setting

The City of Lathrop is located within California's Central Valley in the southern portion of San Joaquin County. Interstate 5 (I-5) connects Lathrop to Stockton and Sacramento to the north and Los Angeles to the south. I-205 connects Lathrop to Tracy and the Bay Area to the west. State Route (SR) 120 connects Lathrop to Manteca, SR 99, foothill communities, and Yosemite National Park to the east. SR 99 also connects to Modesto and Fresno to the south. The Altamont Corridor Express (ACE) rail service connects Lathrop to San Jose and the Bay Area and also connects Stockton to Lathrop

The Planning Area is the geographic area for which the Plan provides a framework for long-term plans for growth, resource conservation, and the provision of public services. State law requires the Plan to include all territory within Lathrop's incorporated area as well as "any land outside its boundaries which in the planning agency's judgment bears relation to its planning" (California Government Code Section 65300). The Plan Area is in San Joaquin County generally located south of the City of Stockton, between the City of Tracy and City of Manteca. For the purposes of the General Plan, the Planning Area is defined as the city limits, Sphere of Influence (SOI), and Area of Influence (AOI) that is included in the analysis and planning for the 20-year horizon of the General Plan.

The General Plan boundary (Planning Area) is shown in Figure 1 (Proposed General Plan Land Use Map).

Project Description

The City of Lathrop is preparing a comprehensive update to its existing General Plan, which was last comprehensively updated in 1991. The General Plan Update is expected to be complete in 2022.

The City's General Plan includes a broad goal policy framework that guides land use and planning decisions within the city. The overall purpose of the General Plan is to create a policy framework that articulates a vision for the City's long-term physical form and development, while preserving and enhancing the quality of life for residents and increasing opportunities for high-quality local job growth and housing options. The key components of the General Plan will include broad goals for the future of Lathrop, and specific policies and actions that will help implement the stated goals.

The updated General Plan will guide the City's development and conservation through land use objectives and policy guidance. The City will implement the Plan by requiring development, infrastructure improvements, and other projects to be consistent with its policies and by implementing the actions included in the Plan, including subsequent project-level environmental review, as required under CEQA.

State law requires the City to adopt a comprehensive, long-term general plan for the physical development of its planning area. The Plan must include land use, circulation, housing,

conservation, open space, noise, and safety elements, as specified in Government Code Section 65302, to the extent that the issues identified by State law exist in the City's planning area.

The Lathrop General Plan includes a comprehensive set of goals, policies, and actions (implementation measures), as well as a revised Land Use Map (Figure 1).

- A **goal** is a description of the general desired result that the City seeks to create through the implementation of the General Plan.
- A **policy** is a specific statement that guides decision-making as the City works to achieve its goals. Once adopted, policies represent statements of City regulations. The General Plan's policies set out the standards that will be used by City staff, the Planning Commission, and the City Council in their review of land development projects, resource protection activities, infrastructure improvements, and other City actions. Policies are on-going and don't necessarily require specific action on behalf of the City.
- An **action** is an implementation measure, procedure, technique, or specific program to be undertaken by the City to help achieve a specified goal or implement an adopted policy. The City must take additional steps to implement each action in the General Plan. An action is something that can and will be completed.

Additional elements that relate to the physical development of the city may also be addressed in the Plan. The degree of specificity and level of detail of the discussion of each Plan Element need only reflect local conditions and circumstances. The Lathrop General Plan includes all of the State-mandated topics and elements, as well as optional elements and issue areas, including, Public Facilities and Services, Economic Development, and Health and Environmental Justice.

The Plan has been prepared to address the requirements of State law and the relevant items addressed in Government Code Section 65300 et seq. The Lathrop General Plan is intended to reflect the desires and vision of residents, businesses, and City Council.

The following objectives are identified for the proposed update to the General Plan:

- Provide a range of high-quality housing options;
- Attract and retain businesses and industries that provide high-quality and high-paying jobs;
- Continue to maintain and improve multimodal transportation opportunities;
- Maintain strong fiscal sustainability and continue to provide efficient and adequate public services;
- Address new requirements of State law; and
- Address emerging transportation, housing, and employment trends.

Growth Projections

While no specific development projects are proposed as part of the Lathrop General Plan Update, the General Plan will accommodate future growth in Lathrop, including new businesses, expansion of existing businesses, and new residential uses. The buildout analysis assumes a 20-year horizon, and 2040 is assumed to be the buildout year of the General Plan.

Growth projections should not be considered a prediction for growth, as the actual amount of development that will occur throughout the planning horizon of the General Plan is based on many factors outside of the City's control. Actual future development would depend on future real estate and labor market conditions, property owner preferences and decisions, site-specific constraints, and other factors. New development and growth are largely dictated by existing development conditions, market conditions, and land turnover rates. Very few communities in California actually develop to the full potential allowed in their respective General Plans during the planning horizon.

As shown in Table 1, buildout of the General Plan could yield a total of up to 25,126 housing units, a population of 95,065 people, 43,958,435 square feet of non-residential building square footage, and 58,403 jobs within the Planning Area. This represents development growth over existing conditions of up to 17,379 dwelling units, and 30,630,722 square feet of non-residential building square footage.

TABLE 1: GROWTH PROJECTIONS - PROPOSED LAND USE MAP

	POPULATION	*DWELLING UNITS*	*NONRESIDENTIAL SQUARE FOOTAGE*	*JOBS*	*JOBS PER HOUSING UNIT*
EXISTING CONDITIONS					
	28,503	7,747	13,327,713	9,153	1.18
NEW GROWTH POTENTIAL					
Proposed General Plan	66,562	17,379	30,630,722	49,250	2.83
EXISTING PLUS NEW GROWTH POTENTIAL					
Proposed General Plan	95,065	25,126	43,958,435	58,403	2.32

SOURCES: SAN JOAQUIN COUNTY ASSESSOR 2021; CALIFORNIA DEPARTMENT OF FINANCE 2021; U.S CENSUS ONTHEMAP; ESRI 2020, DE NOVO PLANNING GROUP 2021.

Program EIR Analysis

The City, as the Lead Agency under the California Environmental Quality Act (CEQA), will prepare a Program EIR for the Lathrop General Plan Update. The EIR will be prepared in accordance with CEQA, the CEQA Guidelines (Guidelines), relevant case law, and City procedures. No Initial Study will be prepared pursuant to Section 15063(a) of the CEQA Guidelines.

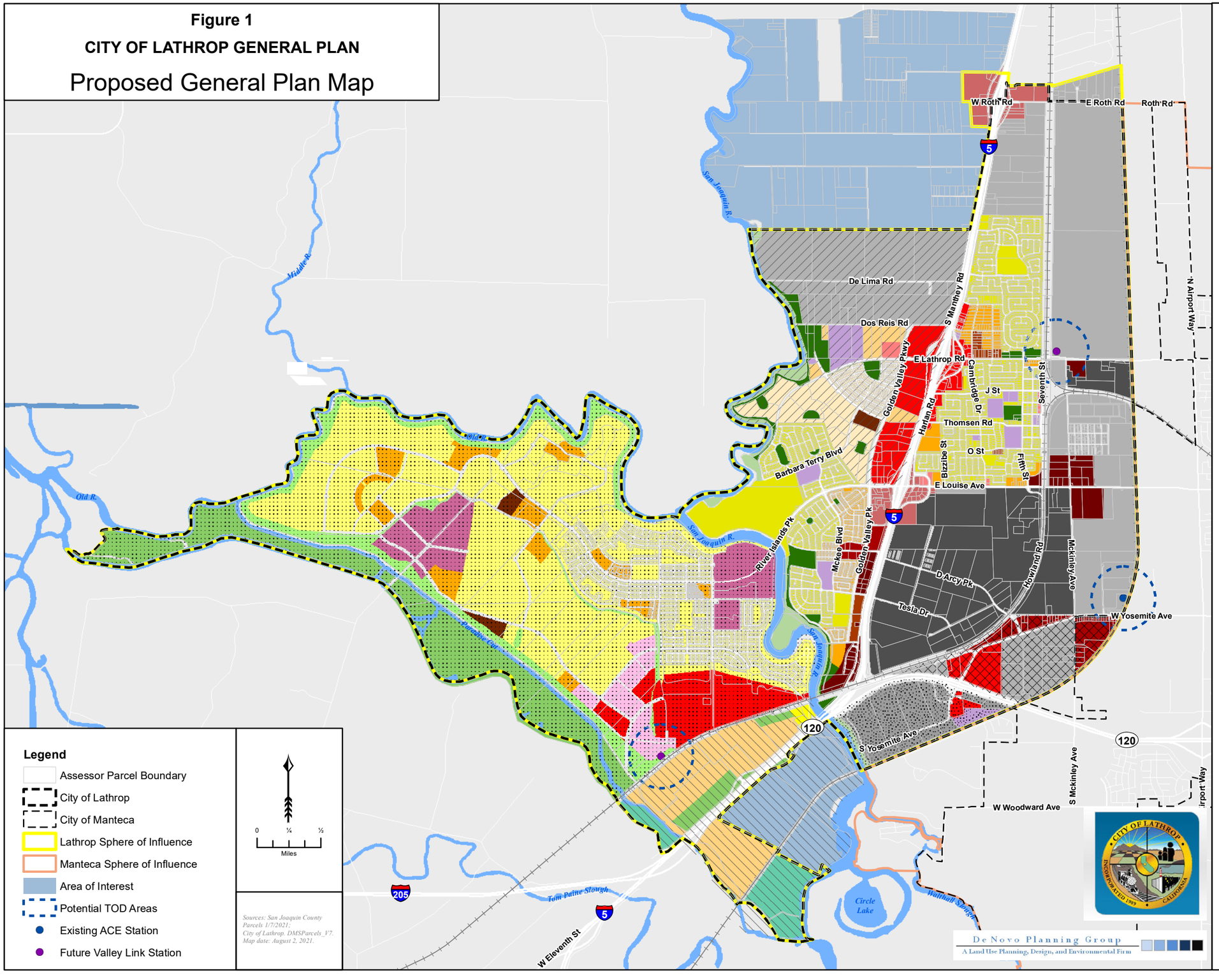
The EIR will analyze potentially significant impacts associated with adoption and implementation of the General Plan. In particular, the EIR will focus on areas that have development potential. The EIR will evaluate the full range of environmental issues contemplated under CEQA and the CEQA Guideline. At this time, the City anticipates that EIR sections will be organized in the following topical areas:

- Aesthetic Resources
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Geology, Soils, and Mineral Resources
- Greenhouse Gases, Climate Change, and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities/Service Systems
- Wildfire
- Mandatory Findings of Significance/Cumulative Impacts
- Alternatives

Figure 1

CITY OF LATHROP GENERAL PLAN

Proposed General Plan Map



Land Use Designations

City Proper
- LD: Low Density Residential (1-7 du/A)
- MD: Medium Density Residential (8-15 du/A)
- HD: High Density Residential (16-25 du/A)
- NC: Neighborhood Commercial
- VC: Village Center
- CC: Community Center
- SC: Service Commercial
- FC: Freeway Commercial
- LI: Limited Industrial
- GI: General Industrial
- P/QP: Public/Quasi-Public
- P: Park
- OS: Open Space

Central Lathrop
- VR-CL: Variable Density Residential (3-16 du/A)
- HR-CL: High Density Residential (15-49 du/A)
- R/MU-CL: Residential Mixed Use (10-40 du/A)
- OC-CL: Office Commercial
- NC-CL: Neighborhood Commercial
- P/QP-CL: Public/Quasi-Public
- P-CL: Park
- OS-CL: Open Space

Lathrop Gateway
- CO-LG: Commerical Office
- SC-LG: Service Commercial
- LI-LG: Limited Industrial

South Lathrop Specific Plan
- CO-SL: Commercial Office
- LI-SL: Limited Industrial
- P/QP-SL: Public/Quasi-Public
- OS-SL: Open Space River/Levee Park

River Islands
- RL-RI: Residential Low (3-9 du/A)
- RM-RI: Residential Medium (6-20 du/A)
- RH-RI: Residential High (15-40 du/A)
- RC-RI: Regional Commercial
- TOD-RI: Transit-Oriented Development
- MU-RI: Mixed Use
- RCO/OS-RI: Resource Conservation/Open Space
- OS/P-RI: Open Space/Public Uses

Stewart Tract
- R-ST: Residential
- RC-ST: Recreation Commercial
- RCO-ST: Resource Conservation
- UR-ST: Urban Reserve

Legend

- Assessor Parcel Boundary
- City of Lathrop
- City of Manteca
- Lathrop Sphere of Influence
- Manteca Sphere of Influence
- Area of Interest
- Potential TOD Areas
- Existing ACE Station
- Future Valley Link Station

0 ¼ ½ Miles

Sources: San Joaquin County Parcels 1/7/2021; City of Lathrop. DMSParcels_V7. Map date: August 2, 2021.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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COMMISSIONER
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EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

October 12, 2021

Mark Meissner
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Re: 2021100139, Lathrop General Plan Update Project, San Joaquin County

Dear Mr. Meissner:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

a. A brief description of the project.

b. The lead agency contact information.

c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.

b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

c. Significance of the project's impacts on tribal cultural resources.

d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.

b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Katy.Sanchez@nahc.ca.gov.

Sincerely,

Katy Sanchez

Katy Sanchez
Associate Environmental Planner

cc: State Clearinghouse

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

November 4, 2021

Mark Meissner
City of Lathrop
Community Development Department, Planning Division
390 Towne Centre Drive
Lathrop, CA 95330

Project: Notice of Preparation and Scoping Meeting for the Lathrop General Plan Update Environmental Impact Report.

District CEQA Reference No: 20211117

Dear Mr. Meissner:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above from the City of Lathrop (City) consisting of a comprehensive update to the existing General Plan (Project). The Project is for the City of Lathrop.

Project Scope

The Project consists of the update to the existing General Plan, to create a policy framework that articulates a vision for the City's long-term physical form and development, while preserving and enhancing the quality of life for residents and increasing opportunities for high-quality local job growth and housing options. The key components of the General Plan will include broad goals for the future of Lathrop, and specific policies and actions that will help implement the stated goals.

The City of Lathrop General Plan Update (Plan) is a program level Project and, while Project-specific data may not be available until specific approvals are being granted, the Environmental Impact Report (EIR) should include a discussion of policies, which when implemented, will reduce or mitigate impacts on air quality at the individual project level.

Future development may require further environmental review and mitigation. Referral documents for those projects should include a project summary detailing, at a minimum, the land use designation, project size, and proximity to sensitive receptors and existing emission sources.

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District significance thresholds for annual emissions of criteria pollutants are the following: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5).

Other potential significant air quality impacts related to Toxic Air Contaminants (see information below under Health Risk Assessment), Ambient Air Quality Standards, Hazards and Odors, may require assessments and mitigation. More information can be found in the District's Guidance for Assessing and Mitigating Air Quality Impacts at: https://www.valleyair.org/transportation/GAMAQI.pdf

The District offers the following comments:

1) Land Use Planning

Nearly all development projects within the San Joaquin Valley Air Basin, from General Plan to individual projects have the potential to generate air pollutants, making it more difficult to attain state and federal ambient air quality standards. Land use decisions are critical to improving air quality within the San Joaquin Valley Air Basin because land use patterns greatly influence transportation needs, and motor vehicle emissions are the largest source of air pollution in the Valley. Land use decisions and project design elements such as preventing urban sprawl, encouraging mix-use development, and project design elements that reduce vehicle miles traveled (VMT) have proven to be beneficial for air quality. The District recommends that the EIR incorporate strategies that reduce VMTs and require the cleanest available heavy-heavy duty (HHD) trucks and vehicles, including zero and near-zero technologies. VMTs can be reduced through encouragement of mix-use development, walkable communities, etc. Additional design element options can be found at: http://www.valleyair.org/transportation/Mitigation-Measures.pdf

In addition, the District recommends that the EIR incorporate strategies that will advance implementation of the best practices listed in Tables 5 and 6 of California Air Resource Board's (CARB's) Freight Handbook Concept Paper, to the extent feasible. This document compiles best practices designed to address air pollution impacts as "practices" which may apply to the siting, design, construction, and operation of freight facilities to minimize health impacts on nearby communities. The concept paper is available at:
https://ww2.arb.ca.gov/sites/default/files/2020-03/2019.12.12%20-%20Concept%20Paper%20for%20the%20Freight%20Handbook_1.pdf

2) Project Related Criteria Pollutant Emissions

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions. The additional environmental review of the Project's potential impact on air quality should consider the following items:

2a) Project Related Construction Emissions

The District recommends that the City consider the use of the cleanest reasonably available off-road construction equipment (including the latest tier equipment as feasible), construction practices (i.e. eliminating unnecessary idling), and fleets to reduce impacts from construction-related diesel exhaust emission.

2b) Project Related Operational Emissions

Emissions from stationary sources and mobile sources should be analyzed separately. For reference, the District's annual criteria thresholds of significance for operational emissions are listed above.

2c) Recommended Model

Project related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be performed using CalEEMod (**Cal**ifornia **E**mission **E**stimator **Mod**el), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

2d) Project Related Operational Emissions– Truck Routing

Truck routing involves the path/roads heavy-duty trucks take to and from their destination. The air emissions from heavy-duty trucks can impact residential communities and sensitive receptors.

The District recommends the City consider evaluating heavy-duty truck routing patterns to help limit emission exposure to residential communities and sensitive receptors. More specifically, this measure would assess current truck routes, in consideration of the number and type of each vehicle, destination/origin of each vehicular trip, time of day/week analysis, vehicle miles traveled and emissions. The truck routing evaluation would also identify alternative truck routes and their impacts on VMT, GHG emissions, and air quality.

2e) Project Related Operational Emissions– Cleanest Available Truck

The San Joaquin Valley will not be able to attain stringent health-based federal air quality standards without significant reductions in emissions from heavy-heavy duty (HHD) Trucks, the single largest source of NOx emissions in the San Joaquin Valley. The District recently adopted the 2018 PM2.5 Plan, which includes significant new reductions from HHD Trucks, including emissions reductions by 2023 through the implementation of the California Air Resources Board (CARB) Statewide Truck and Bus Regulation, which requires truck fleets operating in California to meet the 2010 0.2 g/bhp-hr NOx standard by 2023. Additionally, to meet the federal air quality standards by the 2020 to 2024 attainment deadlines, the District's Plan relies on a significant and immediate transition of heavy duty truck fleets to zero or near-zero emissions technologies, including the near-zero truck standard of 0.02 g/bhp-hr NOx established by the California Air Resources Board.

For future development projects which typically generate a high volume of heavy duty truck traffic (e.g. "high-cube" warehouse or distribution center), there are heavy duty trucks traveling to-and-from from the project location at longer trip length distances for potential distribution. Since the project may exceed the District significance thresholds, the District recommends that the following mitigation measures be considered by the City for inclusion in the EIR for project related operational emissions.

- Advise fleets associated with Project operational activities to utilize the cleanest available HHD truck technologies, including zero and near-zero (0.02 g/bhp-hr NOx) technologies as feasible.

- Advise all on-site service equipment (cargo handling, yard hostlers, forklifts, pallet jacks, etc.) to utilize zero-emissions technologies as feasible.

- Advise fleets associated with future development projects to be subject to the best practices (i.e. eliminating unnecessary idling).

In addition, the District recommends that the City include mitigation measures to reduce project related operational impacts through incorporation of design elements, for example, increased energy efficiency, reducing vehicle miles traveled, etc. More information on mitigation measures can be found on the District's website at: http://www.valleyair.org/transportation/ceqa_idx.htm.

2f) Project Related Operational Emissions– Reduce Idling of Heavy Duty Trucks

The goal of this strategy is to limit the potential for localized PM2.5 and toxic air quality impacts associated with failure to comply with the state's Heavy Duty anti-idling regulation (e.g limiting vehicle idling to specific time limits). The diesel exhaust from excessive idling has the potential to impose significant adverse health and environmental impacts. Therefore, efforts to ensure compliance of the anti-idling regulation, especially near sensitive receptors, is important to limit the amount of idling within the community, which will result in community air quality benefits.

2g) Project Related Operational Emissions– Electric On-Site Off-Road and On-Road Equipment

Since the Project may consist of future development projects that may have the potential to result in increased use of off-road equipment (i.e. forklifts) and/or on-road equipment (i.e. mobile yard trucks with the ability to move materials), the District recommends the County advise the future project proponents to utilize electric or zero emission off-road and on-road equipment used on-site for this Project

3) Voluntary Emission Reduction Agreement

Future development projects could have a significant impact on regional air, the District recommends the EIR also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this Project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate Project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to less than significant. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends draft EIRs include an assessment of the feasibility of implementing a VERA.

4) Health Risk Screening/Assessment

A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TACs) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TACs are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. List of TACs identified by OEHHA/CARB can be found at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants

The District recommends future development project(s) be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using CAPCOA's updated methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed.

   For your convenience, the District's prioritization calculator can be found at: http:www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.

ii) The District recommends a refined HRA for development projects that result in a prioritization score of 10 or greater. Prior to performing an HRA, it is recommended that development project applicants contact the District to review the proposed modeling protocol. A development project would be considered to have a significant health risk if the HRA demonstrates that the project related health impacts would exceed the Districts significance threshold of 20 in a million for

carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices, and would trigger all feasible mitigation measures. The District recommends that development projects which result in a significant health risk not be approved.

For HRA submittals, please provide the following information electronically to the District for review:

- HRA AERMOD model files
- HARP2 files
- Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

More information on toxic emission factors, prioritizations and HRAs can be obtained by:

- E-Mailing inquiries to: hramodeler@valleyair.org; or
- The District can be contacted at (559) 230-6000 for assistance; or
- Visiting the Districts website (Modeling Guidance) at: http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

5) Ambient Air Quality Analysis

An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. An AAQA will be required to be performed for any future development project with emissions that exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both Project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

6) Cumulative Air Impacts

In addition to the discussions on the topics identified above, the District recommends the EIR also include a discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. More information on the District's

attainment status can be found online by visiting the District's website at: http://valleyair.org/aqinfo/attainment.htm.

7) Nuisance Odors

While offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress among the public and often resulting in citizen complaints.

For future development, the City should consider all available pertinent information to determine if a project could have a significant impact related to nuisance odors. Nuisance odors may be assessed qualitatively taking into consideration of project design elements and proximity to off-site receptors that potentially would be exposed to objectionable odors. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact. According to the District Guidance for Assessing and Mitigating air Quality Impacts (GAMAQI), a significant odor problems are defined as more than one confirmed complaint per year averaged over a three-year period, or three unconfirmed complaints per year averaged over a three-year period. An unconfirmed complaint means that either the odor/air contaminant release could not be detected, or the source/facility cannot be determined.

The District is available to assist the City with information regarding specific facilities and categories of facilities, and associated odor complaint records.

8) Vegetative Barriers and Urban Greening

For future developments, the District suggests the County of Fresno consider the feasibility of incorporating vegetative barriers and urban greening as a measure to further reduce air pollution exposure on sensitive receptors (i.e. residential units).

While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, vegetative barriers have been shown to be an additional measure to potentially reduce a population's exposure to air pollution through the interception of airborne particles and the update of gaseous pollutants. Examples of vegetative barriers include, but not limited to the following: trees, bushes, shrubs, or a mix of these. Generally, a higher and thicker vegetative barrier with full coverage will result in greater reductions in downwind pollutant concentrations. In the same manner, urban greening is also a way to help improve air quality and public health in addition to enhancing the overall beautification of a community with drought resistant low maintenance greenery.

9) Solar Deployment in the Community

It is the policy of the State of California that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers by December 31, 2045. While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, the production of solar energy is contributing to improving air quality and public health. The District suggests for future development projects that the City consider the feasibility of incorporating solar power systems, as an emission reduction strategy.

10) Charge Up! Electric Vehicle Charger

To support further installation of electric vehicle charging equipment and development of such infrastructure, the District offers incentives to public agencies, businesses, and property owners of multi-unit dwellings to install electric charging infrastructure (Level 2 and 3 chargers). The purpose of this incentive program is to promote clean air alternative-fuel technologies and the use of low or zero-emission vehicles. The District suggests for future development projects that the City and project proponent consider the feasibility of installing electric vehicle chargers.

Please visit www.valleyair.org/grants/chargeup.htm for more information.

11) Under-fired Charbroilers

Future development projects that may potentially be occupied by restaurants. Should restaurants with under-fired charbroilers move in, the charbroilers may pose the potential for immediate health risk, particularly when located in densely developed locations near sensitive receptors. Since the cooking of meat can release carcinogenic PM2.5 species like polycyclic aromatic hydrocarbons, controlling emissions from new under-fired charbroilers will have a substantial positive impact on public health.

Charbroiling emissions often occur in populated areas, near schools and residential neighborhoods, resulting in high exposure levels for sensitive Valley residents. The air quality impacts on neighborhoods near restaurants with under-fired charbroilers can be significant on days when meteorological conditions are stable, when dispersion is limited and emissions are trapped near the surface within the surrounding neighborhoods. This potential for neighborhood-level concentration of emissions during evening or multi-day stagnation events raises environmental concerns.

Furthermore, reducing commercial charbroiling emissions is essential to achieving attainment of multiple federal PM2.5 standards and associated health benefits in the

Valley. Therefore, the District recommends that the EIR include a measure requiring the assessment and potential installation, as technologically feasible, of particulate matter emission control systems for new large restaurants operating under-fired charbroilers. The District is available to assist the City and project proponents with this assessment. Additionally, to ease the financial burden for Valley businesses, the District is currently offering substantial incentive funding that covers the full cost of purchasing, installing, and maintaining the system for up to two years. Please contact the District at (559) 230-5800 or technology@valleyair.org for more information.

12) District Rules and Regulations

The District issues permits for many types of air pollution sources and regulates some activities not requiring permits. A project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements. In general, a regulation is a collection of rules, each of which deals with a specific topic. Here are a couple of example, Regulation II (Permits) deals with permitting emission sources and includes rules such as District permit requirements (Rule 2010), New and Modified Stationary Source Review (Rule 2201), and implementation of Emission Reduction Credit Banking (Rule 2301).

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (209) 557-6446.

12a) District Rules 2010 and 2201 - Air Quality Permitting for Stationary Sources

Stationary Source emissions include any building, structure, facility, or installation which emits or may emit any affected pollutant directly or as a fugitive emission. District Rule 2010 requires operators of emission sources to obtain an Authority to Construct (ATC) and Permit to Operate (PTO) from the District. District Rule 2201 requires that new and modified stationary sources of emissions mitigate their emissions using best available control technology (BACT).

Future development projects may be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and may require District permits. Prior to construction, the Project proponent should submit to the District an application for an Authority to Construct (ATC). For further information or assistance, the project proponent may contact the District's Small Business Assistance (SBA) Office at (209) 557-6446.

12b) District Rule 9510 (Indirect Source Review)

The purpose of District Rule 9510 is to reduce the growth in both NOx and PM10 emissions associated with development and transportation projects from mobile and area sources associated with construction and operation of development projects. The rule encourages clean air design elements to be incorporated into development projects. In case the proposed development project clean air design elements are insufficient to meet the targeted emission reductions, the rule requires developers to pay a fee used to fund projects to achieve off-site emissions reductions.

Accordingly, future development project(s) within the Project would be subject to District Rule 9510 if:

(1) Upon full build-out, the project would receive a project-level discretionary approval from a public agency and would equal or exceed any one of the following applicability thresholds:

- 50 dwelling units
- 2,000 square feet of commercial space;
- 25,000 square feet of light industrial space;
- 100,000 square feet of heavy industrial space;
- 20,000 square feet of medical office space;
- 39,000 square feet of general office space; or
- 9,000 square feet of educational space; or
- 10,000 square feet of government space; or
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above

(2) Or would equal or exceed any of the applicability thresholds in section 2.2 of the rule.

District Rule 9510 also applies to any transportation or transit development projects where construction exhaust emissions equal or exceed two (2.0) tons of NOx or two (2.0) tons of PM10.

In the case the future development project(s) are subject to District Rule 9510, an Air Impact Assessment (AIA) application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.

Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

The AIA application form can be found online at: http://www.valleyair.org/ISR/ISRFormsAndApplications.htm.

District staff is available to provide assistance with determining if future development projects will be subject to Rule 9510, and can be reached by phone at (559) 230-6000 or by email at ISR@valleyair.org.

12c) District Rule 9410 (Employer Based Trip Reduction)

Future development projects may be subject to District Rule 9410 (Employer Based Trip Reduction) if the Project would result in employment of 100 or more "eligible" employees. District Rule 9410 requires employers with 100 or more "eligible" employees at a worksite to establish an Employer Trip Reduction Implementation Plan (eTRIP) that encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. Under an eTRIP plan, employers have the flexibility to select the options that work best for their worksites and their employees.

Information about how District Rule 9410 can be found online at: www.valleyair.org/tripreduction.htm.

For additional information, you can contact the District by phone at 559-230-6000 or by e-mail at etrip@valleyair.org

12d) Other District Rules and Regulations

Future development projects may also be subject to the following District rules: Regulation VIII, (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Rule 4102 (Nuisance), Rule 4550 (Conservation Management Practices), Rule 4570 (Confined Animal Facilities). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

If you have any questions or require further information, please contact Harout Sagherian by e-mail at Harout.Sagherian@valleyair.org or by phone at (559) 230-5860.

Sincerely,

Brian Clements
Director of Permit Services

For Mark Montelongo
Program Manager

8 November 2021

Mark Meissner
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COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, LATHROP GENERAL PLAN UPDATE PROJECT, SCH#2021100139, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 8 October 2021 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Lathrop General Plan Update Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of

Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/

Waste Discharge Requirements – Discharges to Waters of the State

If USACE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources Control Board website at: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4856 or Nicholas.White@waterboards.ca.gov.

Nicholas White
Water Resource Control Engineer

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

NOVEMBER 1, 2021

VIA EMAIL: PLANNING@CI.LATHROP.CA.US
Mark Meissner
Community Development Director
Community Development Department, Planning Division
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Dear Mr. Meissner:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR THE LATHROP GENERAL PLAN UPDATE, SCH#2021100139

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation of an Environmental Impact Report for the Lathrop General Plan Update (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The City of Lathrop is preparing a comprehensive update to its existing General Plan, which was last comprehensively updated in 1991. The General Plan Update is expected to be complete in 2022.

The City's General Plan includes a broad goal policy framework that guides land use and planning decisions within the city. The overall purpose of the General Plan is to create a policy framework that articulates a vision for the City's long-term physical form and development, while preserving and enhancing the quality of life for residents and increasing opportunities for high-quality local job growth and housing options. The key components of the General Plan will include broad goals for the future of Lathrop, and specific policies and actions that will help implement the stated goals.

Department Comments

Although conversion of agricultural land is often an unavoidable impact under CEQA analysis, feasible alternatives and/or feasible mitigation measures must be considered.

In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required.

However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts. As stated in CEQA statue, mitigation may also include, "Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."[1]

The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. As such, the Department advises the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the loss of agricultural land. Conservation easements are an available mitigation tool and considered a standard practice in many areas of the State. The Department highlights conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

[1] Public Resources Code Section 15370, Association of Environmental Professionals, 2021 CEQA, California Environmental Quality Act, Statute & Guidelines, page 305, https://www.califaep.org/docs/CEQA_Handbook_2021.pdf

Conclusion

The Department recommends further discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.
- Projects compatibility with lands within an agricultural preserve and/or enrolled in a Williamson Act contract.
- If applicable, notification of Williamson Act contract non-renewal and/or cancellation.

Thank you for giving us the opportunity to comment on the Notice of Preparation of an Environmental Impact Report for the Lathrop General Plan Update. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber

Conservation Program Support Supervisor

CALIFORNIA VALLEY MIWOK TRIBE

14807 Avenida Central, La Grange, CA 95329 Ph: (209) 931.4567
Website: http://www.californiavalleymiwok.us E-mail: office@cvmt.net

October 26, 2021

Mr. Sonny Dhaliwal, Mayor
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Dear Mayor Dhaliwal:

The California Valley Miwok Tribe ("CVMT") received a "Notice of Preparation; City of Lathrop General Plan Update Draft EIR" ("Notice") from a non-governmental business, De Novo Planning Group ("De Novo") dated October 11, 2021. Please accept our Tribe's comments to that Letter and related processes.

The Tribe believes that the De Novo Notice is not an appropriate means of initiating or engaging in government-to-government relations with an Indian tribe under California law. The De Novo Notice exhibits that the business is unfamiliar with the requirements of California Law, including SB 18 and AB 52 which apply specifically to General Plan updates and an Environmental Impact Report, regarding consultation with an Indian tribe.

We find it unfortunate that we are again in the same position as existed less than six months ago, when the the Tribe's views were dismissed by the Lathrop Planning Commission. In a letter dated May 15, 2021, we attempted to explain that the Tribe is a federally recognized Indian tribe. Under the United States constitution, the Tribe is an independent sovereign – the term of legal art used by the United States Supreme Court, a "domestic dependent nation" under the protection of the federal government.

Government-To-Government Relations

The Tribe is accustomed to engaging in government-to-government relations with the United States. In certain matters not governed by federal law, the Tribe consults with the State of California; another sovereign government. Under California law, the State has delegated its government-to-government relations for environmental considerations to the subordinate local agency with direct knowledge about the specifics of the project. Nevertheless, the paramount concern is that such relations remain government-to-government.

That consultation in the immediate context of an environmental review for a General Plan update requires a government-to-government consultation is underscored by California's statute. Section 65351of the California Environmental Quality Act ("CEQA") requires the local agency, – not a third party – to provide opportunities for Indian tribes—in this case CVMT—to be involved in the preparation or amendment of the General Plan. Section 65352 requires the local agency – not a third party – to refer proposed actions to CVMT for comment. Separately, section 65352.4 establishes that the consultation with CVMT that is required is "between government agencies and Native American Tribes...." Moreover, such consultation must be "respectful of each party's sovereignty... [and] recognize the Tribe's potential needs for confidentiality...."

Where, as in this case, the City fails to make efforts to develop meaningful and respectful relationship with the Tribe, unilaterally delegating duties that arise under a government-to-government relationship to a non-governmental third party is not just inappropriate, it is discourteous and out of step with the law.

Inaccurate Statutory Representations

As occurred with the Lathrop Planning Commission, it appears that De Novo unfamilar with the City's obligations under the CEQA to include Indian tribes including CVMT in its planning process.

First, De Novo seems to believe that it has authority to "contact individuals and organizations listed with the Native American Heritage Commission" on behalf of the City. As discussed above, we do not believe such authority exists, particularly in light of the City's statutory duty to maintain the Tribe's confidentiality and to engage in government-to-government relations. The City cannot ensure confidentiality if it has delegated its duty to a non-governmental third party.

Second, De Novo has "invited" the Tribe to"provide information regarding sites, traditional cultural properties, values, or other resources considerations...." However, in the first sentence of the De Novo Notice, it states that De Novo is helping prepare an Environmental Impact Report for the City. An invitation to provide information is not what CEQA requires of the City; it requires consultation

Prior to the release of any environmental document, the lead agency is required to consult with CVMT. P.R.C. § 21080.3.1. "Consultation" means:

> the meaningful and timely process of seeking, discussing, and considering carefully the views of others, in a manner that is cognizant of all parties' cultural values and, where feasible, seeking agreement. Consultation between government agencies and Native American tribes shall be conducted in a way that is mutually respectful of each party's sovereignty. Consultation shall also recognize the tribes' potential needs for confidentiality with respect to places that have traditional tribal cultural significance.

P.R.C. § 65352.4. The Consultation that the City is required to engage in, before releasing any environmental document, is good faith two-way communication between governments with the mutual intent to seek agreement. Moreover, the City's consultation with the Tribe cannot conclude until the parties reach agreement, or impasse after a good faith effort. *See* P.R.C.

Renewed Request for Government-to-Government Consultation

As was provided in several prior letters to the City, the Tribe welcomes meaningful consultation before you do any work in preparation of an environmental document that analyzes impacts from proposed updates to your General Plan. CEQA is clear on this point as well, consultation is to begin early in the process, and must be conducted before the City releases any environmental document for public review. We request that De Novo, please inform the City that the Tribe believes that the law requires direct interaction with the City not with a third party.

We elucidated our belief that there are significant tribal cultural resources within the jurisdiction of the City in our July letter to you, and our May letter to your Planning Commission. In fact, recently the County of San Joaquin recognized CVMT as a federally recognized Indian tribe with deep historical connections throughout the San Joaquin Valley.

As previously stated, we look forward to developing a collaborative relationship with the City.

Sincerely,

Silvia Burley

Silvia Burley, Chairperson
California Valley Miwok Tribe,
a federally recognized Indian tribe

Cc: De Novo Planning Group
Peebles Kidder

California Valley Miwok Tribe
14807 Avenida Central
La Grange, California 95329-9400

Mr. Sonny Dhaliwal, Mayor
City of Lathrop
390 Towne Drive
Lathrop, California 95330

NOP Scoping Meeting Comments

J.D. Hightower: Chicken Farm in Northern AOI used to create nuisance

Mary Meninga: Need for future truck routes. Need policy for road improvements. Road improvements need to be within ROW and not on private property and need for standards sound walls ect. for truck routes.

Mary Meninga: Potential for noise and vibration from truck routes. Need good policy to protect homes along truck routes.

Adriana Lopez: Need to analyze the high schools specifically how LI developments may impact kids.

Adriana Lopez: Potential need for mitigation/policy for O/S buffers between HS and LI uses.

Ector Olivares: Question related to Army Depot Plans, and River islands buildout status.

Adriana Lopez: Need to address cumulative/combined impacts.

Adriana Lopez: Will the GP comply with safe routes to schools?

Adriana Lopez: Trucks may impact safe routes to schools

Mary Meninga/Adriana Lopez: Need specific written policy to protect homes from new truck routes

J.D. Hightower: Review the P/PQ uses and include schools

Jonathan Pruitt: Request to make signing up of the website more uses friendly (i.e. sign up with one click)

Jonathan Pruitt: Question relating to alternatives and process moving forward

Email Correspondence:

The Northern Valley Yokut / Ohlone / Bay Mewuk tribe: The proposed general plan presents concerns for the tribe regarding the high potential for inadvertent discoveries of human remains. It is the recommendation to the City of Lathrop to implement the mitigation measure form the perspective of the tribe that are in the attachments above and to have the proposed project monitored by our tribe as the project is in our ancestral lands.

In Addition an attachments were included for Tribal Mitigation.

Appendix B

Continuous and Short-Term Ambient Noise Measurement Results

SAXELBY ACOUSTICS
Acoustics • Noise • Vibration

Appendix B: Continuous and Short-Term Ambient Noise Measurement Results

Appendix B1 : Continuous Noise Monitoring Results

Site: LT-1

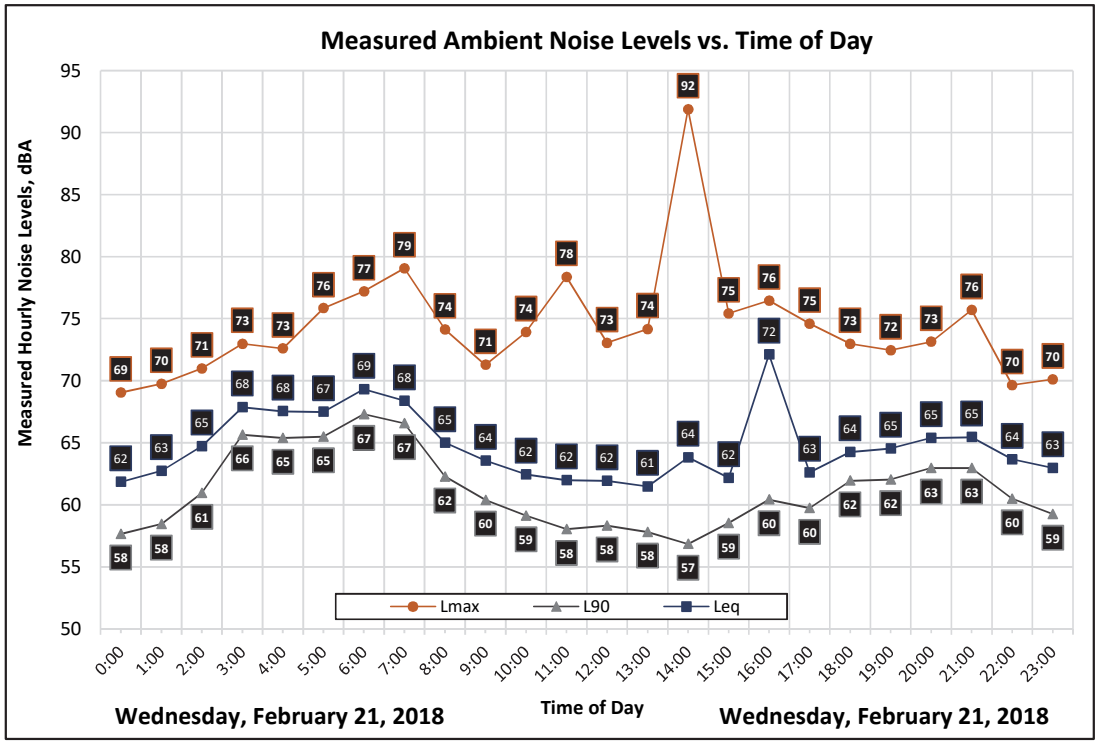
Project: Lathrop General Plan Update **Meter:** LDL 812-1

Location: Stewart Rd & Manthey - 350' to CL I-5 **Calibrator:** B&K 4230

Coordinates: 37.78412 -121.31014

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, February 21, 2018	0:00	62	69	61	58
Wednesday, February 21, 2018	1:00	63	70	62	58
Wednesday, February 21, 2018	2:00	65	71	64	61
Wednesday, February 21, 2018	3:00	68	73	68	66
Wednesday, February 21, 2018	4:00	68	73	67	65
Wednesday, February 21, 2018	5:00	67	76	67	65
Wednesday, February 21, 2018	6:00	69	77	69	67
Wednesday, February 21, 2018	7:00	68	79	68	67
Wednesday, February 21, 2018	8:00	65	74	65	62
Wednesday, February 21, 2018	9:00	64	71	63	60
Wednesday, February 21, 2018	10:00	62	74	62	59
Wednesday, February 21, 2018	11:00	62	78	61	58
Wednesday, February 21, 2018	12:00	62	73	61	58
Wednesday, February 21, 2018	13:00	61	74	61	58
Wednesday, February 21, 2018	14:00	64	92	60	57
Wednesday, February 21, 2018	15:00	62	75	61	59
Wednesday, February 21, 2018	16:00	72	76	73	60
Wednesday, February 21, 2018	17:00	63	75	62	60
Wednesday, February 21, 2018	18:00	64	73	64	62
Wednesday, February 21, 2018	19:00	65	72	64	62
Wednesday, February 21, 2018	20:00	65	73	65	63
Wednesday, February 21, 2018	21:00	65	76	65	63
Wednesday, February 21, 2018	22:00	64	70	63	60
Wednesday, February 21, 2018	23:00	63	70	62	59

Statistics	Leq	Lmax	L50	L90
Day Average	66	76	64	61
Night Average	66	72	65	62
Day Low	61	71	60	57
Day High	72	92	73	67
Night Low	62	69	61	58
Night High	69	77	69	67
Ldn	72	Day %		59
CNEL	73	Night %		41



Appendix B2 : Continuous Noise Monitoring Results

Site: LT-2

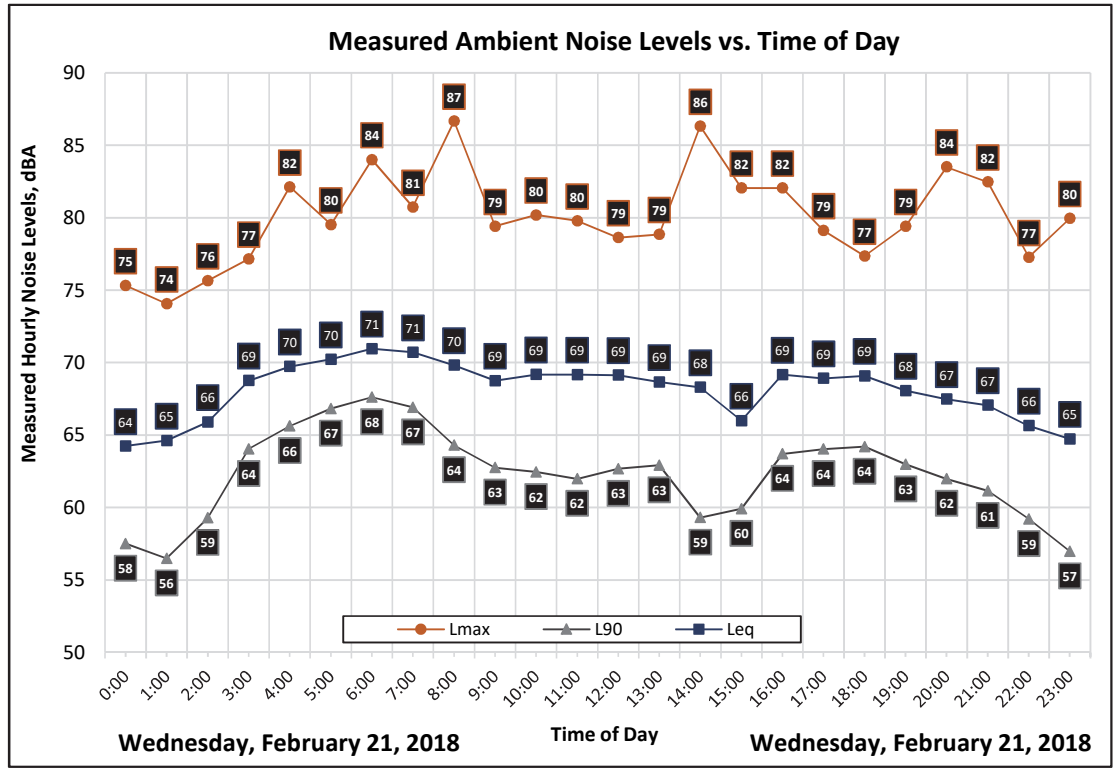
Project: Lathrop General Plan Update **Meter:** LDL 812-2

Location: South of De Lima Rd, West of I-5. 190' to CL I-5 **Calibrator:** B&K 4230

Coordinates: 37.8324 -121.28852

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, February 21, 2018	0:00	64	75	62	58
Wednesday, February 21, 2018	1:00	65	74	62	56
Wednesday, February 21, 2018	2:00	66	76	64	59
Wednesday, February 21, 2018	3:00	69	77	68	64
Wednesday, February 21, 2018	4:00	70	82	69	66
Wednesday, February 21, 2018	5:00	70	80	70	67
Wednesday, February 21, 2018	6:00	71	84	70	68
Wednesday, February 21, 2018	7:00	71	81	70	67
Wednesday, February 21, 2018	8:00	70	87	69	64
Wednesday, February 21, 2018	9:00	69	79	68	63
Wednesday, February 21, 2018	10:00	69	80	68	62
Wednesday, February 21, 2018	11:00	69	80	68	62
Wednesday, February 21, 2018	12:00	69	79	68	63
Wednesday, February 21, 2018	13:00	69	79	68	63
Wednesday, February 21, 2018	14:00	68	86	66	59
Wednesday, February 21, 2018	15:00	66	82	64	60
Wednesday, February 21, 2018	16:00	69	82	68	64
Wednesday, February 21, 2018	17:00	69	79	68	64
Wednesday, February 21, 2018	18:00	69	77	68	64
Wednesday, February 21, 2018	19:00	68	79	67	63
Wednesday, February 21, 2018	20:00	67	84	66	62
Wednesday, February 21, 2018	21:00	67	82	65	61
Wednesday, February 21, 2018	22:00	66	77	64	59
Wednesday, February 21, 2018	23:00	65	80	62	57

Statistics	Leq	Lmax	L50	L90
Day Average	69	81	68	63
Night Average	68	78	66	62
Day Low	66	77	64	59
Day High	71	87	70	67
Night Low	64	74	62	56
Night High	71	84	70	68
Ldn	74	Day %		67
CNEL	75	Night %		33



Appendix B3 : Continuous Noise Monitoring Results

Site: LT-3

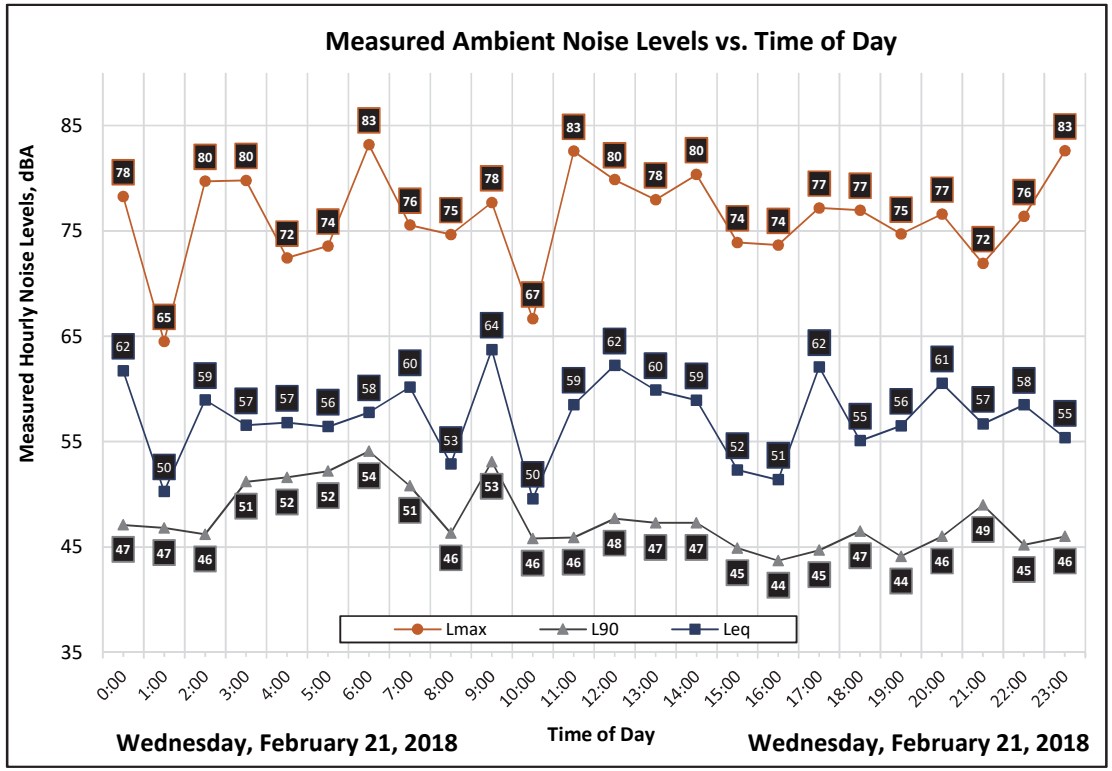
Project: Lathrop General Plan Update **Meter:** LDL 831-2

Location: Princeville St. & Pinewood Dr. - 200' to RR CL **Calibrator:** B&K 4230

Coordinates: 37.82909 -121.27568

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, February 21, 2018	0:00	62	78	51	47
Wednesday, February 21, 2018	1:00	50	65	49	47
Wednesday, February 21, 2018	2:00	59	80	48	46
Wednesday, February 21, 2018	3:00	57	80	53	51
Wednesday, February 21, 2018	4:00	57	72	54	52
Wednesday, February 21, 2018	5:00	56	74	54	52
Wednesday, February 21, 2018	6:00	58	83	56	54
Wednesday, February 21, 2018	7:00	60	76	54	51
Wednesday, February 21, 2018	8:00	53	75	49	46
Wednesday, February 21, 2018	9:00	64	78	55	53
Wednesday, February 21, 2018	10:00	50	67	48	46
Wednesday, February 21, 2018	11:00	59	83	50	46
Wednesday, February 21, 2018	12:00	62	80	49	48
Wednesday, February 21, 2018	13:00	60	78	48	47
Wednesday, February 21, 2018	14:00	59	80	48	47
Wednesday, February 21, 2018	15:00	52	74	48	45
Wednesday, February 21, 2018	16:00	51	74	46	44
Wednesday, February 21, 2018	17:00	62	77	48	45
Wednesday, February 21, 2018	18:00	55	77	49	47
Wednesday, February 21, 2018	19:00	56	75	47	44
Wednesday, February 21, 2018	20:00	61	77	49	46
Wednesday, February 21, 2018	21:00	57	72	52	49
Wednesday, February 21, 2018	22:00	58	76	48	45
Wednesday, February 21, 2018	23:00	55	83	48	46

Statistics	Leq	Lmax	L50	L90
Day Average	59	76	49	47
Night Average	58	77	51	49
Day Low	50	67	46	44
Day High	64	83	55	53
Night Low	50	65	48	45
Night High	62	83	56	54
Ldn	64	Day %		69
CNEL	65	Night %		31



Appendix C

Traffic Noise Modeling Inputs and Results

Appendix C: Traffic Noise Modeling Inputs and Results

Appendix C-1

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - Existing Conditions

Project #: 171107

Description City of Lathrop General Plan Update

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Roth Road	I-5 to Harlan Road	17,200	83	17	2.0%	1.0%	40	100	0	189	88	41	64.2
2	Harlan Road	South of Roth Road	8,400	83	17	2.0%	1.0%	45	100	0	142	66	31	62.3
3	Roth Road	Harlan Road to McKinley Avenue	7,600	83	17	2.0%	1.0%	40	100	0	110	51	24	60.6
4	Roth Road	McKinley Avenue to City Limits	5,300	83	17	2.0%	1.0%	40	50	-5	86	40	19	58.6
5	Lathrop Road	I-5 to Harlan Road	24,300	83	17	2.0%	1.0%	35	100	0	194	90	42	64.3
6	Harlan Road	North of Lathrop Road	9,600	83	17	2.0%	1.0%	45	100	0	155	72	33	62.9
7	Lathrop Road	Harlan Road to 5th Street	14,400	83	17	2.0%	1.0%	35	50	0	137	63	29	66.5
8	Lathrop Road	5th Street to McKinley Avenue	16,100	83	17	2.0%	1.0%	45	75	0	219	102	47	67.0
9	Lathrop Road	McKinley Avenue to City Limits	15,300	83	17	2.0%	1.0%	45	100	0	212	98	46	64.9
10	Spartan Way	Golden Valley Parkway to Lathrop Road	4,200	83	17	2.0%	1.0%	35	100	0	60	28	13	56.7
11	Golden Valley Parkwa	Spartan Way to River Island Parkway	5,300	83	17	2.0%	1.0%	50	100	0	124	58	27	61.4
12	Spartan Way	I-5 to Golden Valley Parkway	7,000	83	17	2.0%	1.0%	35	100	0	84	39	18	58.9
13	Harlan Road	South of Lathrop Road	11,400	83	17	2.0%	1.0%	40	50	0	144	67	31	66.9
14	Cambridge Avenue	South of Lathrop Road	2,100	83	17	2.0%	1.0%	25	50	0	25	12	5	55.5
15	5th Street	South of Lathrop Road	4,000	83	17	2.0%	1.0%	25	50	0	39	18	8	58.3
16	McKinley Avenue	South of Lathrop Road	2,600	83	17	2.0%	1.0%	45	50	0	65	30	14	61.7
17	River Island Parkway	West of McKee Boulevard	2,700	83	17	2.0%	1.0%	45	75	-5	67	31	14	54.2
18	River Island Parkway	Golden Valley Parkway to McKee Boulevard	12,000	83	17	2.0%	1.0%	45	100	-5	180	84	39	58.8
19	Golden Valley Parkwa	River Island Parkway to Towne Centre Drive	6,500	83	17	2.0%	1.0%	45	80	-5	120	56	26	57.6
20	River Island Parkway	I-5 to Golden Valley Parkway	16,300	83	17	2.0%	1.0%	45	100	0	221	103	48	65.2
21	Louise Avenue	I-5 to Harlan Road	29,700	83	17	2.0%	1.0%	45	100	0	330	153	71	67.8
22	Harlan Road	North of Louise Avenue	7,400	83	17	2.0%	1.0%	40	80	-5	108	50	23	57.0
23	Louise Avenue	5th Street to McKinley Avenue	17,500	83	17	2.0%	1.0%	45	75	-5	232	108	50	62.3
24	Cambridge Avenue	North of Louise Avenue	2,900	83	17	2.0%	1.0%	25	50	0	31	15	7	56.9
25	5th Street	North of Louise Avenue	2,800	83	17	2.0%	1.0%	25	50	0	31	14	7	56.8
26	McKinley Avenue	South of Louise Avenue	4,800	83	17	2.0%	1.0%	50	100	0	117	54	25	61.0
27	Louise Avenue	McKinley Avenue to City Limits	15,000	83	17	2.0%	1.0%	45	100	0	209	97	45	64.8
28	McKee Boulevard	River Island Parkway to Town Centre Drive	1,400	83	17	2.0%	1.0%	35	50	0	29	13	6	56.4
29	Towne Centre Drive	Golden Valley Parkway to McKee Boulevard	1,700	83	17	2.0%	1.0%	25	100	0	22	10	5	50.1
30	Harlan Road	Louise Avenue to D'Arcy Parkway	8,500	83	17	2.0%	1.0%	45	100	0	143	66	31	62.3
31	D'Arcy Parkway	East of Harlan Road	3,200	83	17	2.0%	1.0%	40	100	0	62	29	13	56.9
32	Manthey Road	Towne Centre Drive to Stewart Road	2,700	83	17	2.0%	1.0%	45	100	0	67	31	14	57.4
33	D'Arcy Parkway	North of Yosemite Avenue	5,000	83	17	2.0%	1.0%	30	200	0	57	27	12	51.9
34	Yosemite Avenue	D'Arcy Parkway to McKinley Avenue	6,700	83	17	2.0%	1.0%	45	100	0	122	57	26	61.3
35	Yosemite Avenue	McKinley Avenue to City Limits	10,700	83	17	2.0%	1.0%	45	75	0	167	77	36	65.2
36	Somerston Parkway	North of Lakeside Drive	1,100	83	17	2.0%	1.0%	40	50	0	30	14	7	56.7
37	Lakeside Drive	Stewart Road to Somerston Parkway	2,600	83	17	2.0%	1.0%	25	50	0	29	14	6	56.5
38	Stewart Road	Manthey Road to Lakeside Drive	4,100	83	17	2.0%	1.0%	25	120	0	39	18	8	52.7
39	Yosemite Avenue	South of SR 120	300	83	17	2.0%	1.0%	45	100	0	15	7	3	47.8

Appendix C-2

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - Existing Conditions

Project #: 171107

Description City of Lathrop General Plan Update

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
40	Yosemite Avenue	SR 120 to D'Arcy Parkway	10,100	83	17	2.0%	1.0%	45	100	0	161	75	35	63.1
41	Paradise Road	Stewart Road to City Limits	100	83	17	2.0%	1.0%	50	100	0	9	4	2	44.2
42	Golden Valley Parkwa	South of Dos Reis Road	0	83	17	2.0%	1.0%	50	100	0	0	0	0	0.0
43	Golden Valley Parkwa	South of Inland Passage Way	0	83	17	2.0%	1.0%	45	55	0	0	0	0	0.0
44	Golden Valley Parkwa	West of Somerston Parkway	0	83	17	2.0%	1.0%	45	100	0	0	0	0	0.0
45	Golden Valley Parkwa	South of Dell'Osso Drive	0	83	17	2.0%	1.0%	45	100	0	0	0	0	0.0
46	Stanford Crossing	West of Golden Valley Parkway	0	83	17	2.0%	1.0%	35	100	0	0	0	0	0.0
47	River Island Parkway	West of Somerston Parkway	0	83	17	2.0%	1.0%	40	85	0	0	0	0	0.0
48	Cambay Parkway	West of Lakeside Drve	0	83	17	2.0%	1.0%	45	100	0	0	0	0	0.0
49	Cambay Parkway	East of Paradise Road	0	83	17	2.0%	1.0%	45	100	0	0	0	0	0.0
50	Cambay Parkway	West of Paradise Road	0	83	17	2.0%	1.0%	45	100	0	0	0	0	0.0
51	Paradise Road	South of Cambay Parkway	0	83	17	2.0%	1.0%	45	100	0	0	0	0	0.0
52	McKinley Avenue	South of Yosemite Avenue	2,000	83	17	2.0%	1.0%	50	45	0	65	30	14	62.4

Appendix C-3

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - Current General Plan with Build-Out

Project #: 171107

Description City of Lathrop General Plan Update

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Roth Road	I-5 to Harlan Road	51,500	83	17	2.0%	1.0%	40	100	0	393	183	85	68.9
2	Harlan Road	South of Roth Road	15,200	83	17	2.0%	1.0%	45	100	0	211	98	45	64.9
3	Roth Road	Harlan Road to McKinley Avenue	42,200	83	17	2.0%	1.0%	40	100	0	345	160	74	68.1
4	Roth Road	McKinley Avenue to City Limits	39,400	83	17	2.0%	1.0%	40	50	-5	329	153	71	67.3
5	Lathrop Road	I-5 to Harlan Road	68,700	83	17	2.0%	1.0%	35	100	0	387	180	83	68.8
6	Harlan Road	North of Lathrop Road	14,200	83	17	2.0%	1.0%	45	100	0	202	94	43	64.6
7	Lathrop Road	Harlan Road to 5th Street	49,900	83	17	2.0%	1.0%	35	50	0	313	145	67	71.9
8	Lathrop Road	5th Street to McKinley Avenue	57,700	83	17	2.0%	1.0%	45	75	0	513	238	111	72.5
9	Lathrop Road	McKinley Avenue to City Limits	51,200	83	17	2.0%	1.0%	45	100	0	474	220	102	70.1
10	Spartan Way	Golden Valley Parkway to Lathrop Road	11,000	83	17	2.0%	1.0%	35	100	0	114	53	25	60.9
11	Golden Valley Parkwa	Spartan Way to River Island Parkway	68,400	83	17	2.0%	1.0%	50	100	0	685	318	148	72.5
12	Spartan Way	I-5 to Golden Valley Parkway	98,800	83	17	2.0%	1.0%	35	100	0	493	229	106	70.4
13	Harlan Road	South of Lathrop Road	14,700	83	17	2.0%	1.0%	40	50	0	171	79	37	68.0
14	Cambridge Avenue	South of Lathrop Road	4,100	83	17	2.0%	1.0%	25	50	0	39	18	8	58.5
15	5th Street	South of Lathrop Road	5,000	83	17	2.0%	1.0%	25	50	0	45	21	10	59.3
16	McKinley Avenue	South of Lathrop Road	28,000	83	17	2.0%	1.0%	45	50	0	317	147	68	72.0
17	River Island Parkway	West of McKee Boulevard	73,000	83	17	2.0%	1.0%	45	75	-5	601	279	129	68.6
18	River Island Parkway	Golden Valley Parkway to McKee Boulevard	80,300	83	17	2.0%	1.0%	45	100	-5	640	297	138	67.1
19	Golden Valley Parkwa	River Island Parkway to Towne Centre Drive	70,000	83	17	2.0%	1.0%	45	80	-5	584	271	126	67.9
20	River Island Parkway	I-5 to Golden Valley Parkway	122,100	83	17	2.0%	1.0%	45	100	0	846	393	182	73.9
21	Louise Avenue	I-5 to Harlan Road	75,100	83	17	2.0%	1.0%	45	100	0	612	284	132	71.8
22	Harlan Road	North of Louise Avenue	8,200	83	17	2.0%	1.0%	40	80	-5	116	54	25	57.4
23	Louise Avenue	5th Street to McKinley Avenue	55,300	83	17	2.0%	1.0%	45	75	-5	499	232	108	67.3
24	Cambridge Avenue	North of Louise Avenue	2,900	83	17	2.0%	1.0%	25	50	0	31	15	7	56.9
25	5th Street	North of Louise Avenue	7,700	83	17	2.0%	1.0%	25	50	0	60	28	13	61.2
26	McKinley Avenue	South of Louise Avenue	50,900	83	17	2.0%	1.0%	50	100	0	562	261	121	71.3
27	Louise Avenue	McKinley Avenue to City Limits	48,200	83	17	2.0%	1.0%	45	100	0	455	211	98	69.9
28	McKee Boulevard	River Island Parkway to Town Centre Drive	3,700	83	17	2.0%	1.0%	35	50	0	55	26	12	60.6
29	Towne Centre Drive	Golden Valley Parkway to McKee Boulevard	3,600	83	17	2.0%	1.0%	25	100	0	36	17	8	53.4
30	Harlan Road	Louise Avenue to D'Arcy Parkway	21,300	83	17	2.0%	1.0%	45	100	0	264	123	57	66.3
31	D'Arcy Parkway	East of Harlan Road	7,400	83	17	2.0%	1.0%	40	100	0	108	50	23	60.5
32	Manthey Road	Towne Centre Drive to Stewart Road	2,700	83	17	2.0%	1.0%	45	100	0	67	31	14	57.4
33	D'Arcy Parkway	North of Yosemite Avenue	12,800	83	17	2.0%	1.0%	30	200	0	107	50	23	55.9
34	Yosemite Avenue	D'Arcy Parkway to McKinley Avenue	35,700	83	17	2.0%	1.0%	45	100	0	373	173	80	68.6
35	Yosemite Avenue	McKinley Avenue to City Limits	47,800	83	17	2.0%	1.0%	45	75	0	453	210	98	71.7
36	Somerston Parkway	North of Lakeside Drive	6,600	83	17	2.0%	1.0%	40	50	0	100	46	22	64.5
37	Lakeside Drive	Stewart Road to Somerston Parkway	2,600	83	17	2.0%	1.0%	25	50	0	29	14	6	56.5
38	Stewart Road	Manthey Road to Lakeside Drive	5,500	83	17	2.0%	1.0%	25	120	0	48	22	10	54.0
39	Yosemite Avenue	South of SR 120	18,200	83	17	2.0%	1.0%	45	100	0	238	110	51	65.6

Appendix C-4

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - Current General Plan with Build-Out

Project #: 171107

Description City of Lathrop General Plan Update

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
40	Yosemite Avenue	SR 120 to D'Arcy Parkway	44,700	83	17	2.0%	1.0%	45	100	0	433	201	93	69.5
41	Paradise Road	Stewart Road to City Limits	24,500	83	17	2.0%	1.0%	50	100	0	345	160	74	68.1
42	Golden Valley Parkwa	South of Dos Reis Road	46,600	83	17	2.0%	1.0%	50	100	0	530	246	114	70.9
43	Golden Valley Parkwa	South of Inland Passage Way	58,000	83	17	2.0%	1.0%	45	55	0	515	239	111	74.6
44	Golden Valley Parkwa	West of Somerston Parkway	46,000	83	17	2.0%	1.0%	45	100	0	441	205	95	69.7
45	Golden Valley Parkwa	South of Dell'Osso Drive	13,700	83	17	2.0%	1.0%	45	100	0	197	91	42	64.4
46	Stanford Crossing	West of Golden Valley Parkway	5,100	83	17	2.0%	1.0%	35	100	0	68	32	15	57.5
47	River Island Parkway	West of Somerston Parkway	55,200	83	17	2.0%	1.0%	40	85	0	412	191	89	70.3
48	Cambay Parkway	West of Lakeside Drve	14,100	83	17	2.0%	1.0%	45	100	0	201	93	43	64.5
49	Cambay Parkway	East of Paradise Road	12,800	83	17	2.0%	1.0%	45	100	0	188	87	41	64.1
50	Cambay Parkway	West of Paradise Road	15,000	83	17	2.0%	1.0%	45	100	0	209	97	45	64.8
51	Paradise Road	South of Cambay Parkway	24,800	83	17	2.0%	1.0%	45	100	0	292	136	63	67.0
52	McKinley Avenue	South of Yosemite Avenue	47,300	83	17	2.0%	1.0%	50	45	0	536	249	115	76.1

Appendix C-5

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - New General Plan with Build-Out

Project #: 171107

Description City of Lathrop General Plan Update

Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Roth Road	I-5 to Harlan Road	57,200	83	17	2.0%	1.0%	40	100	0	422	196	91	69.4
2	Harlan Road	South of Roth Road	13,700	83	17	2.0%	1.0%	45	100	0	197	91	42	64.4
3	Roth Road	Harlan Road to McKinley Avenue	47,900	83	17	2.0%	1.0%	40	100	0	375	174	81	68.6
4	Roth Road	McKinley Avenue to City Limits	45,000	83	17	2.0%	1.0%	40	50	-5	360	167	77	67.9
5	Lathrop Road	I-5 to Harlan Road	60,700	83	17	2.0%	1.0%	35	100	0	356	165	77	68.3
6	Harlan Road	North of Lathrop Road	15,700	83	17	2.0%	1.0%	45	100	0	216	100	46	65.0
7	Lathrop Road	Harlan Road to 5th Street	40,400	83	17	2.0%	1.0%	35	50	0	272	126	59	71.0
8	Lathrop Road	5th Street to McKinley Avenue	47,600	83	17	2.0%	1.0%	45	75	0	452	210	97	71.7
9	Lathrop Road	McKinley Avenue to City Limits	39,200	83	17	2.0%	1.0%	45	100	0	397	184	85	69.0
10	Spartan Way	Golden Valley Parkway to Lathrop Road	12,400	83	17	2.0%	1.0%	35	100	0	124	57	27	61.4
11	Golden Valley Parkway	Spartan Way to River Island Parkway	63,400	83	17	2.0%	1.0%	50	100	0	651	302	140	72.2
12	Spartan Way	I-5 to Golden Valley Parkway	101,100	83	17	2.0%	1.0%	35	100	0	501	232	108	70.5
13	Harlan Road	South of Lathrop Road	13,900	83	17	2.0%	1.0%	40	50	0	164	76	35	67.8
14	Cambridge Avenue	South of Lathrop Road	4,200	83	17	2.0%	1.0%	25	50	0	40	19	9	58.6
15	5th Street	South of Lathrop Road	4,500	83	17	2.0%	1.0%	25	50	0	42	19	9	58.9
16	McKinley Avenue	South of Lathrop Road	24,500	83	17	2.0%	1.0%	45	50	0	290	135	62	71.5
17	River Island Parkway	West of McKee Boulevard	68,100	83	17	2.0%	1.0%	45	75	-5	573	266	124	68.3
18	River Island Parkway	Golden Valley Parkway to McKee Boulevard	75,000	83	17	2.0%	1.0%	45	100	-5	611	284	132	66.8
19	Golden Valley Parkway	River Island Parkway to Towne Centre Drive	69,600	83	17	2.0%	1.0%	45	80	-5	582	270	125	67.9
20	River Island Parkway	I-5 to Golden Valley Parkway	122,900	83	17	2.0%	1.0%	45	100	0	850	394	183	73.9
21	Louise Avenue	I-5 to Harlan Road	71,500	83	17	2.0%	1.0%	45	100	0	592	275	128	71.6
22	Harlan Road	North of Louise Avenue	8,000	83	17	2.0%	1.0%	40	80	-5	114	53	24	57.3
23	Louise Avenue	5th Street to McKinley Avenue	53,600	83	17	2.0%	1.0%	45	75	-5	489	227	105	67.2
24	Cambridge Avenue	North of Louise Avenue	2,900	83	17	2.0%	1.0%	25	50	0	31	15	7	56.9
25	5th Street	North of Louise Avenue	7,500	83	17	2.0%	1.0%	25	50	0	59	27	13	61.1
26	McKinley Avenue	South of Louise Avenue	46,600	83	17	2.0%	1.0%	50	100	0	530	246	114	70.9
27	Louise Avenue	McKinley Avenue to City Limits	49,300	83	17	2.0%	1.0%	45	100	0	462	215	100	70.0
28	McKee Boulevard	River Island Parkway to Town Centre Drive	3,500	83	17	2.0%	1.0%	35	50	0	53	25	11	60.4
29	Towne Centre Drive	Golden Valley Parkway to McKee Boulevard	4,000	83	17	2.0%	1.0%	25	100	0	39	18	8	53.8
30	Harlan Road	Louise Avenue to D'Arcy Parkway	14,400	83	17	2.0%	1.0%	45	100	0	204	94	44	64.6
31	D'Arcy Parkway	East of Harlan Road	7,100	83	17	2.0%	1.0%	40	100	0	105	49	23	60.3
32	Manthey Road	Towne Centre Drive to Stewart Road	2,700	83	17	2.0%	1.0%	45	100	0	67	31	14	57.4
33	D'Arcy Parkway	North of Yosemite Avenue	12,300	83	17	2.0%	1.0%	30	200	0	104	48	22	55.8
34	Yosemite Avenue	D'Arcy Parkway to McKinley Avenue	36,500	83	17	2.0%	1.0%	45	100	0	378	176	82	68.7
35	Yosemite Avenue	McKinley Avenue to City Limits	48,400	83	17	2.0%	1.0%	45	75	0	457	212	98	71.8
36	Somerston Parkway	North of Lakeside Drive	11,000	83	17	2.0%	1.0%	40	50	0	141	65	30	66.7
37	Lakeside Drive	Stewart Road to Somerston Parkway	2,600	83	17	2.0%	1.0%	25	50	0	29	14	6	56.5
38	Stewart Road	Manthey Road to Lakeside Drive	9,300	83	17	2.0%	1.0%	25	120	0	68	32	15	56.3
39	Yosemite Avenue	South of SR 120	18,200	83	17	2.0%	1.0%	45	100	0	238	110	51	65.6

Appendix C-6

FHWA-RD-77-108 Highway Traffic Noise Prediction Model - New General Plan with Build-Out

Project #: 171107

Description City of Lathrop General Plan Update

											Contours (ft.) - No Offset			
Segment	Roadway	Segment	ADT	Day %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	60 dBA	65 dBA	70 dBA	Level, dBA
40	Yosemite Avenue	SR 120 to D'Arcy Parkway	45,700	83	17	2.0%	1.0%	45	100	0	439	204	95	69.6
41	Paradise Road	Stewart Road to City Limits	25,800	83	17	2.0%	1.0%	50	100	0	357	166	77	68.3
42	Golden Valley Parkwa	South of Dos Reis Road	38,000	83	17	2.0%	1.0%	50	100	0	463	215	100	70.0
43	Golden Valley Parkwa	South of Inland Passage Way	64,400	83	17	2.0%	1.0%	45	55	0	552	256	119	75.0
44	Golden Valley Parkwa	West of Somerston Parkway	48,500	83	17	2.0%	1.0%	45	100	0	457	212	99	69.9
45	Golden Valley Parkwa	South of Dell'Osso Drive	14,200	83	17	2.0%	1.0%	45	100	0	202	94	43	64.6
46	Stanford Crossing	West of Golden Valley Parkway	5,900	83	17	2.0%	1.0%	35	100	0	75	35	16	58.2
47	River Island Parkway	West of Somerston Parkway	47,100	83	17	2.0%	1.0%	40	85	0	371	172	80	69.6
48	Cambay Parkway	West of Lakeside Drve	16,600	83	17	2.0%	1.0%	45	100	0	224	104	48	65.2
49	Cambay Parkway	East of Paradise Road	15,500	83	17	2.0%	1.0%	45	100	0	214	99	46	64.9
50	Cambay Parkway	West of Paradise Road	16,400	83	17	2.0%	1.0%	45	100	0	222	103	48	65.2
51	Paradise Road	South of Cambay Parkway	26,100	83	17	2.0%	1.0%	45	100	0	303	140	65	67.2
52	McKinley Avenue	South of Yosemite Avenue	45,100	83	17	2.0%	1.0%	50	45	0	519	241	112	75.9

Appendix D

Supporting Transportation Data and Analysis

Lathrop General Plan Update

City of Lathrop VMT Summary - 2020 Baseline Scenario

Land Use	Quantity (model inputs)	Units	Home-Based Work Production VMT	Home-Based Other Production VMT	Non Home-Based Production VMT	Home-Based Work Attraction VMT	Home-Based Other Attraction VMT	Non Home-Based Attraction VMT	Total VMT	Total VMT per HH/Employee	Home-Based VMT per HH	Home-Based Work VMT per Emp	Total Trips	Average Trip Length
Single-Family Residential	6,201	Dwelling Units	211,678	479,772	0	0	0	0	691,450	111.5	111.5		49,594	13.9
Multi-Family Residential	217		5,719	12,938	0	0	0	0	18,657	86.0	86.0		1,351	13.8
Age Restricted and Other Residential	249		1,859	9,964	0	0	0	0	11,822	47.5	47.5		890	13.3
Food	344	Employees	0	0	18,301	8,629	28,816	18,281	74,027	215.2		25.1	10,718	6.9
Industrial	6,384		0	0	137,181	220,549	1,539	137,573	496,842	77.8		34.5	23,998	20.7
Office	1,023		0	0	4,264	26,210	2,641	4,224	37,339	36.5		25.6	3,262	11.4
Retail	659		0	0	9,557	16,471	53,574	9,558	89,160	135.3		25.0	13,543	6.6
Total Households	6,667		219,256	502,674	0	0	0	0	721,929	108.3	108.3		51,835	13.9
Total Residents	25,868		219,256	502,674	0	0	0	0	721,929	27.9	27.9		51,835	13.9
Total Employees	9,038		0	0	178,434	288,212	130,919	178,226	775,791	85.8		31.9	61,875	12.5
Total Residents + Employees	34,906		219,256	502,674	178,434	288,212	130,919	178,226	1,497,721	42.9			113,710	13.2

Source: City of Lathrop Travel Demand Model - Fehr & Peers, 2022

Lathrop General Plan Update

City of Lathrop VMT Summary - Previous General Plan Buildout Scenario

Land Use	Quantity (model inputs)	Units	Home-Based Work Production VMT	Home-Based Other Production VMT	Non Home-Based Production VMT	Home-Based Work Attraction VMT	Home-Based Other Attraction VMT	Non Home-Based Attraction VMT	Total VMT	Total VMT per HH/Employee	Home-Based VMT per HH	Home-Based Work VMT per Emp	Total Trips	Average Trip Length
Single-Family Residential	16,841	Dwelling Units	492,963	599,060	0	0	0	0	1,092,022	64.8	64.8		134,347	8.1
Multi-Family Residential	9,312		227,547	294,059	0	0	0	0	521,606	56.0	56.0		57,945	9.0
Age Restricted and Other Residential	1,125		7,788	22,526	0	0	0	0	30,314	26.9	26.9		4,019	7.5
Food	1,868	Employees	0	0	103,140	58,780	197,551	103,085	462,557	247.6		31.5	58,195	7.9
Industrial	16,505		0	0	364,765	576,009	4,144	359,478	1,304,395	79.0		34.9	62,059	21.0
Office	20,269		0	0	89,658	665,751	99,908	87,134	942,450	46.5		32.8	64,697	14.6
Retail	12,668		0	0	186,626	392,048	1,925,200	184,784	2,688,658	212.2		30.9	260,411	10.3
Total Households	27,278		728,298	915,645	0	0	0	0	1,643,942	60.3	60.3		196,310	8.4
Total Residents	105,839		728,298	915,645	0	0	0	0	1,643,942	15.5	15.5		196,310	8.4
Total Employees	53,176		0	0	771,418	1,753,404	2,387,796	759,364	5,671,983	106.7		33.0	479,392	11.8
Total Residents + Employees	159,015		728,298	915,645	771,418	1,753,404	2,387,796	759,364	7,315,925	46.0			675,703	10.8

Source: City of Lathrop Travel Demand Model - Fehr & Peers, 2022

Lathrop General Plan Update

City of Lathrop VMT Summary - Proposed General Plan Buildout Scenario

Land Use	Quantity (model inputs)	Units	Home-Based Work Production VMT	Home-Based Other Production VMT	Non Home-Based Production VMT	Home-Based Work Attraction VMT	Home-Based Other Attraction VMT	Non Home-Based Attraction VMT	Total VMT	Total VMT per HH/Employee	Home-Based VMT per HH	Home-Based Work VMT per Emp	Total Trips	Average Trip Length
Single-Family Residential	14,110	Dwelling Units	401,786	508,649	0	0	0	0	910,435	64.5	64.5		112,397	8.1
Multi-Family Residential	10,374		242,849	323,103	0	0	0	0	565,952	54.6	54.6		64,461	8.8
Age Restricted and Other Residential	1,125		7,570	23,136	0	0	0	0	30,706	27.3	27.3		4,018	7.6
Food	1,759	Employees	0	0	97,782	56,855	186,020	97,080	437,737	248.9		32.3	54,791	8.0
Industrial	24,216		0	0	528,804	849,480	6,388	531,622	1,916,294	79.1		35.1	91,058	21.0
Office	19,621		0	0	87,297	660,528	95,373	84,344	927,543	47.3		33.7	62,628	14.8
Retail	11,534		0	0	171,117	366,550	1,733,532	168,314	2,439,513	211.5		31.8	237,051	10.3
Total Households	25,609		652,205	854,888	0	0	0	0	1,507,093	58.9	58.9		180,876	8.3
Total Residents	99,363		652,205	854,888	0	0	0	0	1,507,093	15.2	15.2		180,876	8.3
Total Employees	58,996		0	0	912,418	1,995,807	2,182,790	905,626	5,996,640	101.6		33.8	479,096	12.5
Total Residents + Employees	158,359		652,205	854,888	912,418	1,995,807	2,182,790	905,626	7,503,732	47.4			659,972	11.4

Source: City of Lathrop Travel Demand Model - Fehr & Peers, 2022

Appendix E

Water Supply Assessment

WEST YOST
Water. Engineered.

6800 Koll Center Parkway
Suite 150
Pleasanton CA 94566

925.426.2580 phone
530.756.5991 fax
westyost.com

November 10, 2021

Project No.: 487-12-17-14
SENT VIA: EMAIL

Ben Ritchie
Principal
De Novo Planning Group
1020 Suncast Ln #106
El Dorado Hills, CA 95762

SUBJECT: City of Lathrop - General Plan Update Water Supply Report – Working Draft

Dear Ben:

The purpose of this letter report is to present the findings of the Water Supply Analysis of the City of Lathrop (City) General Plan Update. In this letter report, we summarize the land use in the General Plan Update, project future demand at Buildout (projected to occur in 2045) and compare the projected water demand to the water supply documented in the City's 2020 Urban Water Management Plan (UWMP)and the South San Joaquin Irrigation District (SSJID) 2020 UWMP.

As indicated below, based on the assumptions presented in this report, the City would have a 2 percent deficiency in water supplies to serve development of the proposed land uses during some dry years.

GENERAL PLAN UPDATE LAND USE

The City of Lathrop is located in the flat plain at the northern end of California's San Joaquin Valley in south San Joaquin County. The City is located approximately 10 miles south of Stockton and 22 miles north of Modesto. The Planning Area for the Lathrop General Plan includes the entire city limits and the Planning Area inside the City's Sphere of Influence (SOI).

The location of the General Plan planning area in relation to the current City limits and Sphere of Influence is shown on attached Figure 2.0-2. The proposed General Plan buildout, if approved, consists of low density residential, medium density residential, and high-density residential land uses, as well as various business, commercial, commercial mixed use, industrial, and park land uses.

To calculate projected 2045 Buildout demands, existing demands were added to planned General Plan growth demand (excluding River Islands) and planned River Island Phase 2 demand. River Island Phase 2 demands were referenced from the River Islands Phase 2 Development Water Supply Assessment (Woodard & Curran, September 2020).

Existing demands are summarized in Table 1.

Table 1. Existing Demands

Use Type	2016, AF	2017, AF	2018, AF	2019, AF	2020, AF
Single Family	1,834	1,991	2,112	2,136	2,559
Multi-Family	84	76.0	80.0	79	99
Commercial	157	169.0	206.0	185	189
Industrial	676	833.0	1117.0	1,139	1,171
Institutional/ Governmental	83	94.0	104.0	86	128
Irrigation	533	719.0	730.0	665	870
Agricultural	23	119.0	226.0	212	1
Other/Construction	50	75.0	157.0	122	171
Losses[a,b]	206	93.0	-180.0	-173	297
Total	**3,646**	**4,168**	**4,551**	**4,452**	**5,485**

Source: EKI, City of Lathrop 2020 Urban Water Management Plan, June 2021.

(a) Losses represent all non-revenue water, which includes apparent loss, real loss, and unbilled authorized consumption.
(b) Negative non-revenue water values during 2018 and 2019 are likely due to metering errors.

Proposed future land uses for buildout of the General Plan are summarized in Table 2 and shown on attached Figure 2.0-2.

Table 2. Proposed Growth Projections for Buildout of the General Plan (Excluding River Islands Phase 2)

Land Use	Remaining General Plan Growth, DU, SF	Remaining General Plan Growth, Acres	General Plan Buildout, DU, SF	General Plan Buildout, Acres
Residential Development				
Single Family/Low Density Residential[a]	7,454	--	--	--
Multi-Family/Medium Density Residential[b]	1,589	--	--	--
Multi-Family/High Density Residential[c]	573	--	--	--
Total Residential	**9,616**	**--**	**--**	**--**
Non-Residential Development				
Commercial	9,854,000	226.2	--	--
Industrial	20,778,000	477.0	--	--
Total Non-Residential	**30,632,000**	**703.2**	**--**	**--**
Institutional	--	--	14,122,588	324
Park and Right of Way Landscape[d]	--	--	10,214,384	234
Total (Acres)	**--**	**--**	**--**	**559**

Source: DeNovo, Draft Lathrop General Plan Update, September 2021.

(a) Single Family Residential land use was assumed to be low density residential at approximately 1-9 du/ac.
(b) Multifamily Medium Density Residential land use was assumed to be approximately 10-14 du/ac.
(c) Multifamily High Density Residential land use was assumed to be approximately 15-25 du/a.
(d) Landscape areas within Right of Ways are assumed to be 15 percent of the total acreage.

Proposed future land uses for buildout of River Islands Phase 2 are shown in Table 3.

Table 3. Proposed Future Land Uses for Buildout of River Islands Phase 2

Land Category	Residential Units, units	Project Area, acres	Water Demand Factor	Total Demand, gpd
Low Density Residential	4,061	--	315 gpd/DU	1,279,215
Medium Density Residential	3,150	--	235 gpd/DU	740,227
High Density Residential	3,515	--	135 gpd/DU	474,552
Total Residential	**10,726**	**--**	**--**	**2,493,994**
Commercial[a]	--	135.6	860 gpd/acre	116,609
Schools	--	109.7	1,500 gpd/acre	164,550
Parks and Open Space[b]	--	211.5	2,450 gpd/acre	518,198
Roadway Landscape Areas[c]	--	39.7	2,450 gpd/acre	97,228
Total	**10,726**	**496.0**	**--**	**3,390,578**
Total Project Demand (AFY)	**--**	**--**	**--**	**3,798**

Source: City of Lathrop, River Island Phase 2 Development Water Supply Assessment, September 2020.

(a) Includes the planned River Islands Town Center and Employment Center.
(b) Includes only irrigated parks and open space areas.
(c) Includes only irrigated roadway landscape areas.

PROJECTED WATER DEMAND

The projected water demands were calculated based on a sum of existing 2020 water demands, planned General Plan growth demand (excluding River Islands) and planned River Island Phase 2 demand. The demand for the future land use areas for the proposed General Plan Growth (excluding River Islands) was calculated by multiplying the projected land uses from Table 2 by the land use-based water demand factors shown in Table 4.

Table 4. Water Use Factors by Land Use Type

Land Use Designation	Water Use Factor		
	2021 Urban Water Management Plan[a]		
	City Wide	River Islands	Units
Low Density Residential (LDR)	330	315	gpd/du
Medium Density Residential (MDR)	250	235	gpd/du
High Density Residential (HDR)	135	--	gpd/du
General Commercial	860	--	gpd/ac
Industrial	1200	--	gpd/ac
Parks	2,450	--	gpd/ac
Public/Institutional	1500	--	gpd/ac

(a) Based on unit water demand factors used in the 2020 Urban Water Management Plan (EKI, June 2021). These factors were developed using unit water factors presented in the 2019 Water System Master Plan but updated based on additional water use data for 2017 to 2019.

The resulting water demand projection is shown in Table 5.

Table 5. Projected Water Demand of Future Land Uses at Buildout of the General Plan

Proposed Land Use	Future Land UsE at Buildout, DU, acres[a]	Water Demand Factor, gpd per DU, gpd per acre[b]	Water Demand, acre-feet
Future Water Demand			
Low Density Residential	7,454	330	2,755
Medium Density Residential	1,589	250	445
High Density Residential	573	135	87
General Commercial[c]	136	860	131
Industrial[c]	360	1,200	484
Public/Institutional	324	2,450	890
Landscape	234	2,450	644
River Islands Phase 2 Development	--	--	3,798
Subtotal	10,111	--	9,233
Unaccounted-for Water(d)	--	--	369
Existing Water Demands(e)	--	--	4,487
Total	**--**	**--**	**14,089**

(a) See Table 2 and Table 3. Land uses shown are the difference between the General Plan and River Islands planned land use.
(b) See Table 4.
(c) Acreages reduced from Table 2 values by a floor area ratio of 0.6 and 0.75 for commercial and industrial land uses, respectively.
(d) Four percent of water demand per 2020 UWMP.
(e) See Table 1. Does not include institutional or landscape demand, which are included in full in the future water demand above.

Based on the analysis above, the projected potable and raw water demand at buildout of the General Plan is 14,089 AFY. It should be noted that City potable demand in 2020 was significantly higher than in previous years which may have been caused by a higher daytime population in Lathrop than normal due to stay-at-home orders and mandated closure of non-essential businesses in response to the COVID-19 pandemic.

WATER SUPPLY SUMMARY

The City's water supplies are documented in the 2020 UWMP and the SSJID 2020 UWMP and are summarized below. However, reliability projections presented in the SSJID 2020 UWMP do not take into consideration the impacts of the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Bay-Delta Plan"). If implemented the Bay-Delta Plan would have significant impacts on the minimum projected supply amounts available for SSJID to distribute. The Bay-Delta Plan remains uncertain due to pending litigation and based on these uncertainties SSJID has opted to make no near-term planning assumptions and should conditions change a revision to the 2020 SSJID UWMP would impact this water supply analysis.

The projected surface water deliveries available to the City in 2045, near Buildout of the General Plan, as documented in the SSJID 2020 UWMP and Lathrop 2020 UWMP, are presented in Table 6.

Table 6. SCWSP Surface Water Deliveries to the City of Lathrop during Hydrologic Normal, Single-Dry, and Multiple-Dry Years in 2040[(a)]

Hydrologic Condition	Percent of Normal Supply	Projected Water Delivery, AFY
Normal Year	100%	10,671
Single Dry Year	85%	9,039
Multiple Dry Year 1	100%	10,671
Multiple Dry Year 2	100%	10,671
Multiple Dry Year 3	85%	9,039
Multiple Dry Year 4	85%	9,039
Multiple Dry Year 5	100%	10,671

Source: EKI, City of Lathrop 2020 Urban Water Management Plan, June 2021, Table 7-1 Projected SCWSP Supply Availability.

The 2020 UWMP indicates that it is anticipated that the GSP being prepared for the Tracy Subbasin will not require the City to limit groundwater production to achieve sustainability and that groundwater supplies are considered to be 100 percent reliable. The projected groundwater availability is shown in Table 7.

Table 7. Projected Groundwater Production during Hydrologic Normal, Single-Dry and Multiple-Dry Years in 2040[(a)]

Planning Area	Projected Groundwater Production, AFY
Maximum Total Supply	4,720

Source: EKI, City of Lathrop 2020 Urban Water Management Plan, June 2021, Table 7-4 Projected Water Supply in Normal Years.

The City's total potable and raw water supply is shown in Table 8.

Table 8. Summary of Potable and Raw Water Supply During Hydrologic Normal, Single-Dry and Multiple-Dry Years[(a)]

Hydrologic Condition	Potable and Raw Water Supply at Buildout of the General Plan Area, AFY
Normal Year	15,391
Single Dry Year	13,759
Multiple Dry Year 1	15,391
Multiple Dry Year 2	15,391
Multiple Dry Year 3	13,759
Multiple Dry Year 4	13,759
Multiple Dry Year 5	15,391

(a) Surface Water Supply from Table 6 plus Assumed Groundwater Supply from Table 7.

The City currently uses disinfected tertiary recycled water to irrigate fodder crops, landscape areas, and for percolation into the ground. However, there is no infrastructure in place to deliver tertiary treated recycled water to retail customers to offset potable demand. Therefore, recycled water supplies are not assumed to be an available water supply for this letter report.

COMPARISON OF WATER SUPPLY AND DEMAND AT BUILDOUT

A comparison of the available water supply and projected demands at buildout of the General Plan is shown in Table 9.

Table 9. Comparison of Potable and Raw Water Demand Versus Supply during Hydrologic Normal, Single Dry, and Multiple Dry Years

Hydrologic Condition		Supply and Demand Comparison, AFY Buildout of General Plan Area
Normal Year		
Available Potable and Raw Water Supply[a]		15,391
Total Water Demand[b]		14,089
Potential Surplus (Deficit)[c]		1,302
Supply Surplus/Shortfall, Percent of Demand		9%
Single Dry Year		
Available Potable and Raw Water Supply[a]		13,759
Total Water Demand[b]		14,089
Potential Surplus (Deficit)[c]		(330)
Supply Surplus/Shortfall, Percent of Demand		-2%
Multiple Dry Year		
Multiple Dry Year 1	Available Potable and Raw Water Supply[a]	15,391
	Total Water Demand[b]	14,089
	Potential Surplus (Deficit)[c]	1,302
	Supply Surplus/Shortfall, Percent of Demand	9%
Multiple Dry Year 2	Available Potable and Raw Water Supply[a]	15,391
	Total Water Demand[b]	14,089
	Potential Surplus (Deficit)[c]	1,302
	Supply Surplus/Shortfall, Percent of Demand	9%
Multiple Dry Year 3	Available Potable and Raw Water Supply[a]	13,759
	Total Water Demand[b]	14,089
	Potential Surplus (Deficit)[c]	(330)
	Supply Surplus/Shortfall, Percent of Demand	-2%
Multiple Dry Year 4	Available Potable and Raw Water Supply[a]	13,759
	Total Water Demand[b]	14,089
	Potential Surplus (Deficit)[c]	(330)
	Supply Surplus/Shortfall, Percent of Demand	-2%

Table 9. Comparison of Potable and Raw Water Demand Versus Supply during Hydrologic Normal, Single Dry, and Multiple Dry Years

Hydrologic Condition		Supply and Demand Comparison, AFY Buildout of General Plan Area
Multiple Dry Year 5	Available Potable and Raw Water Supply[(a)]	15,391
	Total Water Demand[(b)]	14,089
	Potential Surplus (Deficit)[(c)]	1,302
	Supply Surplus/Shortfall, Percent of Demand	9%

(a) From Table 8.
(b) Existing plus projected demand. See paragraph under Projected Water Demand.

As indicated in Table 9, based on the assumptions presented in this report, the City would have a 2 percent deficiency in water supplies to serve development of the proposed land uses during some dry years.

Thank you for this opportunity to be of continued service to you and the City of Lathrop. Please let us know if you have any questions or require further information.

Sincerely,
WEST YOST

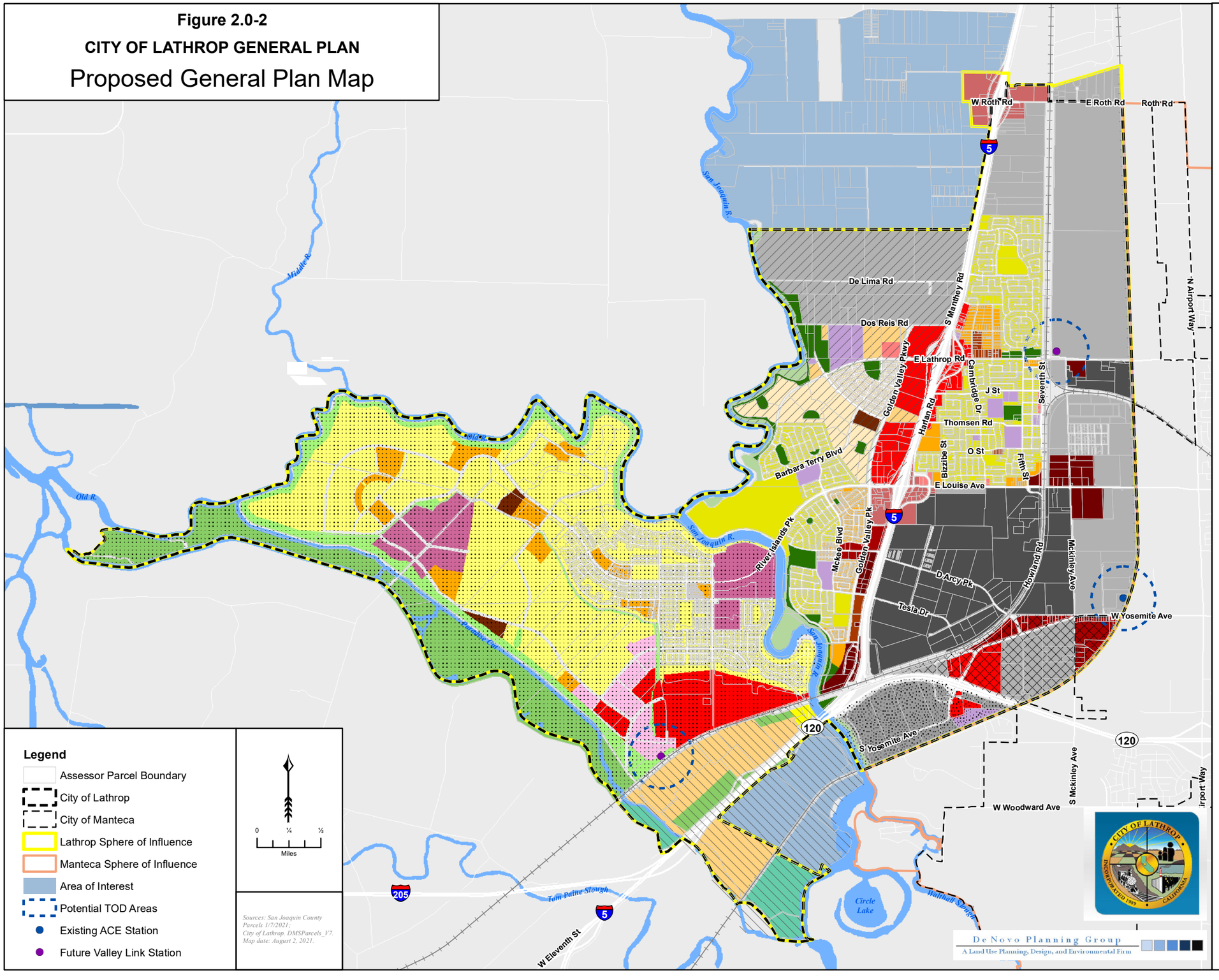
Jim Connell, PE
Principal Engineer
RCE #63052

Attachment: Figure 2.0-2 – City of Lathrop General Plan, Proposed General Plan Map

Figure 2.0-2

CITY OF LATHROP GENERAL PLAN

Proposed General Plan Map



Land Use Designations

City Proper
- LD: Low Density Residential (1-7 du/A)
- MD: Medium Density Residential (8-15 du/A)
- HD: High Density Residential (16-25 du/A)
- NC: Neighborhood Commercial
- VC: Village Center
- CC: Community Center
- SC: Service Commercial
- FC: Freeway Commercial
- LI: Limited Industrial
- GI: General Industrial
- P/QP: Public/Quasi-Public
- P: Park
- OS: Open Space

Central Lathrop
- VR-CL: Variable Density Residential (3-16 du/A)
- HR-CL: High Density Residential (15-49 du/A)
- R/MU-CL: Residential Mixed Use (10-40 du/A)
- OC-CL: Office Commercial
- NC-CL: Neighborhood Commercial
- P/QP-CL: Public/Quasi-Public
- P-CL: Park
- OS-CL: Open Space

Lathrop Gateway
- CO-LG: Commerical Office
- SC-LG: Service Commercial
- LI-LG: Limited Industrial

South Lathrop Specific Plan
- CO-SL: Commercial Office
- LI-SL: Limited Industrial
- P/QP-SL: Public/Quasi-Public
- OS-SL: Open Space River/Levee Park

River Islands
- RL-RI: Residential Low (3-9 du/A)
- RM-RI: Residential Medium (6-20 du/A)
- RH-RI: Residential High (15-40 du/A)
- RC-RI: Regional Commercial
- TOD-RI: Transit-Oriented Development
- MU-RI: Mixed Use
- RCO/OS-RI: Resource Conservation/Open Space
- OS/P-RI: Open Space/Public Uses

Stewart Tract
- R-ST: Residential
- RC-ST: Recreation Commercial
- RCO-ST: Resource Conservation
- UR-ST: Urban Reserve

Legend
- Assessor Parcel Boundary
- City of Lathrop
- City of Manteca
- Lathrop Sphere of Influence
- Manteca Sphere of Influence
- Area of Interest
- Potential TOD Areas
- Existing ACE Station
- Future Valley Link Station

0 ¼ ½ Miles

Sources: San Joaquin County Parcels 1/7/2021; City of Lathrop. DMSParcels_V7. Map date: August 2, 2021.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Appendix F

Health Risk Model Outputs

Mobile Truck Emissions - Truck Route Segment 1: Spartan Way Segment

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.1911959	miles	AERMOD
2. # of trucks trips per day:	7742	trucks	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:

Total daily PM10 On-site Mobile Emissions Generated by the project:

8.48614645	**g/day-all trucks**
0.01870873	lbs/day-all trucks
6.82868579	**lbs/year-all trucks**

Max Hr Emissions

Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.001559	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 2 - Golden Valley Parkway Segment (south)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.4950464	miles	AERMOD
2. # of trucks trips per day:	263	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

0.74706221	**g/day-all trucks**
0.00164699	lbs/day-all trucks
0.60115073	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000137	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 3: Golden Valley Parkway + Does Reis Segment (north)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.5988154	miles	AERMOD
2. # of trucks trips per day:	7479	trucks	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:

Total daily PM10 On-site Mobile Emissions Generated by the project:

	25.6745024	**g/day-all trucks**
	0.05660252	lbs/day-all trucks
	20.6599203	**lbs/year-all trucks**

Max Hr Emissions

Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

	0.004717	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 4 - Manthey Road Segment 1

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.6136041	miles	AERMOD
2. # of trucks trips per day:	4305	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

15.1424097	**g/day-all trucks**
0.03338326	lbs/day-all trucks
12.1848896	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.002782	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 5 - Manthey Road Segment 2

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.2568749	miles	AERMOD
2. # of trucks trips per day:	2508	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

	3.69401477	**g/day-all trucks**
	0.0081439	lbs/day-all trucks
	2.97252308	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

	0.000679	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 6 - Manthey Road Segment 3

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.5090273	miles	AERMOD
2. # of trucks trips per day:	1850	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

5.39971606	**g/day-all trucks**
0.01190432	lbs/day-all trucks
4.34507754	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000992	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 7 - De Lima Road Segment 1

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.1158857	miles	AERMOD
2. # of trucks trips per day:	4134	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

2.7466483	**g/day-all trucks**
0.00605532	lbs/day-all trucks
2.21019026	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000505	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 8 - De Lima Road Segment 2

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.114208	miles	AERMOD
2. # of trucks trips per day:	3499	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

2.29122062	**g/day-all trucks**
0.00505127	lbs/day-all trucks
1.84371384	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000421	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 9 - De Lima Road Segment 3

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.2921066	miles	AERMOD
2. # of trucks trips per day:	2493	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

4.17473765	**g/day-all trucks**
0.00920371	lbs/day-all trucks
3.3593542	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000767	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 10 - De Lima Road Segment 4

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.1134624	miles	AERMOD
2. # of trucks trips per day:	2446	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

1.59136937	**g/day-all trucks**
0.00350836	lbs/day-all trucks
1.28055313	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000292	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 11 - De Lima Road Segment 5

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.1045768	miles	AERMOD
2. # of trucks trips per day:	1579	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

0.94688549	**g/day-all trucks**
0.00208752	lbs/day-all trucks
0.76194578	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000174	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 12 - De Lima Road Segment 6

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.2016971	miles	AERMOD
2. # of trucks trips per day:	743	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

0.85941481	**g/day-all trucks**
0.00189468	lbs/day-all trucks
0.69155933	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000158	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 13 - De Lima Road Segment 7

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.1029612	miles	AERMOD
2. # of trucks trips per day:	619	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

0.36559103	**g/day-all trucks**
0.00080599	lbs/day-all trucks
0.29418609	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000067	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 14 - De Lima Road Segment 8 (Northern Roadway)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.3023592	miles	AERMOD
2. # of trucks trips per day:	1657	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

2.87189732	**g/day-all trucks**
0.00633144	lbs/day-all trucks
2.31097643	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000528	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 15 - De Lima Road Segment 9 (Northern Roadway)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.2105827	miles	AERMOD
2. # of trucks trips per day:	1030	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

1.24310061	**g/day-all trucks**
0.00274056	lbs/day-all trucks
1.00030603	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000228	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 16 - De Lima Road Segment 10 (Northern Roadway)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.1665275	miles	AERMOD
2. # of trucks trips per day:	1076	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

1.02738379	**g/day-all trucks**
0.00226499	lbs/day-all trucks
0.82672166	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000189	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 17 - De Lima Road Segment 11 (Northern Roadway)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.2027534	miles	AERMOD
2. # of trucks trips per day:	689	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

0.80092177 g/day-all trucks
0.00176573 lbs/day-all trucks
0.64449078 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000147 lbs/hour-all trucks

Mobile Truck Emissions - Truck Route Segment 18 - De Lima Road Segment 12 (Northern Roadway)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.2469329	miles	AERMOD
2. # of trucks trips per day:	503	truck trips	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 30 MPH, T7 Tractor Class 8):			EMFAC2021
	0.00573296	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

0.71240057	**g/day-all trucks**
0.00157057	lbs/day-all trucks
0.57325898	**lbs/year-all trucks**

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000131	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 19 - I-5 Northbound Segment (Entry)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	0.7138934	miles	AERMOD
2. # of trucks trips per day:	1835	trucks	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 45 MPH, T7 Tractor Class 8):			EMFAC2021
	0.01089355	g/mile	

Therefore:

Total daily PM10 On-site Mobile Emissions Generated by the project:

14.2693491	**g/day-all trucks**
0.03145849	lbs/day-all trucks
11.4823497	**lbs/year-all trucks**

Max Hr Emissions

Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.002622	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 20 - I-5 Southbound Segment (Entry)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	1.195891	miles	AERMOD
2. # of trucks trips per day:	2036	trucks	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 45 MPH, T7 Tractor Class 8):			EMFAC2021
	0.01089355	g/mile	

Therefore:

Total daily PM10 On-site Mobile Emissions Generated by the project:

26.5258797	**g/day-all trucks**
0.05847948	lbs/day-all trucks
21.345012	**lbs/year-all trucks**

Max Hr Emissions

Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.004873	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 21 - I-5 Northbound Segment (Exit)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	1.278161	miles	AERMOD
2. # of trucks trips per day:	1936	trucks	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 45 MPH, T7 Tractor Class 8):			EMFAC2021
	0.01089355	g/mile	

Therefore:

Total daily PM10 On-site Mobile Emissions Generated by the project:

26.9493329	**g/day-all trucks**	
0.05941304	lbs/day-all trucks	
21.685759	**lbs/year-all trucks**	

Max Hr Emissions

Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.004951	**lbs/hour-all trucks**

Mobile Truck Emissions - Truck Route Segment 22 - I-5 Southbound Segment (Exit)

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled (line segment):	1.01	miles	AERMOD
2. # of trucks trips per day:	0.5635215	trucks	Fehr & Peers
3. PM EF (San Joaquin County, Weighted 45 MPH, T7 Tractor Class 8):			EMFAC2021
	0.01089355	g/mile	

Therefore:

Total daily PM10 On-site Mobile Emissions Generated by the project:

0.00620014	**g/day-all trucks**
1.3669E-05	lbs/day-all trucks
0.00498916	**lbs/year-all trucks**

Max Hr Emissions

Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000001	**lbs/hour-all trucks**

Calculation of Weighted Emission Factor for T7 Tractor Class 8 - 45 MPH

Sources: OEHHA, Air Toxics Hot Spots Program Assessment (Februaary 2015), page 8-4 & 8-5; EMFAC2021 (v1.01).

Note: Year 2050 emission factor also used for years after 2050.

Age Sensitivity Factors by Age Group for Cancer Risk Assessment

Age Group	Age Sensitivity Factor (Unitless)
3rd Trimester	10
0<2 years	10
2<9 years	3
2<16 years	3
16<30 years	1
16<70 years	1

Source: OEHHA, February 2015.

Calculation of Weighted Emission Factor (based on OEHHA Guidance and EMFAC 2021 Emission Factors)

Age	Year	Emission Factor (g/mile) T7 Tractor Class 8	Weighting
3rd Trimester	2021	0.021563122	10
0	2022	0.014397427	10
1	2023	0.012072359	10
2	2024	0.011891928	3
3	2025	0.011672775	3
4	2026	0.011525326	3
5	2027	0.011353357	3
6	2028	0.011165647	3
7	2029	0.010974024	3
8	2030	0.010771152	3
9	2031	0.010553786	3
10	2032	0.010328119	3
11	2033	0.010108579	3
12	2034	0.009908906	3
13	2035	0.00972279	3
14	2036	0.009543128	3
15	2037	0.00937553	3
16	2038	0.00922014	1
17	2039	0.009078196	1
18	2040	0.008945911	1
19	2041	0.008822959	1
20	2042	0.008711013	1
21	2043	0.008611262	1
22	2044	0.008522241	1
23	2045	0.008444465	1
24	2046	0.00837796	1
25	2047	0.008322037	1
26	2048	0.00827606	1
27	2049	0.008238141	1
28	2050	0.008206878	1
29	2051	0.008206878	1
30	2052	0.008206878	1
31	2053	0.008206878	1
32	2054	0.008206878	1
33	2055	0.008206878	1
34	2056	0.008206878	1
35	2057	0.008206878	1
36	2058	0.008206878	1
37	2059	0.008206878	1
38	2060	0.008206878	1
39	2061	0.008206878	1
40	2062	0.008206878	1
41	2063	0.008206878	1
42	2064	0.008206878	1
43	2065	0.008206878	1
44	2066	0.008206878	1
45	2067	0.008206878	1
46	2068	0.008206878	1
47	2069	0.008206878	1
48	2070	0.008206878	1
49	2071	0.008206878	1
50	2072	0.008206878	1
51	2073	0.008206878	1
52	2074	0.008206878	1
53	2075	0.008206878	1
54	2076	0.008206878	1
55	2077	0.008206878	1
56	2078	0.008206878	1
57	2079	0.008206878	1
58	2080	0.008206878	1
59	2081	0.008206878	1
60	2082	0.008206878	1
61	2083	0.008206878	1
62	2084	0.008206878	1
63	2085	0.008206878	1
64	2086	0.008206878	1
65	2087	0.008206878	1
66	2088	0.008206878	1
67	2089	0.008206878	1
68	2090	0.008206878	1
69	2091	0.008206878	1
70	2092	0.008206878	1

Weighted Emission Factor (g/mile)

0.010893546

Calculation of Weighted Emission Factor for T7 Tractor Class 8 - 30 MPH

Sources: OEHHA, Air Toxics Hot Spots Program Assessment (Februaary 2015), page 8-4 & 8-5; EMFAC2021 (v1.01).

Note: Year 2050 emission factor also used for years after 2050.

Age Sensitivity Factors by Age Group for Cancer Risk Assessment

Age Group	Age Sensitivity Factor (Unitless)
3rd Trimester	10
0<2 years	10
2<9 years	3
2<16 years	3
16<30 years	1
16<70 years	1

Source: OEHHA, February 2015.

Calculation of Weighted Emission Factor (based on OEHHA Guidance and EMFAC 2021 Emission Factors)

		Emission Factor (g/mile)	
Age	Year	T7 Tractor Class 8	Weighting
3rd Trimester	2021	0.015886998	10
0	2022	0.009449764	10
1	2023	0.00603132	10
2	2024	0.00588321	3
3	2025	0.005719438	3
4	2026	0.005594387	3
5	2027	0.005462332	3
6	2028	0.005327672	3
7	2029	0.005196464	3
8	2030	0.005063452	3
9	2031	0.004926693	3
10	2032	0.004790078	3
11	2033	0.004661139	3
12	2034	0.004546596	3
13	2035	0.004441891	3
14	2036	0.004342283	3
15	2037	0.004250671	3
16	2038	0.004167113	1
17	2039	0.004092573	1
18	2040	0.004024456	1
19	2041	0.003962266	1
20	2042	0.003906359	1
21	2043	0.003857114	1
22	2044	0.003813379	1
23	2045	0.003775329	1
24	2046	0.003742875	1
25	2047	0.00371564	1
26	2048	0.003693282	1
27	2049	0.003674812	1
28	2050	0.003659553	1
29	2051	0.003659553	1
30	2052	0.003659553	1
31	2053	0.003659553	1
32	2054	0.003659553	1
33	2055	0.003659553	1
34	2056	0.003659553	1
35	2057	0.003659553	1
36	2058	0.003659553	1
37	2059	0.003659553	1
38	2060	0.003659553	1
39	2061	0.003659553	1
40	2062	0.003659553	1
41	2063	0.003659553	1
42	2064	0.003659553	1
43	2065	0.003659553	1
44	2066	0.003659553	1
45	2067	0.003659553	1
46	2068	0.003659553	1
47	2069	0.003659553	1
48	2070	0.003659553	1
49	2071	0.003659553	1
50	2072	0.003659553	1
51	2073	0.003659553	1
52	2074	0.003659553	1
53	2075	0.003659553	1
54	2076	0.003659553	1
55	2077	0.003659553	1
56	2078	0.003659553	1
57	2079	0.003659553	1
58	2080	0.003659553	1
59	2081	0.003659553	1
60	2082	0.003659553	1
61	2083	0.003659553	1
62	2084	0.003659553	1
63	2085	0.003659553	1
64	2086	0.003659553	1
65	2087	0.003659553	1
66	2088	0.003659553	1
67	2089	0.003659553	1
68	2090	0.003659553	1
69	2091	0.003659553	1
70	2092	0.003659553	1

Weighted Emission Factor (g/mile)

0.005732958

calendar_year	season_month	sub_area	vehicle_class	temperature	relative_humidity	process	speed_time	pollutant	emission_rate
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128057422
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009339778
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003659553
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128076265
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009360046
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003674812
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128096837
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009384063
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003693282
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128119072
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.00941242
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.00371564
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128140658
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009445772
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003742875
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128166943
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009484625
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003775329
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128198496
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009529412
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003813379
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128238394
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009579627
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003857114
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128276804
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009634935
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003906359
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128299909
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009695397
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.003962266
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128299713
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009760158
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004024456
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128277758
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009828207
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004092573
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128231586
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.00989835
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004167113
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128172362
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009971651
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004250671
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128101709
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010049314
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004342283
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128035956
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010134182
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004441891
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127983968
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010229391
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004546596
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127970395
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010333746
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004661139
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128008256
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010450703
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004790078
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128054645
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010577838
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.004926693
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.128049971
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010716402
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.005063452
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127969437
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036

2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010863993
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.005196464
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127879364
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011022894
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.005327672
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127762457
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011192921
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.005462332
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127518572
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011389938
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.005594387
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127307086
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011637331
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.005719438
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127421887
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011950321
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.00588321
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.127553976
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.012344881
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.00603132
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.130474272
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.013764921
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.009449764
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	30	PM	0.131972054
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.01749219
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	30	PM	0.015886998

calendar_year	season_month	sub_area	vehicle_class	temperature	relative_humidity	process	speed_time	pollutant	emission_rate
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.0799832
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009339778
2050	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008206878
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079994072
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009360046
2049	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008238141
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080005828
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009384063
2048	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.00827606
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080018383
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.00941242
2047	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008322037
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080030212
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009445772
2046	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.00837796
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080044667
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009484625
2045	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008444465
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080062069
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009529412
2044	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008522241
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080084361
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009579627
2043	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008611262
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080105303
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009634935
2042	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008711013
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080116131
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009695397
2041	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008822959
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080111804
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009760158
2040	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.008945911
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080093373
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009828207
2039	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.009078196
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080059307
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.00989835
2038	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.00922014
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.080016638
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.009971651
2037	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.00937553
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079966296
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010049314
2036	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.009543128
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.07991848
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010134182
2035	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.00972279
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079878749
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010229391
2034	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.009908906
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079862693
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010333746
2033	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.010108579
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079878508
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010450703
2032	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.010328119
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.07989938
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010577838
2031	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.010553786
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079888446
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010716402
2030	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.010771152
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079830198
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.010863993
2029	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.010974024
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079766768
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036

2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011022894
2028	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.011165647
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079687259
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011192921
2027	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.011353357
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079528387
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011389938
2026	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.011525326
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079391241
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011637331
2025	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.011672775
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.079461801
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.011950321
2024	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.011891928
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.07954417
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.012344881
2023	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.012072359
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.081358716
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.013764921
2022	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.014397427
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMBW	45	PM	0.082289345
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8			PMTW		PM	0.036
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8			IDLEX		PM	0.01749219
2021	Annual	San Joaquin (SJV)	T7 Tractor Class 8	60	60	RUNEX	45	PM	0.021563122