DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR THE

LATHROP INTEGRATED WATER RESOURCES MASTER PLAN

(SCH: 2019029106)

JULY 2019

Prepared for:

City of Lathrop, Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330
(209) 941-7430

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

DRAFT
ENVIRONMENTAL IMPACT REPORT

FOR THE

LATHROP INTEGRATED WATER RESOURCES MASTER PLAN
(SCH: 2019029106)

JULY 2019

Prepared for:

City of Lathrop, Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330
(209) 941-7430

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

DRAFT EIR

Chapter **Page Number**

TABLE OF CONTENTS

Table **Page Number**

Figures

Note: Figures are located at the end of the chapters.

Appendix

INTRODUCTION

The City of Lathrop (City) has determined that a project-level environmental impact report (EIR) is required for the proposed Lathrop Integrated Water Resources Master Plan (IWRMP) Project (proposed project) pursuant to the requirements of the California Environmental Quality Act (CEQA).

This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. The program-level analysis considers the broad environmental effects of the IWRMP. CEQA Guidelines Section 15168 states that a Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1) Geographically;
2) As logical parts in the chain of contemplated actions;
3) In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

A program-level analysis may be prepared for a long-term program before the details of each phase or project have been developed. For the IWRMP, facilities will be implemented in the near-term and long-term. The long-term components do not currently have specific construction and operational details provided. This Program EIR serves as a first-tier environmental document that focuses on the overall effects of implementing the IWRMP.

PROJECT DESCRIPTION

The following provides a brief summary and overview of the proposed project. Section 2.0 of this EIR includes a detailed description of the proposed project, including maps and graphics. The reader is referred to Section 2.0 for a more complete and thorough description of the components of the proposed project.

The project site is located throughout Lathrop, California. The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area.

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's existing recycled water distribution system is generally contiguous with the City limits, and some of the future facilities are planned for north of the City limits.

The proposed project includes adoption and implementation of the IWRMP, which includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The Water System Master Plan focuses on development of water demand unit factors and projections, hydraulic assessment of the City's existing water infrastructure and key planned improvements, and development of recommended water system capital improvement projects (CIPs). The Wastewater System Master Plan focuses on development of wastewater flow unit factors and projections, hydraulic assessment of the City's existing infrastructure and key planned conveyances, and development of recommended wastewater CIPs. The Recycled Water System Master Plan focuses on an evaluation of recycled water use and disposal alternatives, recycled water balance analyses, hydraulic assessment of the City's existing recycled water infrastructure and key planned improvements, and development of recommended recycled water system improvements and operational recommendations.

Generators would be provided in conjunction with the proposed water pump station improvements. The generators will be added as the new essential facilities are constructed and brought on-line, such as the Central Lathrop Specific Plan (CLSP) water tank, River Islands water tank/SSJID turnout, and sewer pump stations. The generators would all be for emergency operations in the event of a power outage, and would only be run for maintenance and air quality permit testing requirements.

Additionally, Supervisory Control and Data Acquisition (SCADA) communication towers would also be provided. Currently, SCADA towers are located at the City of Lathrop Corporation Yard (2112 E. Louise Avenue), the City of Lathrop City Hall (390 Town Centre Drive), the Lathrop Consolidated Treatment Facility (LCTF) (18800 Christopher Way), and at a few other locations in the River Islands and CLSP development areas. The proposed SCADA towers are required in order to provide a line-of-sight for radio communications between the facilities. The towers would be 50- to 100-feet in height, or taller.

Refer to Section 2.0, Project Description, for a more complete description of the details of the proposed project.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the proposed Lathrop IWRMP Project that are known to the City of Lathrop, were raised during the Notice of Preparation (NOP)

process, or raised during preparation of the Draft EIR. This Draft EIR discusses potentially significant impacts associated with biological resources, cultural and tribal resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and utilities.

The City received six comments on the NOP for the proposed Lathrop IWRMP Draft EIR. A brief summary of each comment letter is provided in the list below. A copy of each letter is provided in Appendix A of this Draft EIR. A public scoping meeting was held on March 13, 2019 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR.

Aspects of the proposed project that could be of public concern include the following:

- Potential for use of electricity and gas facilities;
- Potential to result in growth in and along the South Delta-Lower San Joaquin River Basin; and
- Discharge of recycled water into the San Joaquin River System;
- Consistency with existing and future improvements associated with the River Islands development area.

ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6 of the CEQA Guidelines requires an EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project. The alternatives analyzed in this EIR include the following two alternatives in addition to the proposed Lathrop IWRMP:

- No Project (No Build) Alternative
- Near-Term Improvements Alternative

Alternatives are described in detail in Section 5.0, Alternatives to the Proposed Project. A comparative analysis of the proposed project and each of the project alternatives is provided in Table ES-1. The table includes a numerical scoring system, which assigns a score of “2,” “3,” or “4” to the proposed project and each of the alternatives with respect to how each alternative compares to the proposed project in terms of the severity of the environmental topics addressed in this EIR. A score of “2” indicates that the alternative would have a better (or lessened) impact when compared to the proposed project. A score of “3” indicates that the alternative would have the same (or equal) level of impact when compared to the proposed project. A score of “4” indicates that the alternative would have a worse (or greater) impact when compared to the proposed project. The project alternative with the lowest total score is considered the environmentally superior alternative.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*PROPOSED PROJECT*	*NO PROJECT (NO BUILD) ALTERNATIVE*	*NEAR-TERM IMPROVEMENTS ALTERNATIVE*
Biological Resources	3 – Same	2 – Lesser	2 – Lesser
Cultural and Tribal Resources	3 – Same	2 – Lesser	2 – Lesser
Geology and Soils	3 – Same	2 – Lesser	3 – Same
Hazards and Hazardous Materials	3 – Same	2 – Lesser	3 – Same
Hydrology and Water Quality	3 – Same	2 – Lesser	3 – Same
Utilities	3 – Same	3 – Same	3 – Same
Summary	**18**	**13**	**16**

As shown in Table ES-1, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Near-Term Improvements Alternative ranks higher than the proposed project. However, the Near-Term Improvements Alternative would not fully meet all of the project objectives.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

The environmental impacts of the proposed project, the impact level of significance prior to mitigation, the proposed mitigation measures and/or adopted policies and standard measures that are already in place to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
BIOLOGICAL RESOURCES			
Impact 3.1-1: The proposed project has the potential to result in direct or indirect effects on special-status species	PS	***Mitigation Measure 3.1-1:*** *Prior to commencement of any grading activities, the project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*	LS
Impact 3.1-2: The proposed project would not result in adverse effects on riparian habitat, a sensitive natural community, protected wetlands, or jurisdictional waters	LS	None required.	--
Impact 3.1-3: The proposed project would not result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites	LS	None required.	--
Impact 3.1-4: The proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	LS	None required.	--
Impact 3.1-5: The proposed project has the potential to conflict with an adopted Habitat Conservation Plan	PS	*Implement* ***Mitigation Measure 3.1-1***	LS

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
CULTURAL AND TRIBAL RESOURCES			
Impact 3.2-1: The proposed project has the potential to cause a substantial adverse change to a significant historical resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074	PS	***Mitigation Measure 3.2-1:*** *All construction workers shall receive a sensitivity training session before they begin site work. The sensitivity training shall inform the workers of their responsibility to identify and protect any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources, within the project site. The sensitivity training shall cover laws pertaining to cultural resources, examples of cultural resources that may be discovered in the project site, and what to do if a cultural resource, or anything that may be a cultural resource, is discovered.* *If any subsurface historic remains, prehistoric or historic artifacts, paleontological resources, other indications of archaeological resources, or cultural and/or tribal resources are found during grading and construction activities, all work within 100 feet of the find shall cease, the City of Lathrop Community Development Department shall be notified, and the applicant shall retain an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, to evaluate the find(s). If tribal resources are found during grading and construction activities, the applicant shall notify the Native American Heritage Commission. If paleontological resources are found during grading and construction activities, a qualified paleontologist shall be retained to determine the significance of the discovery.* *The archaeologist and/or paleontologist shall define the physical extent and the nature of any built features or artifact-bearing deposits. The investigation shall proceed immediately into a formal evaluation to determine the eligibility of the feature(s) for inclusion in the California Register of Historical Resources. The formal evaluation shall include, at a minimum, additional exposure of the feature(s), photo-documentation and recordation, and analysis of the artifact assemblage(s). If the evaluation determines that the feature(s) and artifact(s) do not have sufficient data potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists (e.g., an intact feature is identified with a large and varied artifact assemblage), further mitigation would be necessary, which might include avoidance of further disturbance to the resource(s) through project redesign. If avoidance is determined to be infeasible, additional data recovery excavations shall be conducted for the resource(s), to collect enough information to exhaust the data potential of those resources.*	LS

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		Pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Data recovery efforts can range from rapid photographic documentation to extensive excavation depending upon the physical nature of the resource. The degree of effort shall be determined at the discretion of a qualified archaeologist and should be sufficient to recover data considered important to the area's history and/or prehistory. Significance determinations for tribal cultural resources shall be measured in terms of criteria for inclusion on the California Register of Historical Resources (Title 14 CCR, §4852[a]), and the definition of tribal cultural resources set forth in Public Resources Code Section 21074 and 5020.1 (k). The evaluation of the tribal cultural resource(s) shall include culturally appropriate temporary and permanent treatment, which may include avoidance of tribal cultural resources, in-place preservation, and/or re-burial on project property so the resource(s) are not subject to further disturbance in perpetuity. Any re-burial shall occur at a location predetermined between the landowner and the Native American Heritage Commission. The landowner shall relinquish ownership of all sacred items, burial goods, and all archaeological artifacts that are found on the project area to the Native American Heritage Commission for proper treatment and disposition. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation. *The language of this mitigation measure shall be included on any future grading plans, utility plans, and subdivision improvement drawings approved by the City for the development of the project.*	
Impact 3.2-2: The proposed project has the potential to cause a substantial adverse change to a significant archaeological resource, as defined in CEQA Guidelines §15064.5	PS	*Implement* ***Mitigation Measure 3.2-1***	LS

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.2-3: The proposed project has the potential to directly or indirectly destroy a unique paleontological resource or sit or unique geologic feature	PS	*Implement **Mitigation Measure 3.2-1***	LS
Impact 3.2-4: The proposed project has the potential to disturb human remains, including those interred outside of formal cemeteries	PS	***Mitigation Measure 3.2-2:** If human remains are discovered during the course of construction during any phase of the project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:* • *The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.* • *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:* o *The Native American Heritage Commission is unable to identify a descendent.* o *The descendant identified fails to make a recommendation.* o *The City of Lathrop or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*	LS

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
GEOLOGY AND SOILS			
Impact 3.3-1: The proposed project may directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic related ground failure, or landslides	LS	None required.	--
Impact 3.3-2: The proposed project may result in substantial soil erosion or the loss of topsoil	PS	***Mitigation Measure 3.3-1:*** *Prior to clearing, grading, and disturbances to the ground such as stockpiling, or excavation for each phase of the project, the project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the SWRCB to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ). The SWPPP shall be designed with Best Management Practices (BMPs) that the SWRCB has deemed as effective at reducing erosion, controlling sediment, and managing runoff. These include: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs, installing silt fences or placing straw wattles below slopes, installing berms and other temporary run-on and runoff diversions. These BMPs are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Final selection of BMPs will be subject to approval by City of Lathrop and the SWRCB . The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the SWRCB .*	LS
Impact 3.3-3: The proposed project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse	PS	***Mitigation Measure 3.3-2:*** *Prior to earthmoving activities for each phase of the project, a certified geotechnical engineer, or equivalent, shall be retained to perform a final geotechnical evaluation of the soils at a design-level as required by the requirements of the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction or*	LS

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		lateral spreading. The grading and improvement plans for each phase of the project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.	
Impact 3.3-4: The proposed project has the potential to be located on expansive soils which may create substantial risks to life or property	PS	*Implement* ***Mitigation Measure 3.3-2****.*	LS
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.4-1: The proposed project has the potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	PS	***Mitigation Measure 3.4-1****: A Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health prior to the issuance of the first grading permit for each phase of the project. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.* ***Mitigation Measure 3.4-2:*** *Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Division (CUPA) for review and approval. If during the construction process the contractors or the subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*	LS
Impact 3.4-2: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LS	None required.	--

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.4-3: The proposed project would not result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	LS	None required.	--
Impact 3.4-4: The proposed project has the potential to result in a safety hazard or excessive noise for people residing or working on the project site as a result of a public airport or public use airport	LS	None required.	--
Impact 3.4-5: The proposed project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	LS	None required.	--
Impact 3.4-6: The proposed project has the potential to expose people or structures to a risk of loss, injury or death from wildland fires	LS	None required.	--
HYDROLOGY AND WATER QUALITY			
Impact 3.5-1: The proposed project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction	PS	*Implement* ***Mitigation Measure 3.3-1***.	LS
Impact 3.5-2: The proposed project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operation	LS	None required.	--

Environmental Impact	*Level of Significance Without Mitigation*	*Mitigation Measure*	*Resulting Level of Significance*
Impact 3.5-3: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin	LS	None required.	--
Impact 3.5-4: The proposed project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows	LS	None required.	--
Impact 3.5-5: The proposed project would not release pollutants due to project inundation by a flood, tsunami, or seiche	LS	None required.	--
Impact 3.5-6: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	LS	None required.	--

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
UTILITIES			
Impact 3.6-1: The proposed project would require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects	LS	None required.	--
Impact 3.6-2: The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments	LS	None required.	--
Impact 3.6-3: The proposed would require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects	LS	None required.	--
Impact 3.6-4: The proposed project would not result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years	LS	None required.	--
Impact 3.6-5: The proposed project would not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects	LS	None required.	--

Environmental Impact	*Level of Significance Without Mitigation*	*Mitigation Measure*	*Resulting Level of Significance*
Impact 3.6-6: The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals	LS	None required.	--
Impact 3.6-7: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste	LS	None required.	--
Impact 3.15-3: The project may not be served by a permitted landfill with sufficient capacity to meet the solid waste disposal needs of the project	LS	None required.	--
OTHER CEQA-REQUIRED TOPICS			
Impact 4.1: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	LCC	None required.	--
Impact 4.2: Cumulative Impacts on Known and Undiscovered Cultural Resources	LCC	None required.	--
Impact 4.3: Cumulative Impact on Geologic and Soils Resources	LCC	None required.	--
Impact 4.4: Cumulative Impact Related to Hazards and Hazardous Materials	LCC	None required.	--
Impact 4.5: Cumulative Increases in Peak Stormwater Runoff from the Project Site	LCC	None required	--
Impact 4.6: Cumulative Impacts Related to Degradation of Water Quality	LCC	None required.	--

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 4.7: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge	LCC	None required.	--
Impact 4.8: Cumulative Impacts Related to Inundation by a Flood, Tsunami, or Seiche	LCC	None required.	--
Impact 4.9: Cumulative Impact on Wastewater Utilities	LCC	None required.	--
Impact 4.10: Cumulative Impact on Water Utilities	LCC	None required.	--
Impact 4.11: Cumulative Impact on Stormwater Facilities	LCC	None required.	--
Impact 4.12: Cumulative Impact on Solid Waste Facilities	LCC	None required.	--
Impact 4.13: Cumulative Impact on Electric Power, Natural Gas, and Telecommunication Facilities	LCC	None required.	--

This page left intentionally blank.

This section summarizes the purpose of the Environmental Impact Report (EIR) for the Lathrop Integrated Water Resources Master Plan (IWRMP) Project (the "project"). The following discussion addresses the environmental procedures that are to be followed according to State law, the intended uses of the EIR, the EIR scope and organization, and a summary of the agency and public comments received during the public review period for the Notice of Preparation (NOP).

1.1 PURPOSE AND INTENDED USES OF THE EIR

The City of Lathrop, as lead agency, determined that the proposed Lathrop IWRMP Project is a "project" within the definition of the California Environmental Quality Act (CEQA). CEQA requires the preparation of an environmental impact report prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development. CEQA further requires public agencies to balance a variety of public objectives, including economic, environmental, and social factors in making a decision to approve a development project with significant and unavoidable environmental impacts.

The City of Lathrop, as the lead agency, has prepared this Draft EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from construction and operation of the Lathrop IWRMP. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used by the City to determine whether to approve, modify, or deny the Lathrop IWRMP and associated approvals in light of the project's environmental effects. The EIR will be used as the primary environmental document to evaluate full project development, including all associated infrastructure improvements, and permitting actions associated with the Lathrop IWRMP. All of the actions and components of the proposed project are described in detail in Section 2.0 of this Draft EIR.

1.2 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section

15168. The program-level analysis considers the broad environmental effects of the IWRMP. CEQA Guidelines Section 15168 states that a Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1) Geographically;
2) As logical parts in the chain of contemplated actions;
3) In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or
4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

A program-level analysis may be prepared for a long-term program before the details of each phase or project have been developed. For the IWRMP, facilities will be implemented in the near-term and long-term. The long-term components do not currently have specific construction and operational details provided. This Program EIR serves as a first-tier environmental document that focuses on the overall effects of implementing the IWRMP.

1.3 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

As required by CEQA, this EIR defines lead, responsible, and trustee agencies. The City of Lathrop is the "Lead Agency" for the project because it holds principal responsibility for approving the project. The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386).

The following agencies are considered Responsible or Trustee Agencies for this project, and may be required to issue permits or approve certain aspects of the proposed project:

- State Water Quality Control Board – Construction activities would be required to be covered under the National Pollution Discharge Elimination System;
- State Water Quality Control Board – The Storm Water Pollution Prevention Plan would be required to be approved prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District – Approval of construction-related air quality permits;
- San Joaquin Council of Governments – Review of project application to determine consistency with the San Joaquin County Multi-Species Habitat, Conservation, and Open Space Plan.

1.4 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City circulated an Initial Study and NOP of an EIR for the proposed project on February 20, 2019 to trustee agencies, the State Clearinghouse, and the public. A public scoping meeting was held on March 13, 2019 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The NOP and public comment provided to the NOP by interested parties are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City has filed the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

PUBLIC NOTICE/PUBLIC REVIEW

The City has provided a public notice of availability for the Draft EIR, and invites comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, a forty-five (45) day review period is required for this Draft EIR. Public comment on the Draft EIR will be accepted in written form and orally at a public meeting before the Lathrop Planning Commission. All comments or questions regarding the Draft EIR should be addressed to:

Greg Gibson, Senior Civil Engineer
City of Lathrop
Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330
ggibson@ci.lathrop.ca.us

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete", the City Council may certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and

2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. The Guidelines state as follows:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.*

Following review and consideration of the Final EIR, the City may take action to approve, modify, or reject the project. A Mitigation Monitoring Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. This Mitigation Monitoring Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City of Lathrop, applicable local and regional planning documents, and responses to the NOP.

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

This Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, and identifies the scope and organization of the Draft EIR.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, related infrastructure improvements, and a list of related agency action requirements.

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact after the incorporation of mitigation measures.

The following environmental topics are addressed in this section:

- Biological Resources
- Cultural and Tribal Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Utilities

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project. Chapter 5.0 provides a comparative analysis between the environmental impacts of the project and the selected alternatives.

CHAPTER 6.0 – REPORT PREPARERS

This chapter lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

CHAPTER 7.0 – REFERENCES

This chapter lists all source documents used in the preparation of the EIR.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as technical material prepared to support the analysis. The EIR appendices are available in electronic format. The appendices can be viewed online at:

https://www.ci.lathrop.ca.us/com-dev/page/public-review-documents

1.6 SIGNIFICANCE CRITERIA

In general, CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial" adverse change in the physical environment. A potential impact is considered significant if a project would substantially degrade the environmental quality of land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance (CEQA Guidelines §§15360, 15382).

Definitions of significance vary with the physical condition affected and the setting in which the change occurs. The CEQA Guidelines set forth physical impacts that trigger the requirement to make "mandatory findings of significance" (CEQA Guidelines §15065).

This CEQA document relies on three levels of impact significance:

1. Less-than-significant impact, for which no mitigation measures are warranted;
2. Significant impact that can be mitigated to a level that is less than significant; and

3. Significant impact that cannot be mitigated to a level that is less than significant. Such impacts are significant and unavoidable.

Each resource area uses a distinct set of significance criteria. For example, a proposed project resulting in an exposure of persons to noise levels in excess of standards established in the local general plan or community plan would be considered a significant impact. If existing levels, without the proposed project, already exceed the standards, an increase in noise levels of 3 dB attributable to the proposed would be considered significant. Construction of appropriate sound walls could reduce the impact to a less-than-significant level. If criteria for determining significance relative to a specific environmental resource impact are not identified in the Guidelines, criteria were developed for this Draft EIR consistent with the past pattern and practice of the City of Lathrop.

The significance criteria are identified at the beginning of the impacts discussion for each resource area. These significance criteria promote consistent evaluation of impacts for all alternatives considered, even though significance criteria are necessarily different for each resource considered.

1.7 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received six comments on the NOP for the proposed Lathrop IWRMP Draft EIR. A brief summary of each comment letter is provided in the list below. A copy of each letter is provided in Appendix A of this Draft EIR. A public scoping meeting was held on March 13, 2019 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR.

1. Central Valley Regional Water Quality Control Board (March 14, 2019);
2. Pacific Gas and Electric (February 20, 2019);
3. River Islands (March 21, 2019);
4. San Joaquin County Department of Public Works (March 22, 2019);
5. San Joaquin Valley Air Pollution Control District (March 19, 2019);
6. Terra Land Group (March 18, 2019).

1.8 AREAS OF CONTROVERSY

Aspects of the proposed project that could be of public concern include the following:

- Potential for use of electricity and gas facilities;
- Potential to result in growth in and along the South Delta-Lower San Joaquin River Basin; and
- Discharge of recycled water into the San Joaquin River System;
- Consistency with existing and future improvements associated with the River Islands development area.

This page left intentionally blank.

This chapter provides a comprehensive description of the Lathrop Integrated Water Resources Master Plan (IWRMP) Project (proposed project), including proposed infrastructure improvements, requested entitlements, and project objectives.

Figures referenced throughout this section are located at the end of the chapter.

2.1 PROJECT LOCATION AND ENVIRONMENTAL SETTING

The project site is located throughout Lathrop, California. See Figures 2.0-1 and 2.0-2 for the regional location and the project vicinity. The IWRMP includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area. See Figure 2.0-3 for the aerial view of the City.

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's existing recycled water distribution system is generally contiguous with the City limits, and some future facilities are planned for north of the City limits. See Figure 2.0-4 for the water system improvements projects included in the proposed Water System Master Plan, Figure 2.0-5 for the wastewater system improvements projects included in the proposed Wastewater System Master Plan, and Figures 2.0-6, 2.0-7, and 2.0-8 for the Phase 1, Phase 2A, and Phase 2B recycled water system infrastructure projects included in the proposed Recycled Water System Master Plan, respectively.

2.2 PROJECT BACKGROUND

For the past year, the City has been working to prepare a comprehensive update to the City's water, sewer and recycled water master plan documents in order to support growth in the City while maintaining safe, reliable utility services for existing users. Collectively, these documents are referred to as the City's IWRMP.

A comprehensive update to the City's water, sewer and recycled water master plan documents was needed to forecast and update water and sewer demand projections, address changes in regulatory requirements, population and growth projections, proposed land use, climate change and other factors. The last comprehensive update of the City's water, sewer and recycled master plans were prepared in 2001 and they have been amended numerous times. A Water Supply Study was prepared and adopted by the City in 2009 to serve as the basis for future water planning documents. A draft Water Master Plan was prepared for the City in 2013, but was never finalized and adopted. Over the course of time, numerous amendments to the master plans and changes have occurred that necessitate a comprehensive update to these documents.

The IWRMP has identified significant changes from previously approved master plan documents. Some of these changes include:

- Changes in demand factors for water, sewer and associated recycled water storage and disposal capacity.
- Changes in land use and growth projections from the General Plan.
- Closure of the Sharpe Army Depot and need for City to provide water and sewer service to the Army & Air Force Exchange Services (AAFES) and other organizations at the military base.
- Potential reductions to the City's water supply due to Sustainable Groundwater Management Act implementation, and curtailment of South San Joaquin Irrigation District surface water rights.
- Consolidation of existing proposed wastewater treatment facilities into a single facility and associated recycled water system used for land disposal of effluent.
- Need for additional treatment of groundwater for arsenic, manganese, uranium and other constituents of concern.

2.3 PROJECT GOALS, OBJECTIVES, AND ENTITLEMENT REQUESTS

GOALS AND OBJECTIVES

Consistent with California Environmental Quality Act (CEQA) Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the project shall be discussed. The principal objective of the proposed project is the approval and subsequent implementation of the Lathrop IWRMP.

The proposed project identifies the following objectives:

- Construct improvements that are integrated with the City's infrastructure geographic information system (GIS) and allow for automatic synchronization between the model and infrastructure GIS to limit future maintenance efforts;
- Provide cost-effective and fiscally responsible water, wastewater, and recycled water services that meet the water quantity, water quality, system pressure, and reliability requirements of the City's customers;

- Improve or replace existing City water, wastewater, and recycled water system infrastructure;
- Provide future water, wastewater, and recycled water system infrastructure necessary to meet projected growth of the City's service area.

ENTITLEMENT REQUESTS AND OTHER APPROVALS

The City of Lathrop is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the CEQA, Section 15050.

Implementation of the proposed project would require the following entitlements and approvals from the City of Lathrop:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- City review and approval of the Integrated Water Resources Master Plan.

Additionally, the following agencies may be required to issue permits or approve certain aspects of the proposed project:

- State Water Quality Control Board (SWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES);
- SWQCB – The Storm Water Pollution Prevention Plan (SWPPP) would be required to be approved prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Approval of construction-related air quality permits;
- San Joaquin Council of Governments (SJCOG) – Review of project application to determine consistency with the San Joaquin County Multi-Species Habitat, Conservation, and Open Space Plan (SJMSCP).

2.4 PROJECT DESCRIPTION

PROJECT OVERVIEW

The proposed project includes adoption and implementation of the IWRMP, which includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan. Each of these Plans is discussed in detail below.

WATER SYSTEM MASTER PLAN

The Water System Master Plan focuses on development of water demand unit factors and projections, hydraulic assessment of the City's existing water infrastructure and key planned improvements, and development of recommended water system capital improvement projects (CIPs). Recommended CIPs were developed to support the City's water supply strategy and address the deficiencies identified in the hydraulic assessment. A project was developed to

address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of supply sources within the City's distribution system.

Table 2.0-1 summarizes all the identified capacity improvement projects and their estimated planning level opinion of probable costs (OPCs).

TABLE 2.0-1: SUMMARY OF RECOMMENDED WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT #	PROJECT	TIME FRAME[1]	ADDRESSES FIRE FLOW DEFICIENCY	TOTAL PROJECT OPC[2,3]
	WATER SUPPLY IMPROVEMENTS			
WS-1	SGMA Compliance[4]	Existing	--	$300,000
WS-2	SSJID Turnout Emergency Backup Power[5]	Near-Term	--	$770,000
WS-3	Well 21 WTF Phase 2 Improvements[6]	Near-Term	--	$1,300,000
WS-4	Well 21 WTF Tank, BPS, and Transmission Main[7]	Near-Term	--	$5,520,000
WS-5	SCWSP Phase 2	Near-Term	--	$23,200,000
WS-6	SSJID Turnout 2 Expansion[5]	Long-term	--	$3,680,000
			Total Water Supply Improvements OPC	*$34,770,000*
	WATER DISTRIBUTION SYSTEM IMPROVEMENTS			
WD-1	Booster Pump Station 1 Pipeline Replacement and Residential Fire Flow Improvement Project	Existing	Yes	$1,200,000
WD-2	Booster Pump Station 3 Pipeline Replacement and Harlan Rd. Fire Flow Improvement Project	Existing[8]	Yes	$1,510,000
WD-3	Northern McKinley Industrial Area Fire Flow Improvement Project	Existing	Yes	$1,290,000
WD-4	Old Harlan Fire Flow Improvement Project	Existing	Yes	$110,000
WD-5	Crossroads Fire Flow Improvement Project	Existing	Yes	$50,000
WD-6	McKinley Ave. and E. Louise Ave. Fire Flow Improvement Project	Existing	Yes	$80,000
WD-7	Booster Pump Station 2 Pipeline Replacement Project	Existing	No	$230,000
WD-8	LAWTF Transmission Improvement Project	Existing[9]	No	$2,890,000
WD-9	Sadler Oak Transmission Improvement Project	Near-Term[10]	No	$360,000
WD-10	SSJID Transmission Improvement Project	Long-Term[11]	No	$1,630,000
			Total Water Distribution System Improvements OPC	*$9,350,000*
			Total Water Distribution Supply and System Improvements OPC	***$44,120,000***

NOTES:

[1] TIME FRAME REFERS TO WHEN PROJECTS ARE IDENTIFIED TO BE REQUIRED.

[2] COSTS SHOWN ARE PRESENTED IN NOVEMBER 2018 DOLLARS BASED ON AN ENR CCI OF 11,183 (20-CITY AVERAGE), WITH TOTALS ROUNDED TO THE NEAREST $10,000.

[3] COSTS INCLUDE MARK-UPS EQUAL TO 60% FOR CONSTRUCTION CONTINGENCY (25%), DESIGN (10%), CONSTRUCTION MANAGEMENT (10%), PERMITTING (10%), AND PROJECT IMPLEMENTATION (5%).

[4] THE CITY'S CURRENT BUDGET FOR SGMA COMPLIANCE HAS BEEN RETAINED HEREIN, BUT WILL BE REEVALUATED IN THE FUTURE TO ADDRESS THE FINAL RESULT OF THE BASIN BOUNDARY MODIFICATION REQUEST AND THE LEVEL OF EFFORT IDENTIFIED IN THE GSP FOR IMPLEMENTATION.

[5] CONSTRUCTION COSTS FOR IMPROVEMENTS HAVE BEEN CARRIED OVER FROM ESTIMATES IN THE 2013 DRAFT WATER MASTER PLAN, ESCALATED TO NOVEMBER 2018 DOLLARS.

[6] CONSTRUCTION COSTS FOR WELL 21 WTF PHASE 2 IMPROVEMENTS REFLECT THE CURRENT ENGINEER'S ESTIMATE PREPARED BY H2O URBAN SOLUTIONS IN JULY 2017, ESCALATED TO NOVEMBER 2018 DOLLARS. NOTE THAT THE RAW WATER LINE FROM MCKINLEY TO WELL 21 MAY BE CONSTRUCTED IN PHASE 1.

[7] CONSTRUCTION COSTS FOR WELL 21 WTF TANK AND BPS REFLECT THE CURRENT ENGINEER'S ESTIMATE PREPARED BY H2O URBAN SOLUTIONS IN JULY 2017, ESCALATED TO NOVEMBER 2018 DOLLARS. TRANSMISSION LINE COST REFLECT THE IWRMP UNIT PIPELINE COSTS FOR UNDEVELOPED AREAS.

[8] THE BPS-3 PIPELINE REPLACEMENT IS SIZED TO ADDRESS HEAD LOSS DEFICIENCIES INCREASED BY CENTRAL LATHROP SPECIFIC PLAN (CLSP) DEVELOPMENT.

[9] *THE LAWTF TRANSMISSION IMPROVEMENT PROJECT IMPROVES TRANSMISSION CAPABILITIES AND SUPPLY RESILIENCY BETWEEN THE LAWTF AND THE MOSSDALE, RIVER ISLANDS, AND CLSP DEVELOPMENT AREAS.*

[10] *THE SADLER OAK TRANSMISSION IMPROVEMENT PROJECT TRANSMISSION CAPABILITIES AND SUPPLY RESILIENCY BETWEEN TANK 4 AND RIVER ISLANDS AND SOUTH LATHROP.*

[11] *THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT (SSJID) TRANSMISSION IMPROVEMENT PROJECT TRANSMISSION CAPABILITIES AND SUPPLY RESILIENCY BETWEEN SSJID TURNOUT 1 AND CLSP AND ADDRESS HEAD LOSS DEFICIENCIES WHICH ARE WORSENED BY INCREASED DEMAND CONDITIONS WEST OF I-5.*

SOURCE: CITY OF LATHROP WATER SYSTEM MASTER PLAN, TABLE ES-2.

WASTEWATER SYSTEM MASTER PLAN

The Wastewater System Master Plan focuses on development of wastewater flow unit factors and projections, hydraulic assessment of the City's existing infrastructure and key planned conveyances, and development of recommended wastewater CIPs.

Recommended CIPs were developed to address the potential deficiencies identified in the hydraulic assessment. For each identified gravity sewer capacity deficiency, a project was developed to remove and replace the existing pipe with a larger diameter pipe. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Proposed increases in pipe diameters were optimized to meet the applicable criteria, while preventing oversizing and resulting low velocities during dry weather conditions. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. EKI has also suggested installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas.

Table 2.0-2 summarizes all the identified collection system improvement projects, including location, proposed improvements, estimated planning level costs, and alternatives.

TABLE 2.0-2: SUMMARY OF RECOMMENDED WASTEWATER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT #	*PROJECT*	*TIME FRAME*	*ADDRESSES MODELED SURCHARGING IN EXISTING SCENARIO*	*TOTAL PROJECT OPC[1]*
TREATMENT FACILITY IMPROVEMENT				
WWT-1	Lathrop CTP Expansion to 5.0 MGD	Existing	--	$36,000,000[3]
COLLECTION SYSTEM IMPROVEMENTS				
WW-1	Stonebridge Gravity Main Replacement and Pump Station Upgrade	Existing	No	$700,000
WW-2A	Woodfield West Deficiency Project - Alternative A	Existing[2]	No	$2,240,000
WW-2B	Woodfield West Deficiency Project - Alternative B	Existing[2]	No	$1,970,000
WW-3	Woodfield Pump Station Upgrade	Existing[2]	No	$720,000
WW-4	J St. Gravity Main Replacement Project	Existing[2]	Yes	$1,390,000
WW-5	Easy Ct. / O St. Gravity Main Replacement Project	Existing	No	$1,130,000
WW-6	O St. Pump Station Upgrade	Existing	No	$1,280,000
WW-7	Crossroads Gravity Main Replacement Project	Near-Term Future	No	$1,690,000
Collection System CIP Cost Subtotal				*$8,880,000 to $9,150,000*

PROJECT #	*PROJECT*	*TIME FRAME*	*ADDRESSES MODELED SURCHARGING IN EXISTING SCENARIO*	*TOTAL PROJECT OPC[1]*
MISCELLANEOUS COLLECTION SYSTEM IMPROVEMENT				
WW-8	Temporary Flow Monitoring	--	--	$100,000
			Total CIP Cost	***$44,980,000 to $45,250,000***

NOTES: [1] COSTS SHOWN ARE PRESENTED IN NOVEMBER 2018 DOLLARS BASED ON AN ENR CCI OF 11,184 (20-CITY AVERAGE).

[2] PROJECT ADDRESSES EXISTING DEFICIENCIES, HOWEVER FUTURE DEVELOPMENT INFLUENCES RECOMMENDED PIPE OR PUMP SIZES TO BE INSTALLED.

[3] TOTAL PROJECT OPC CONSISTS OF CONSTRUCTION OPC DEVELOPED BASED ON A UNIT COST OF $9 PER GALLON ADDITIONAL ADWF CAPACITY, 25% CONSTRUCTION CONTINGENCY, AND 35% ENGINEERING AND ADMINISTRATION COSTS.

SOURCE: CITY OF LATHROP WASTEWATER SYSTEM MASTER PLAN, TABLE ES-2.

RECYCLED WATER SYSTEM MASTER PLAN

The Recycled Water System Master Plan focuses on an evaluation of recycled water use and disposal alternatives, recycled water balance analyses, hydraulic assessment of the City's existing recycled infrastructure and key planned improvements, and development of recommended recycled water system improvements and operational recommendations.

The City's recycled water system supports the disposal of the effluent produced by the City-owned Lathrop Consolidated Treatment Facility (CTF). When the draft of the Recycled Water System Master Plan was published in March 2018, the recycled water system had a disposal capacity of 1.0 million gallons per day (MGD) and included seven agricultural land application areas (LAAs; A23, A28, A30, A31, A35, A35b, and A35c), nine storage ponds (S1, S2, S3, S5, S6, S16, A, B, and C), their associated pump stations (PMP1, PMP2, PMP3, PMP10, and the Crossroads PMP), and approximately 30.3 miles of recycled water pipeline. This infrastructure supported the recent Phase 1 expansion of the Lathrop CTF and is referred to as "existing" or "Phase 1" infrastructure herein.

The City is currently expanding its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF, which will increase the Lathrop CTF treatment capacity and disposal capacity to 2.5 MGD. For purposes of this evaluation, it was assumed that the Phase 2 recycled water system expansion would be completed in two phases: Phases 2A and 2B. Phase 2A improvements were based on the planned initial infrastructure improvements as of October 2017, which were planned to provide a disposal capacity of 1.9 MGD. Phase 2B facilities would expand the disposal capacity to the full 2.5 MGD CTF Phase 2 treatment capacity.

Planned Phase 2A improvements included an expansion of the recycled water distribution network and the addition of a new lined recycled water storage pond (S28), a new percolation pond (PB-1), two new agricultural LAAs (A34 and A36), and a new pump station (RI-PS) that supplies recycled water to a private distribution system serving landscape irrigation use areas in the River Islands development area.

During 2017 and 2018, the Phase 2A improvements were implemented, with the exception that LAA A34 was not constructed. This resulted in an interim disposal capacity of approximately 1.55 MGD. In late 2018, LAA A34 was constructed, but as of December 2018, the permitting has not yet been performed to increase the disposal capacity to approximately 1.9 MGD.

In late 2018, there were some developments that may affect the phasing of the recycled water capacity as well as the configuration of Phase 2B. These developments include the possible removal or replacement of selected storage ponds and/or LAAs. These removals and/or replacements were not anticipated at the time of the original drafting of the Recycled Water System Master Plan and are therefore not considered in the analysis included in the Master Plan.

The hydraulic assessment of the distribution system indicated that the distribution system pipelines are adequately sized to meet performance criteria through Phase 2B. The Recycled Water System Master Plan identified the following improvements that should be implemented during the Phase 2A expansion, in addition to those currently under construction:

- Conversion of the low-pressure PMP-10 to a high-pressure pump station should be completed as soon as possible to be able to effectively convey recycled water from S16. This improvement is anticipated to be funded by developers.
- Installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs. Costs for these improvements were estimated to be $480,000, not inclusive of estimated contingencies (PACE, 2018).
- Establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Costs have not been estimated for these operational improvements.

For expansion of permitted recycled water uses in Phase 2B, the Recycled Water System Master Plan recommends the following improvements, in addition to those already planned:

- Increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5). This improvement is anticipated to be funded by developers.
- Install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B. This improvement is anticipated to be funded by developers.

Alternative uses of recycled water were evaluated in Phase 2B and beyond, including increased percolation and river discharge of CTF effluent to the San Joaquin River. These alternatives have the potential to provide increased water supply benefits and reduce the areas required for recycled water storage and disposal. The City has initiated discussions with Central Valley Regional Water Quality Control Board (RWQCB) staff regarding obtaining a National Pollutant Discharge Elimination System (NPDES) permit for a surface water discharge as a means of disposing of CTF effluent in the future and is currently preparing a report for the RWQCB regarding regionalization, reclamation, recycling, and conservation to support the permitting effort. The Recycled Water

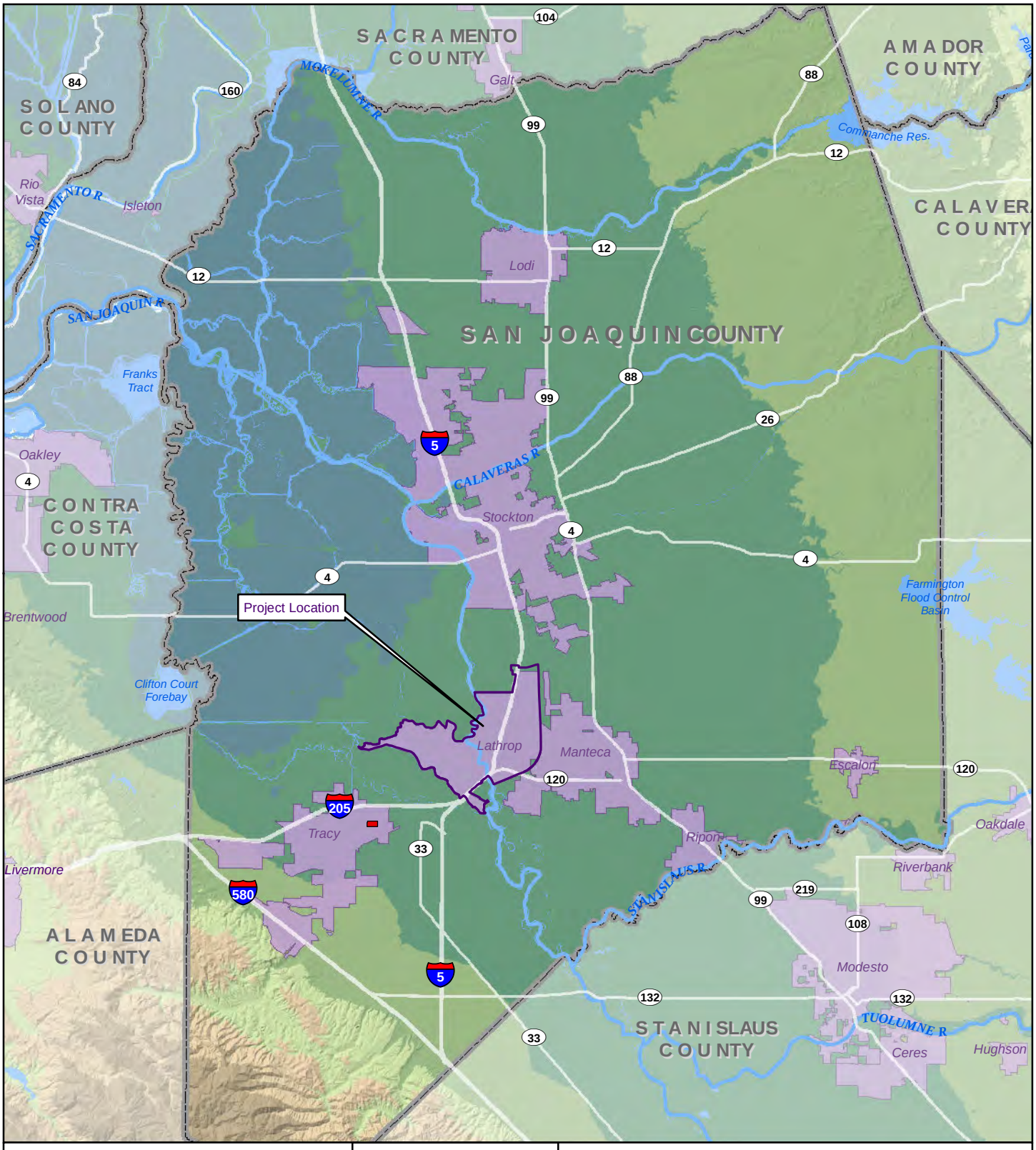
System Master Plan recommends that the City initiate a percolation study to assess locations in the City which have suitable soils for a percolation.

SCADA TOWERS AND GENERATORS

Generators would be provided in conjunction with the proposed water pump station improvements shown above in Table 2.0-1. The generators will be added as the new essential facilities are constructed and brought on-line, such as the Central Lathrop Specific Plan (CLSP) water tank, River Islands water tank/SSJID turnout, and sewer pump stations (see Table 2.0-2 above). The generators would all be for emergency operations in the event of a power outage, and would only be run for maintenance and air quality permit testing requirements.

The generators would typically be enclosed within a building or semi-enclosed within a masonry wall enclosure in order to help attenuate noise. The type of enclosure would depend on the location. For example, generators near residential areas would be semi-enclosed or enclosed within a building, and generators in non-residential areas may not be enclosed.

Additionally, SCADA communication towers would also be provided. Currently, SCADA towers are located at the City of Lathrop Corporation Yard (2112 E. Louise Avenue), the City of Lathrop City Hall (390 Town Centre Drive), the Lathrop Consolidated Treatment Facility (LCTF) (18800 Christopher Way), and at a few other locations in the River Islands and CLSP development areas. The proposed SCADA towers are required in order to provide a line-of-sight for radio communications between the facilities. The towers would be 50- to 100-feet in height, or taller.



Legend

City Area

County Boundary

0 2½ 5

Miles

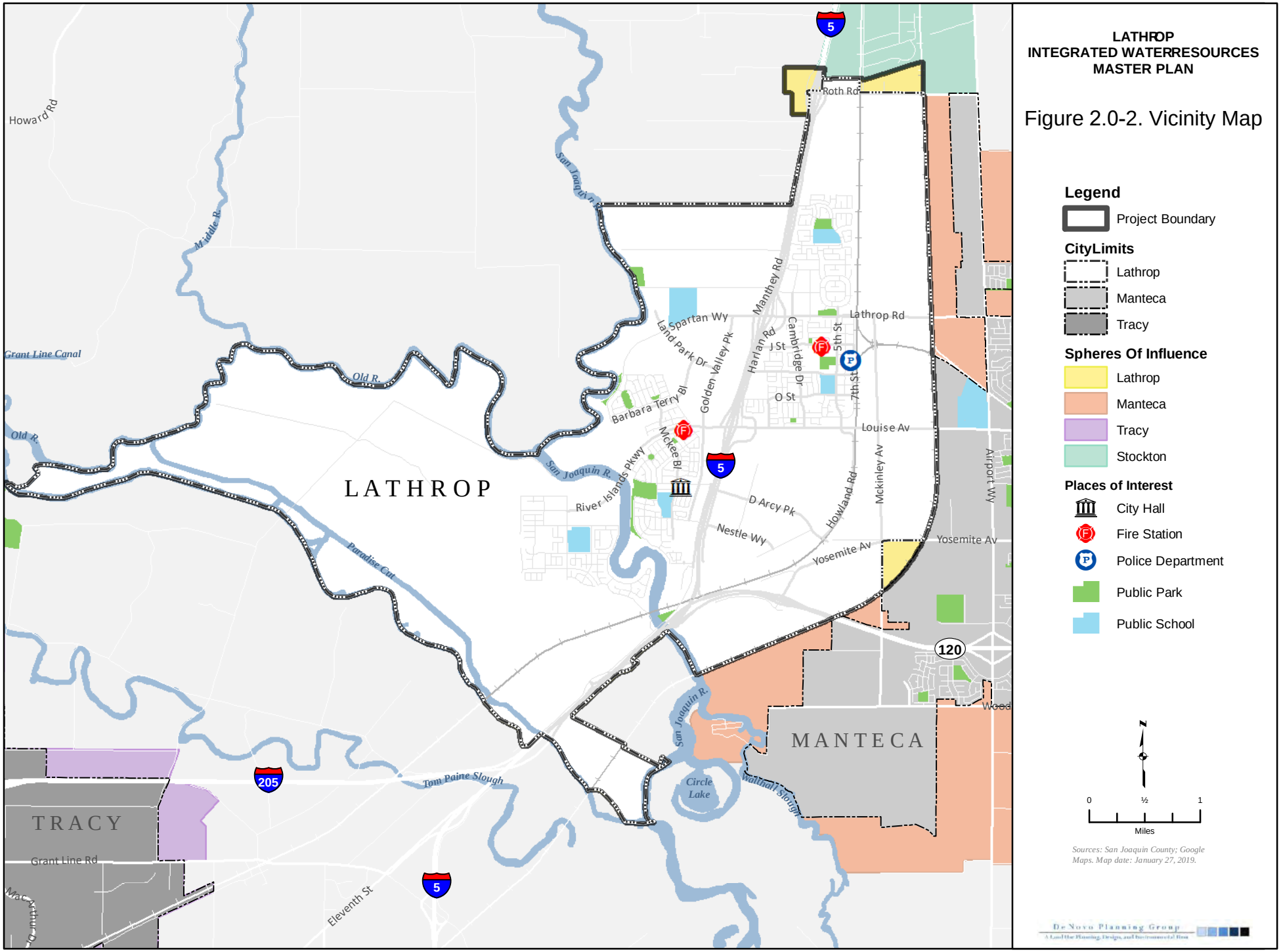
Sources: CalAtlas; Sacramento County, San Joaquin County, Solano County, Contra Costa County, Alameda County, Stanislaus County.
Map date: January 27, 2019

LATHROP INTEGRATED WATER RESOURCES MASTER PLAN

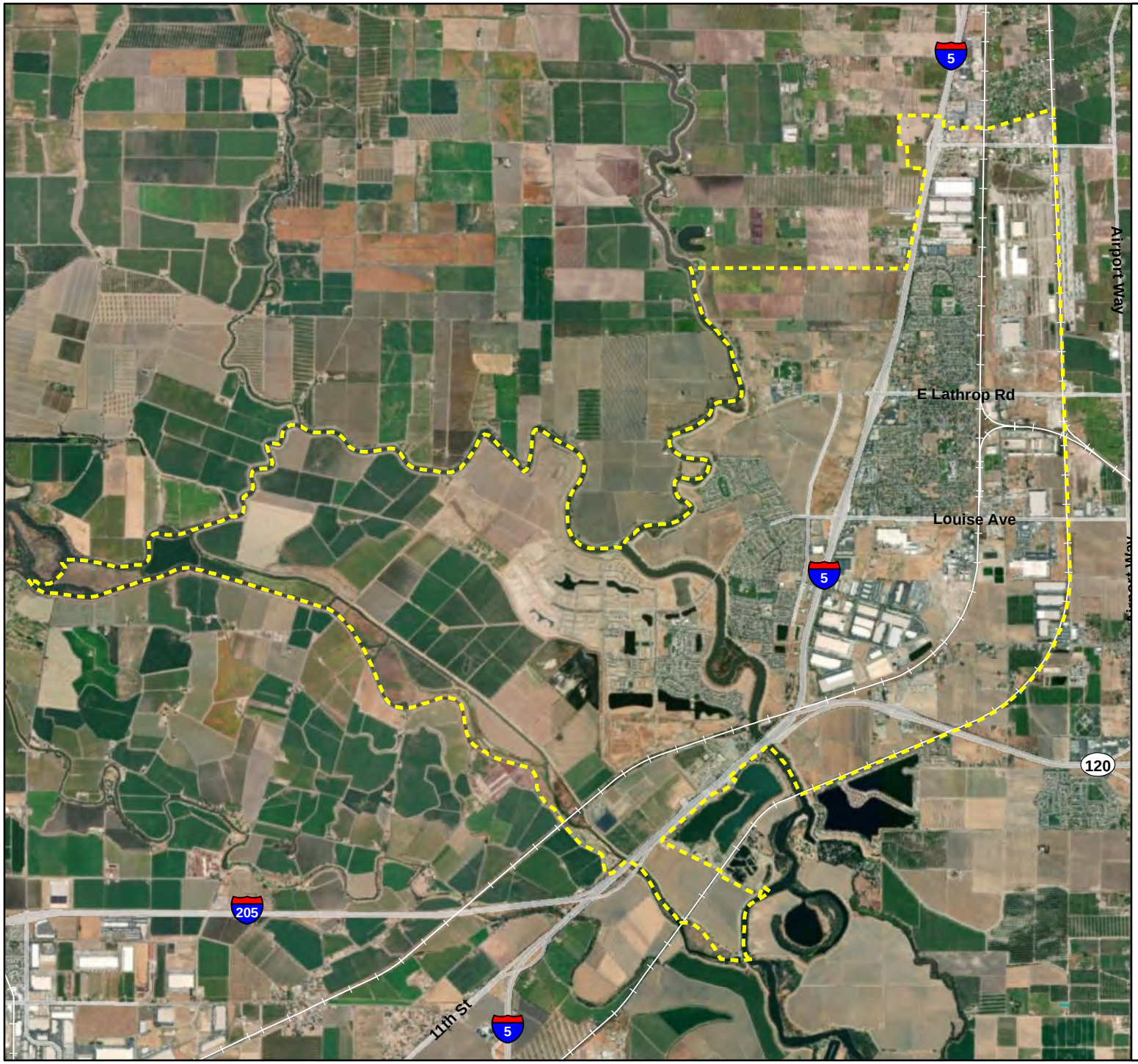
Figure 2.0-1. Regional Location Map

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

This page left intentionally blank.


LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN
Figure 2.0-2. Vicinity Map
Legend
Project Boundary
CityLimits
Lathrop
Manteca
Tracy
Spheres Of Influence
Lathrop
Manteca
Tracy
Stockton
Places of Interest
City Hall
Fire Station
Police Department
Public Park
Public School
Howard Rd
Middle R.
Grant Line Canal
Old R.
San Joaquin R.
Roth Rd
Manthey Rd
Lathrop Rd
Spartan Wy
Land Park Dr
Golden Valley Pk
Harlan Rd
J St
Cambridge Dr
5th St
7th St
O St
Louise Av
Barbara Terry Bl
McKee Bl
River Islands Pkwy
D Arcy Pk
Nestle Wy
Howland Rd
Mckinley Av
Airport Wy
Yosemite Av
Paradise Cut
120
Wood
MANTECA
Circle Lake
Walnut Slough
Tom Paine Slough
205
TRACY
Grant Line Rd
Eleventh St
5
0
½
1
Miles
Sources: San Joaquin County; Google Maps. Map date: January 27, 2019.
De Novo Planning Group

This page left intentionally blank.



LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

Figure 2.0-3.
Aerial View of Project

Legend

Project Boundary

N

0 ½ 1

Miles

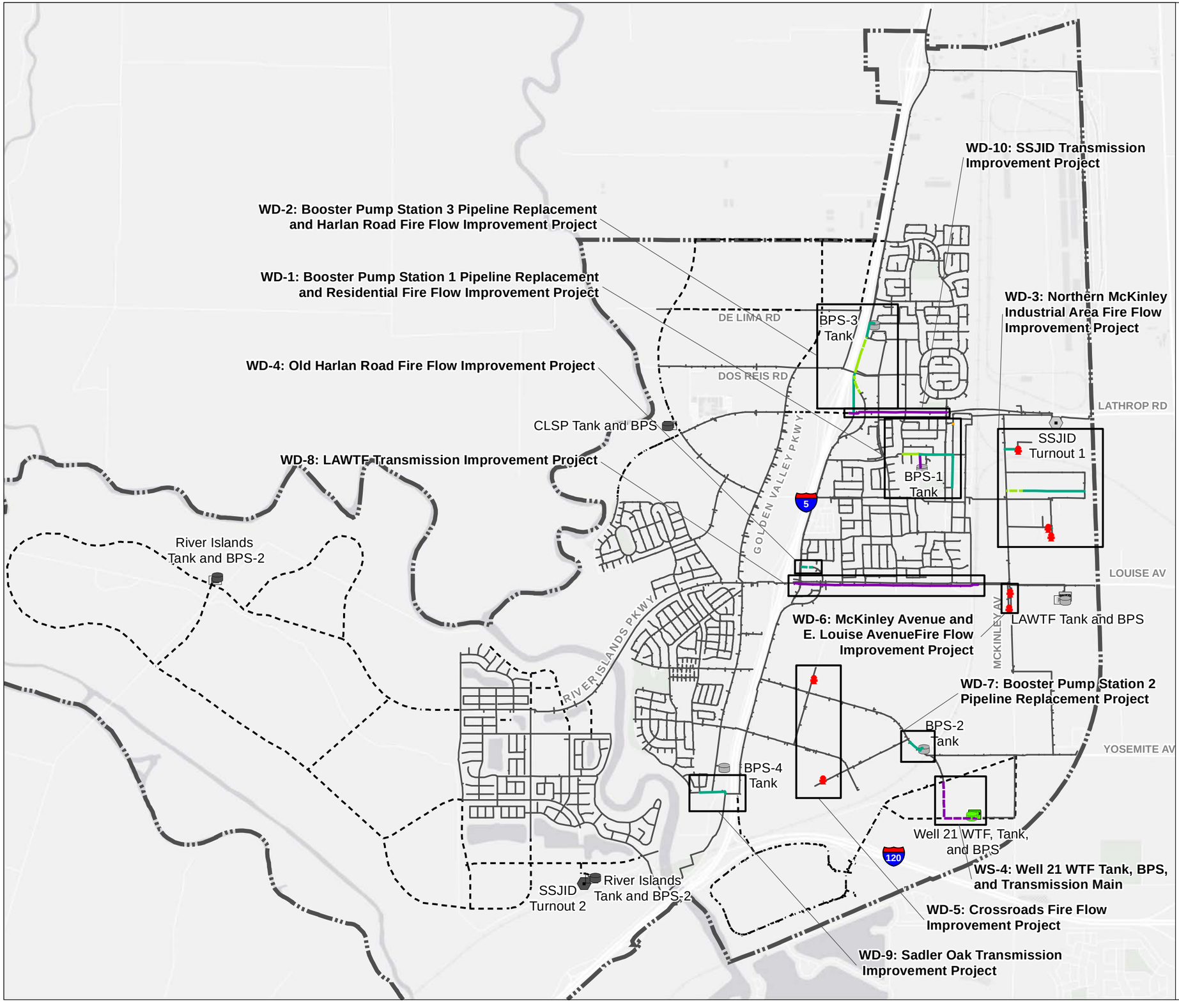
Sources: San Joaquin County; ArcGIS Online World Imagery Map Service. Map date: January 27, 2019.

De Novo Planning Group

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 2.0-4.
Water System Improvement Projects



Legend

- Sphere of Influence

Existing Infrastructure

- Treatment Plant
- Pump Station
- Enclosed Storage Facility
- SSJID Turnout
- Existing Pipe

Future Infrastructure

- Future Pump Station
- Future Enclosed Storage Facility
- Future SSJID Turnout
- Future Pipe

Recommended CIPS

- Replace existing hydrant with 8-inch hydrant & lateral
- Future Pump Station
- Future Enclosed Storage Facility
- Future SSJID Turnout

Replacement Pipe, inches

- 6
- 8
- 12
- 16

New Pipe, inches

- 6
- 8
- 12
- 16

N

0 3,000 6,000

(Scale in Feet)

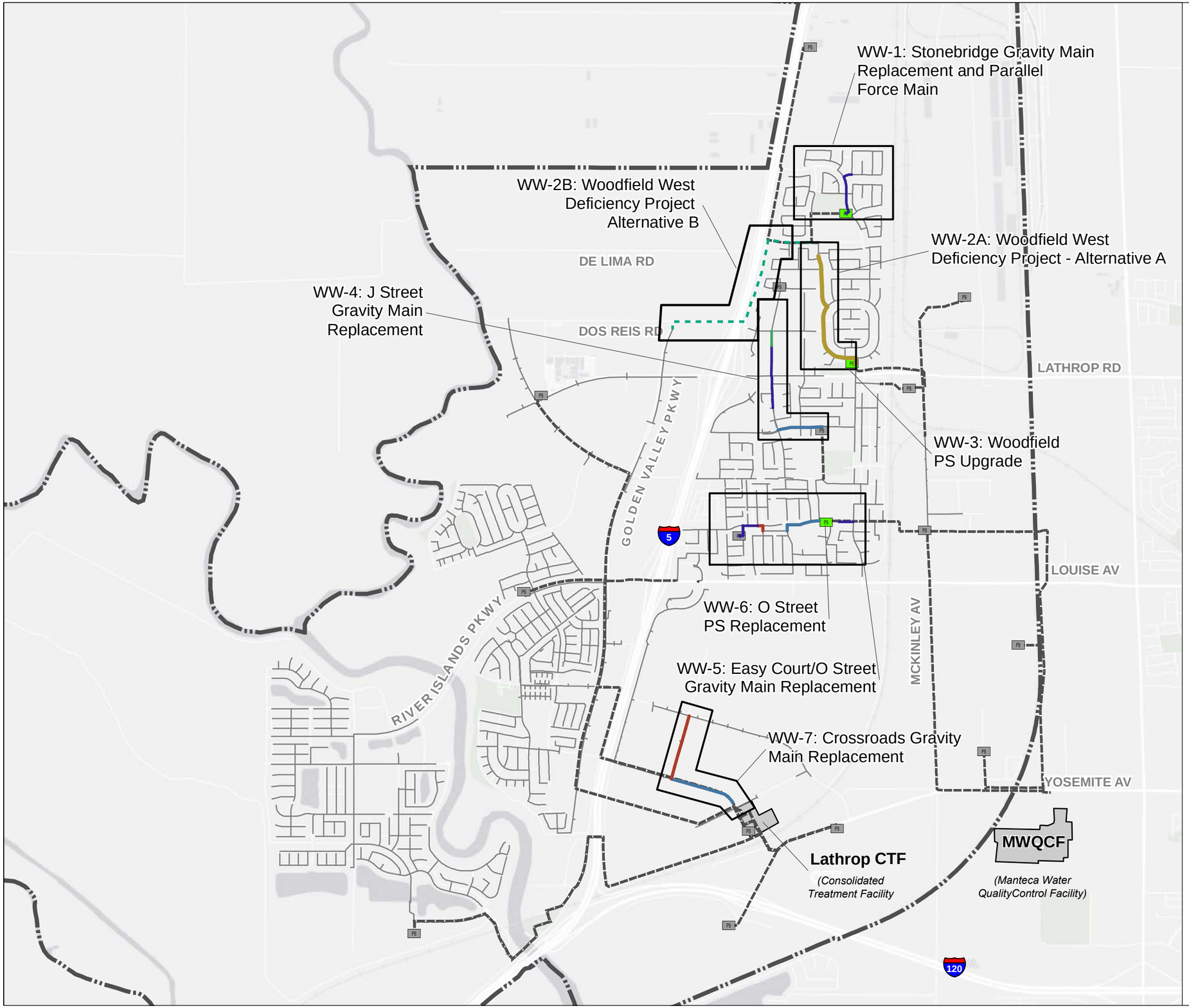
Source: eki environment & water, Recommended Water System Improvement Projects, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

Figure 2.0-5. Wastewater System Improvement Projects



Legend

- Sphere of Influence
- Approximate Area of WWTF
- Pump Station or Lift Station
- Pump Station or Lift Station Upgrade
- Force Main
- Gravity Main

Diameter of Replacement Sewer

- 8"
- 10"
- 12"
- 15"
- 18"

Diameter of New Force Main

- 6"

N

0 2,500 5,000

(Scale in Feet)

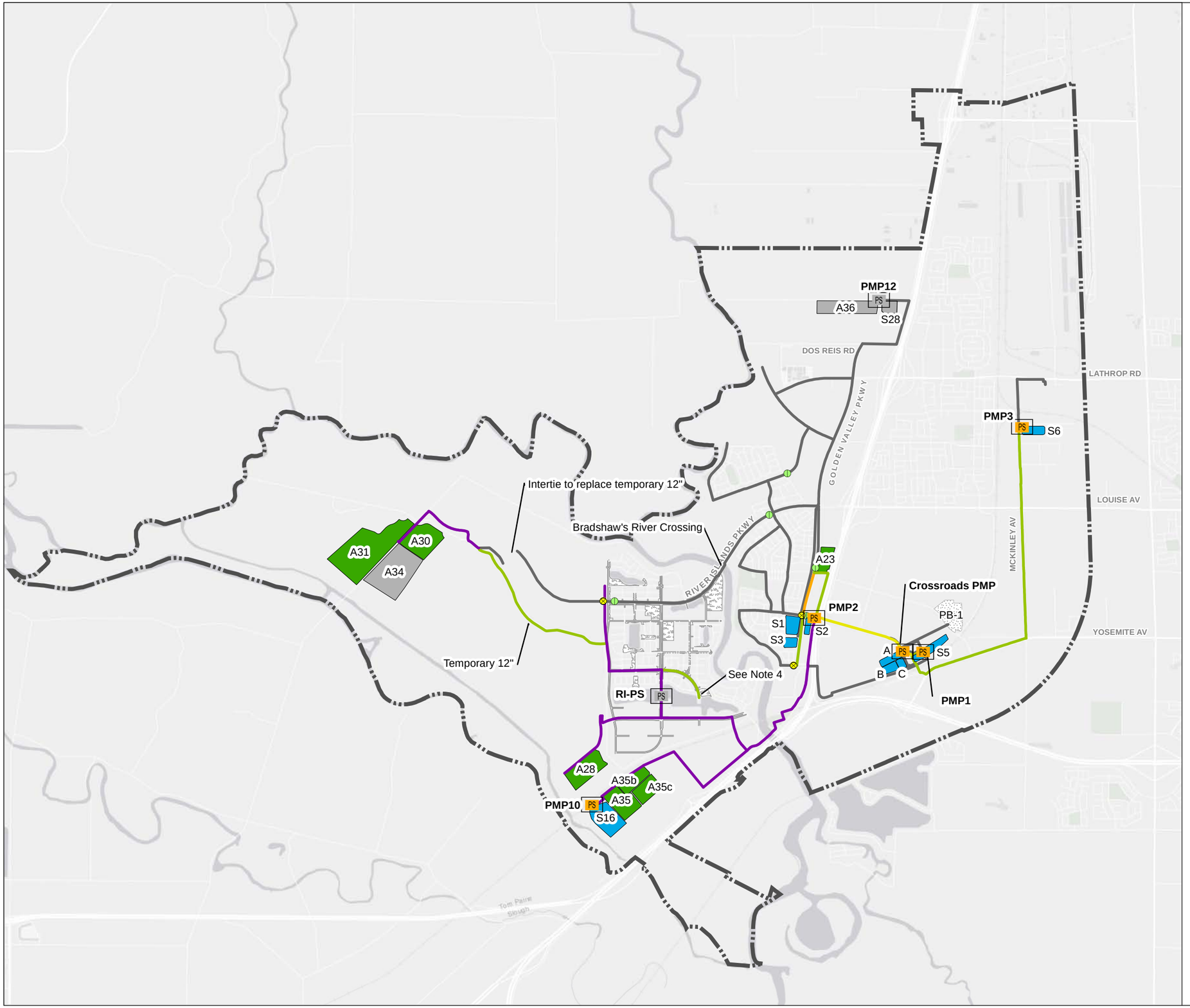
Source: eki environment & water, Recommended Collections System Improvement Projects, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 2.0-6.
Phase 1 Recycled Water System Infrastructure Projects



Legend

Pipe Diameter, Inches

- 6
- 8
- 10
- 12
- 16
- 18
- 20
- 24
- Inactive Pipe

Recycled Water Ponds

- Phase 1
- Inactive (Phase 2A)

Percolation Basins

- Inactive (Phase 2A)

Agricultural Irrigation Use Areas

- Phase 1
- Inactive (Phase 2A)

Landscape Irrigation Use Areas

- Inactive (Phase 2A)

Recycled Water Pump Stations

- PS Phase 1
- PS Inactive (Phase 2A)

Other Infrastructure

- Closed Valve
- Isolation Plate

N

0 4,000 8,000

(Scale in Feet)

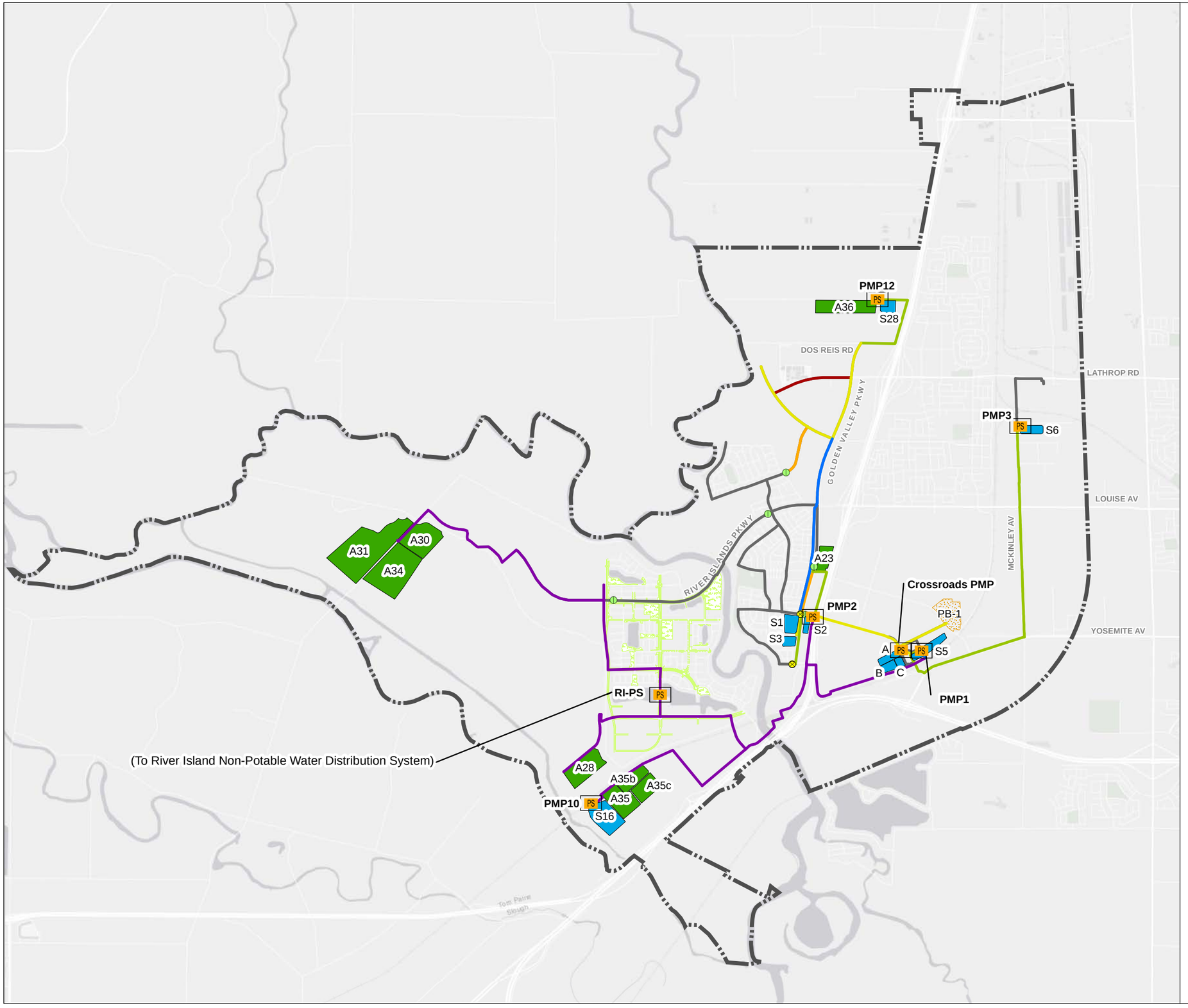
Source: eki environment & water, Phase 1 Recycled Water Systems Infrastructure, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 2.0-7.
Phase 2A Recycled Water System Infrastructure Projects



Legend

Sphere of Influence

Pipe Diameter, Inches

6
8
10
12
16
18
20
24
Inactive Pipe

Recycled Water Distribution Infrastructure

Storage Pond
Percolation Basin
Land Application Area
Landscape Irrigation Area
PS Pump Station

Other Infrastructure

Closed Valve
Isolation Plate

N

0 4,000 8,000
(Scale in Feet)

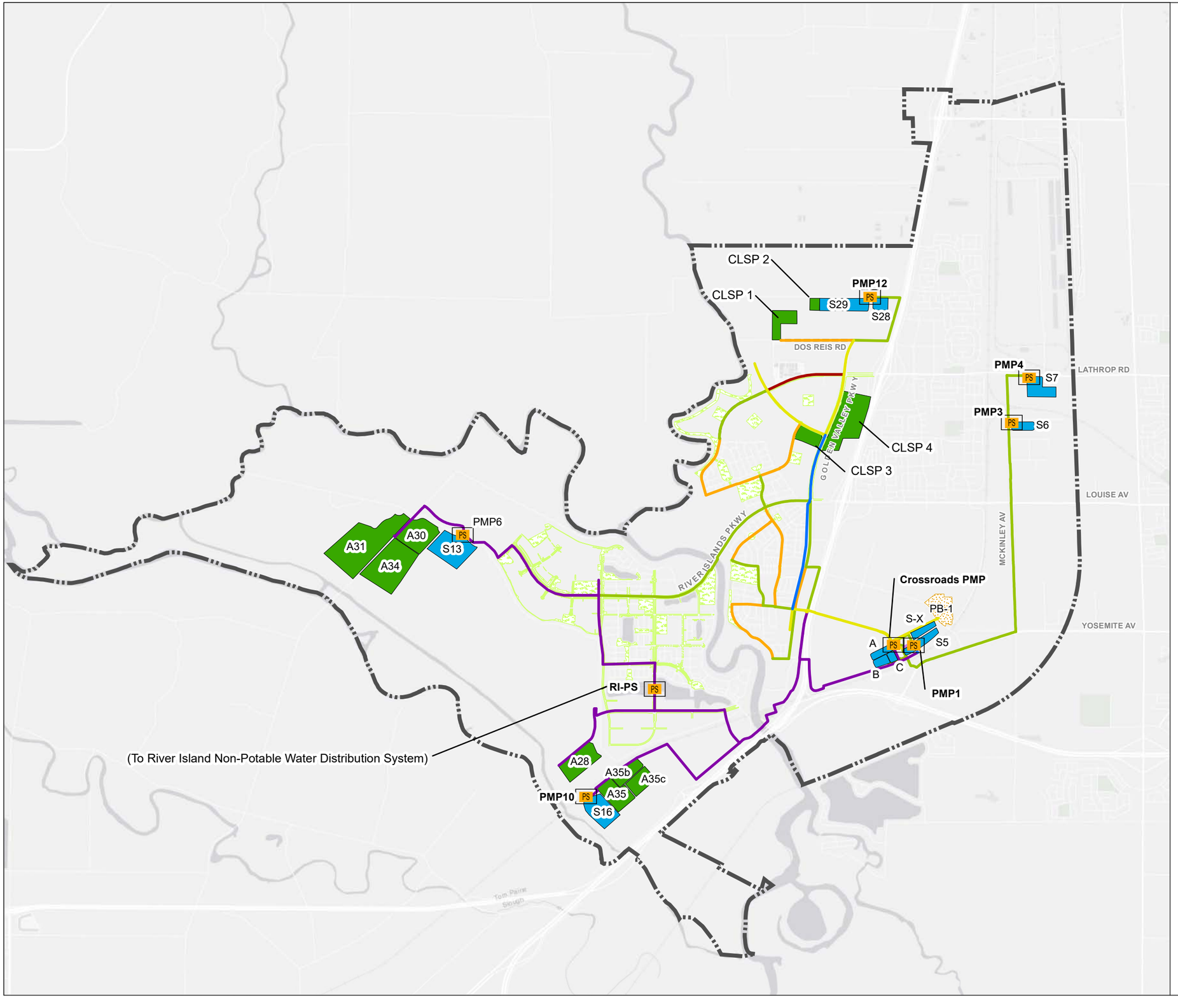
Source: eki environment & water, Phase 2A Recycled Water Systems Infrastructure, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 2.0-8.
Phase 2B Recycled Water System Infrastructure Projects



Legend

- Sphere of Influence

Pipe Diameter, Inches

6	16
8	18
10	20
12	24

Recycled Water Distribution Infrastructure

- Storage Pond
- Percolation Basin
- Land Application Area
- Landscape Irrigation Area
- PS Pump Station

Other Infrastructure

- Closed Valve
- Isolation Plate

N

0 4,000 8,000
(Scale in Feet)

Source: eki environment & water, Phase 2B Recycled Water Systems Infrastructure, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from project implementation. The analysis contained in this section is intended to be at a project-level, and covers impacts associated with the conversion of the entire site to an urban use. This section is based in part on the following: *Comprehensive General Plan for the City of Lathrop, California* (adopted 1991), and San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP, 2000), as well as site specific surveys and analysis.

One comment was received during the Notice of Preparation (NOP) comment period regarding biological resources from the Central Valley Regional Water Quality Control Board (CVRWQCB) (March 14, 2019). Full comments received are included in Appendix A.

3.1.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCES/BIOREGION

The City of Lathrop is located in the western portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is located just south and west of the City. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

The City of Lathrop is located within the San Joaquin Valley Bioregion, which is comprised of Kings County, most of Fresno, Kern, Merced, and Stanislaus counties, and portions of Madera, San Luis Obispo, and Tulare counties. The San Joaquin Valley Bioregion is the third most populous out of ten bioregions in the state, with an estimated 2 million people. The largest cities are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route 99 are the major north-south roads that run the entire length of the bioregion.

The bioregion is bordered on the west by the coastal mountain ranges. Its eastern boundary joins the southern two-thirds of the Sierra bioregion, which features Yosemite, Kings Canyon, and Sequoia National Parks. At its northern end, the San Joaquin Valley bioregion borders the southern end of the Sacramento Valley bioregion. To the west, south, and east, the bioregion extends to the edges of the valley floor.

Habitat in the bioregion includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about five percent. Remnants of the wetland habitats are protected in this bioregion in publicly owned parks, reserves, and wildlife areas. The bioregion is considered the state's top agricultural producing region with the abundance of fertile soil.

LOCAL SETTING

Location

The Lathrop Integrated Water Resources Master Plan (IWRMP) project site is located throughout Lathrop, California. The IWRMP includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area.

Topography

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

Climate

The City of Lathrop is located in the northern portion of the San Joaquin Valley, which has a Mediterranean climate that is subject to cool, wet winters (often blanketed with fog) and hot, dry summers. The average annual precipitation is approximately 13.81 inches. Precipitation occurs as rain most of which falls between the months of November through April, peaking in January at 2.85 inches. The average temperatures range from December lows of 37.5 F to July highs of 94.3 F.

Vegetation

Vegetation in the project area varies by depending on the location of each improvement. Much of the proposed disturbance areas consist of agricultural, ruderal, and landscaping. Other improvements would be located within currently developed areas (i.e., roadway rights-of-way).

Some of the proposed improvements are located in active agricultural areas generally located west of Interstate 5. There is very limited natural vegetation in areas that are actively used for agricultural purposes, the exception of the perimeter of the agricultural fields. Common plant species observed in these areas include: wild oat (*Avena barbata*), rip-gut brome (*Bromus diandrus*), softchess (*Bromus hordeaceus*) alfalfa (*Medicago sativa*), Russian thistle (Salsola tragus), Italian thistle (*Carduus pycnocephalus*), rough pigweed (*Amaranthus retroflexus*), sunflower (*Helianthus annuus*), tarragon (*Artemisia dracunculus*), coyote brush (*Baccharis pilularis*), prickly lettuce (*Lactuca serriola*), milk thistle (*Silybum marianum*), sow thistle (*Sonchus asper*), telegraph weed (*Heterotheca*

grandiflora), barley (*Hordeum* sp.), mustard (*Brassica niger*), and heliotrope (*Heliotropium curassavicum*).

Wildlife

Agricultural and ruderal vegetation found in the City provides habitat for both common and a few special-status wildlife populations. For example, some commonly observed wildlife species in the region include: California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus),* American kestrel (*Falco sparverius*), white-tailed kite (*Elanus leucurus*), American killdeer (*Charadrius vociferus*), gopher snake (*Pituophis melanoleucus*), garter snake (*Thamnophis species*), and western fence lizard (*Sceloporus occidentalis*), as well as many native insect species. There are also several bat species in the region. Bats often feed on insects as they fly over agricultural and natural areas.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting.

Plant Communities

Agricultural and natural plant communities provide habitat for a variety of biological resources in the region. Sensitive habitats include those that are of special concern to resource agencies or those that are protected under a Habitat Conservation Plan, Natural Community Conservation Plan, the California Environmental Quality Act (CEQA), the Fish and Game Code, or the Clean Water Act (CWA). Additionally, sensitive habitats are usually protected under specific policies from local agencies. Figure 3.1-1 illustrates the plant communities (land cover types) in the vicinity of the project site.

The California Wildlife Habitat Relationship (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

According to the California Wildlife Habitat Relationship System there are 16 cover types (wildlife habitat classifications) in the Planning Area out of 59 found in the State. These include: Annual Grassland, Barren Land, Coastal Scrub, Cropland, Deciduous Orchard, Dryland Grain Crops, Eucalyptus, Evergreen Orchard, Fresh Emergent Wetland, Irrigated Grain Crops, Irrigated Hayfield, Irrigated Row and Field Crops, Riverine, Urban Land, Valley Foothill Riparian, and Vineyard.

Table 5.2-1 identifies the area by acreage for each cover type (classification) found in Lathrop (City limits and SOI).

TABLE 5.2-1: COVER TYPES - CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

COVER TYPE	*CITY (ACRES)*	*SOI (ACRES)*	*PLANNING AREA (TOTAL ACRES)*
Annual Grassland	736.46	99.93	836.39
Barren	105.96	13.41	119.36
Coastal Scrub	6.20	0.00	6.20
Cropland	2,356.91	101.85	2,458.76
Deciduous Orchard	162.83	17.91	180.75
Dryland Grain Crops	1,374.21	209.15	1,583.36
Eucalyptus	0.00	0.04	0.04
Evergreen Orchard	0.89	0.00	0.89
Fresh Emergent Wetland	9.17	7.93	17.09
Irrigated Grain Crops	779.44	1.15	780.59
Irrigated Hayfield	1,172.67	6.33	1,179.00
Irrigated Row and Field Crops	1,032.65	0.68	1,033.33
Riverine	329.61	37.28	366.89
Urban	4,460.35	230.32	4,690.67
Valley Foothill Riparian	304.63	4.64	309.27
Vineyard	8.01	1.33	9.34
Total	**12,839.98**	**731.95**	**13,571.93**

SOURCE: SOURCE: CASIL GIS DATA, CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM, 2019.

Hydrogeomorphic Features

There are rivers, streams, and other aquatic habitats in the project area. The San Joaquin River roughly bisects the city running north/south. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest. Additionally, the Old River, a tidal distributary to the San Joaquin River, generally follows the western City limit line. Further, various agricultural drainage systems are located throughout the City, mainly west of Interstate 5.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service's (USFWS) records of listed endangered and threatened species from the IPAC database. The background search was regional in scope and focused on the documented occurrences within the nine-quadrangle search of the project site. The search included the following nine quadrangles: Woodward Island, Holt, Stockton West, Stockton East, Manteca, Lathrop, Clifton Court Forebay, Midway, Tracy, Vernalis, and Ripon. Table 3.1-1 provides a list of special-status plants and Table 3.1-2 provides a list of special-status animals. Figure 3.1-2 presents the documented occurrences within the nine-quadrangle radius of the project site.

TABLE 3.1-1: SPECIAL-STATUS PLANT SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*
alkali milk-vetch *Astragalus tener var. tener*	--/--/1B.2/ Yes	Alameda, Contra Costa, Merced, Monterey, Napa, San Benito, Santa Clara, San Francisco, San Joaquin, Solano, Sonoma, Stanislaus, Yolo Counties	Favors alkaline playas, valley and foothill grasslands, and vernal pools. Also occurs in open, alkaline and seasonally moist meadows. 1 – 60 meters. Mar-Jun.
big tarplant *Blepharizonia plumosa*	--/--/1B.1/No	San Francisco Bay area with occurrences in Alameda, Contra Costa, San Joaquin, Stanislaus, and Solano Counties	Valley and foothill grassland; 30-505 m. July-Oct.
Brewer's western flax *Hesperolinon breweri*	--/--/1B.2/No	Alameda, Contra Costa, Napa, Solano Counties	Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. 195-910 m. May-Jul.
bristly sedge *Carex comosa*	--/--/2B.1/ Yes	Contra Costa, Lake, Mendocino, Sacramento, San Bernardino, Santa Cruz, San Francisco, Shasta, San Joaquin, Sonoma Counties	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1010 m. May-Sep.
California alkali grass *Puccinellia simplex*	--/--/1B.2/No	Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kings, Kern, Lake, Los Angeles, Madera, Merced, Napa, San Bernardino, Santa Clara, Santa Cruz, San Luis Obispo, Solano, Stanislaus, Tulare, Yolo Counties	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. 2 – 930 meters. Mar-May.
Caper-fruited tropidocarpum *Tropidocarpum capparideum*	--/--/1B.1/Yes	Historically known from the northwest San Joaquin Valley and adjacent Coast Range foothills; currently known from Fresno, Monterey, and San Luis Obispo Counties	Alkaline hills in valley and foothill grassland; below 455 m. March-April.
chaparral harebell *Campanula exigua*	--/--/1B.2/No	Alameda, Contra Costa, Fresno, Merced, San Benito, Santa Clara, Stanislaus Counties	Chaparral. Rocky sites, usually on serpentine in chaparral. 90-1375 m. May-Jun.
chaparral ragwort *Senecio aphanactis*	--/--/2B.2/No	Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, Santa Barbara, San Bernardino, San Benito, Santa Clara, Santa Cruz, Santa Catalina Island, Santa Cruz Island, San Diego, San Francisco, San Luis Obispo, San Mateo, Solano, Santa Rosa Island, Tulare, Ventura Counties	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m. Jan-Apr(May).
Delta button-celery *Eryngium racemosum*	--/E/1B.1/Yes	San Joaquin River delta floodplains and adjacent Sierra Nevada foothills: Calaveras, Merced, San Joaquin, and Stanislaus Counties	Riparian scrub, seasonally inundated depressions along floodplains on clay soils; below 75 m. June-August.
Delta mudwort *Limosella australis*	--/--/2B.1/ Yes	Contra Costa, Sacramento, San Joaquin, Solano Counties	Riparian scrub, marshes and swamps. Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with Lilaeopsis masonii. 0-5 m. May-Aug.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*
Delta tule pea *Lathyrus jepsonii var. jepsonii*	--/--/1B.2/ Yes	Contra Costa, Napa, Sacramento, San Joaquin, Solano, Sonoma, Yolo Counties	Marshes and swamps. In freshwater and brackish marshes. Often found with Typha, Aster lentus, Rosa californica, Juncus spp., Scirpus, etc. Usually on marsh and slough edges. 0-5 m. May-Jul(Aug-Sep).
diamond-petaled California poppy *Eschscholzia rhombipetala*	--/--/1B.1/ Yes	Alameda, Contra Costa, Colusa, San Joaquin, San Luis Obispo, Stanislaus Counties	Valley and foothill grassland. Alkaline, clay slopes and flats. 30-625 m. Mar-Apr.
heartscale *Atriplex cordulata var. cordulata*	--/--/1B.2/ Yes	Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Madera, Merced, San Joaquin, Solano, Stanislaus, Tulare, Yolo Counties	Grows in grasslands with sandy alkaline or saline soils. Favors chenopod scrub, meadows, seeps, valley and foothill grasslands. 0 – 650 meters. Apr-Oct.
Hospital Canyon larkspur *Delphinium californicum ssp. interius*	--/--/1B.2/ Yes	Alameda, Contra Costa, Merced, Monterey, San Benito, Santa Clara, San Joaquin, Stanislaus Counties	Cismontane woodland, chaparral, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. 195-1095 m. Apr-Jun.
large-flowered fiddleneck *Amsinckia grandiflora*	E/E/1B.1/ Yes	Alameda, Contra Costa, San Joaquin Counties	Cismontane woodland, valley and foothill grassland. Annual grassland in various soils. 275-550 m. (Mar)Apr-May.
Lemmon's jewelflower *Caulanthus lemmonii*	--/--/1B.2/No	Alameda, Fresno, Kings, Kern, Merced, Monterey, Santa Barbara, San Benito, San Joaquin, Lan Luis Obispo, Stanislaus, Ventura Counties.	Pinyon and juniper woodland, valley and foothill grassland. 75-1585 m. Feb-May.
lesser saltscale *Atriplex minuscula*	--/--/1B.1/No	Alameda, Butte, Fresno, Kinds, Kern, Madera, Merced, Stanislaus, Tulare Counties	Marshes and swamps, meadows and seeps. Alkaline. 0-220 m. Feb-May.
long-styled sand-spurrey *Spergularia macrotheca var. longistyla*	--/--/1B.2/No	Alameda, Contra Costa, Napa, Solano Counties	Marshes and swamps, meadows and seeps. Alkaline. 0-220 m. Feb-May.
marsh skullcap *Scutellaria galericulata*	--/--/2B.2/No	El Dorado, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Siskiyou, San Joaquin Counties	Marshes and swamps, lower montane coniferous forest, meadows and seeps. Swamps and wet places. 0-1950 m. Jun-Sep.
Mason's lilaeopsis *Lilaeopsis masonii*	--/R/1B.1/ Yes	Alameda, Contra Costa, Marin, Napa, Sacramento, San Joaquin, Solano, Yolo Counties	Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. In brackish or freshwater. 0-10 m. Apr-Nov.
palmate-bracted bird's-beak *Chloropyron palmatum*	E/E/1B.1/No	Alameda, Colusa, Fresno, Glenn, Madera, San Joaquin, Yolo Counties	Chenopod scrub, valley and foothill grassland. Usually on Pescadero silty clay which is alkaline, with Distichlis, Frankenia, etc. 5-155 m. May-Oct.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*
recurved larkspur *Delphinium recurvatum*	--/--/1B.2/Yes	Central Valley from Colusa to Kern Counties	Alkaline soils in saltbush scrub, cismontane woodland, valley and foothill grassland; 3-750 m. March-May.
saline clover *Trifolium hydrophilum*	--/--/1B.2/No	Alameda, Contra Costa, Colusa, Lake, Monterey, Napa, Sacramento, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Luis Obispo, San Mateo, Solano, Sonoma, Yolo	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 1-335 m. Apr-Jun.
San Joaquin spearscale *Extriplex joaquinana*	--/--/1B.2/No	Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Monterey, Napa, San Benito, Santa Clara, San Joaquin, San Luis Obispo, Solano, Tulare, Yolo Counties	Alkaline. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. 1-835 m. Apr-Oct.
Sanford's arrowhead *Sagittaria sanfordii*	--/--/1B.2/ Yes	Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, Tulare, Ventura, Yuba	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. May-Oct(Nov).
shining navarretia *Navarretia nigelliformis ssp. radians*	--/--/1B.2/No	Alameda, Contra Costa, Colusa, Fresno, Madera, Merced, Monterey, San Benito, San Joaquin, San Luis Obispo, Stanislaus, Tulare Counties	Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. 60-975 m. (Mar)Apr-Jul.
showy golden madia *Madia radiata*	--/--/1B.1/ Yes	Contra Costa, Fresno, Kings, Kern, Monterey, Santa Barbara, San Benito, Santa Clara, San Joaquin, San Luis Obispo, Stanislaus Counties	Valley and foothill grassland, cismontane woodland. Mostly on adobe clay in grassland or among shrubs. 75-1220 m. Mar-May.
slough thistle *Cirsium crassicaule*	--/--/1B.1/Yes	San Joaquin Valley: Kings, Kern, and San Joaquin Counties	Freshwater sloughs and marshes; 3-100 m. May-August.
spiny-sepaled button-celery *Eryngium spinosepalum*	--/--/1B.2/No	Contra Costa, Fresno, Kern, Madera, Merced, San Luis Obispo, Stanislaus, Tulare, Tuolumne Counties	Vernal pools, valley and foothill grassland. Some sites on clay soil of granitic origin; vernal pools, within grassland. 15-1270 m. Apr-Jun.
Suisun Marsh aster *Symphyotrichum lentum*	--/--/1B.2/ Yes	Contra Costa, Napa, Sacramento, San Joaquin, Solano, Yolo Counties	Marshes and swamps (brackish and freshwater). Most often seen along sloughs with Phragmites, Scirpus, blackberry, Typha, etc. 0-15 m. (Apr)May-Nov.
watershield *Brasenia schreberi*	--/--/2B.3/No	Butte, Calaveras, El Dorado, Fresno, Kern, Lake, Lassen, Mendocino, Merced, Nevada, Plumas, Sacramento, Shasta, Sierra, Siskiyou, San Joaquin, Sonoma, Sutter, Tehama, Trinity, Tulare, Tuolumne Counties	Freshwater marshes and swamps. Aquatic known from water bodies both natural and artificial in California. 1-2180 m. Jun-Sep.
woolly rose-mallow *Hibiscus lasiocarpos var. occidentalis*	--/--/1B.2/No	Butte, Contra Costa, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, Yolo Counties	Marshes and swamps (freshwater). Moist, freshwater-soaked river banks & low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0-155 m. Jun-Sep.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*
Wright's trichocoronis *Trichocoronis wrightii* var. *wrightii*	--/--/2.1/Yes	Scattered locations in the Central Valley; southern coast of Texas	Floodplains, moist places, on alkaline soils; below 450 m. May-September.

NOTES: CNPS = CALIFORNIA NATIVE PLANT SOCIETY
SJMSCP = SAN JOAQUIN MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

FEDERAL
E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE
E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

CALIFORNIA NATIVE PLANT SOCIETY
1B = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA AND ELSEWHERE.
2 = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE.
3 = A REVIEW LIST – PLANTS ABOUT WHICH MORE INFORMATION IS NEEDED.
4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST
.1 = SERIOUSLY ENDANGERED IN CALIFORNIA (OVER 80% OF OCCURRENCES THREATENED-HIGH DEGREE AND IMMEDIACY OF THREAT).
.2 = FAIRLY ENDANGERED IN CALIFORNIA (20-80% OCCURRENCES THREATENED).
.3 = NOT VERY ENDANGERED IN CALIFORNIA (<20% OF OCCURRENCES THREATENED).

TABLE 3.1-2: SPECIAL-STATUS WILDLIFE AND FISH SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*HABITAT REQUIREMENTS*
INVERTEBRATES		
California linderiella *Linderiella occidentalis*	--/--/No	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.
conservancy fairy shrimp *Branchinecta conservatio*	E/--/Yes	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.
crotch bumble bee *Bombus crotchii*	--/--/No	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.
curved-foot hygrotus diving beetle *Hygrotus curvipes*	--/--/Yes	Aquatic; known only from Alameda & Contra Costa counties.
midvalley fairy shrimp *Branchinecta mesovallensis*	--/--/No	Vernal pools in the Central Valley.
vernal pool fairy shrimp *Branchinecta lynchi*	T/--/Yes	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County. Common in vernal pools; they are also found in sandstone rock outcrop pools.
vernal pool tadpole shrimp *Lepidurus packardi*	E/--/Yes	Shasta County south to Merced County. Vernal pools and ephemeral stock ponds.
molestan blister beetle *Lytta molesta*	--/--/Yes	Distribution of this species is poorly known. Annual grasslands, foothill woodlands or saltbush scrub.

SPECIES	STATUS (FED/CA/ SJMSCP)	HABITAT REQUIREMENTS
Sacramento anthicid beetle *Anthicus sacramento*	--/--/No	Found in several locations along the Sacramento and San Joaquin rivers, from Shasta to San Joaquin counties, and at one site along the Feather River. Sand dune area, sand slipfaces among bamboo and willow, but may not depend on these plants.
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/--/Yes	Stream side habitats below 3,000 feet throughout the Central Valley. Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.
western bumble bee *Bombus occidentalis*	--/--/No	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.
AMPHIBIANS		
California tiger salamander *Ambystoma californiense (A. tigrinum c.)*	T/SSC/Yes	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County. Small ponds, lakes, or vernal pools in grass-lands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.
California red-legged frog *Rana aurora draytoni*	T/SSC/Yes	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County. Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.
foothill yellow-legged frog *Rana boylii*	--/C-SSC/Yes	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
western spadefoot *Spea hammondii*	--/SSC/Yes	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.
BIRDS		
Aleutian goose *Branta canadensis leucopareia*	D/--/Yes	The entire population winters in Butte Sink, then moves to Los Banos, Modesto, the Delta, and East Bay reservoirs; stages near Crescent City during spring before migrating to breeding grounds. Roosts in large marshes, flooded fields, stock ponds, and reservoirs; forages in pastures, meadows, and harvested grainfields; corn is especially preferred.
burrowing owl *Athene cunicularia*	BCC/SSC/Yes	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast. Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows.
California black rail *Laterallus jamaicensis coturniculus*	BCC/T/Yes	Permanent resident in the San Francisco Bay and east-ward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties. Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations.
California horned lark *Eremophila alpestris actia*	--/WL/Yes	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.
ferruginous hawk *Buteo regalis*	--/WL/Yes	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*HABITAT REQUIREMENTS*
golden eagle *Aquila chrysaetos*	--/WL/Yes	Winter range spans most of California; breeding range excludes the Central Valley floor. Nests in cliffs, rocky outcrops and large trees. Forages in a variety of open habitats, including grassland, shrubland, and cropland.
great blue heron *Ardea herodias*	--/--/Yes	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.
least Bell's vireo *Vireo bellii pusillus*	E/E/No	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.
loggerhead shrike *Lanius ludovicianus*	BCC/SSC/Yes	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter. Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.
merlin *Falco columbarius*	--/WL/Yes	It is not known to nest in California, but it is a winter transient throughout most of California with wintering populations in the Central Valley. Avoid dense forests and inhabit fairly open land.
northern harrier *Circus hudsonius*	--/SSC/Yes	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.
short-eared owl *Asio flammeus*	BCC/SSC/Yes	Permanent resident along the coast from Del Norte County to Monterey County although very rare in summer north of San Francisco Bay, in the Sierra Nevada north of Nevada County, in the plains east of the Cascades, and in Mono County; small, isolated populations. Freshwater and salt marshes, lowland meadows, and irrigated alfalfa fields; needs dense tules or tall grass for nesting and daytime roosts.
song sparrow (Modesto Population) *Melospiza melodia*	BCC/SSC/Yes	Restricted to California, where it is locally numerous in the Sacramento Valley, Sacramento–San Joaquin River Delta, and northern San Joaquin Valley. Exact boundaries of range uncertain. Found in emergent freshwater marshes dominated by tules (*Scirpus* spp.) and cattails (*Typha* spp.) as well as riparian willow (*Salix* spp.) thickets. They also nest in riparian forests of Valley Oak (*Quercus lobata*) with a sufficient understory of blackberry (*Rubus* spp.), along vegetated irrigation canals and levees, and in recently planted Valley Oak restoration sites.
Swainson's hawk *Buteo swainsoni*	BCC/T/Yes	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County. Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields.
tricolored blackbird *Agelaius tricolor*	BCC/T (SSC)/Yes	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties. Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony.
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	T (BCC) /E/Yes	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers. Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak riparian habitats where scrub jays are abundant.
white-tailed kite *Elanus leucurus*	--/FP/Yes	Nests in riparian corridors along streams and rivers, and forages in nearby grasslands and fields.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*HABITAT REQUIREMENTS*
yellow-headed blackbird *Xanthocephalus xanthocephalus*	--/SSC/Yes	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as odonatan are abundant, nesting timed with maximum emergence of aquatic insects.
FISH		
Delta smelt *Hypomesus transpacificus*	T/T/Yes	Primarily in the Sacramento–San Joaquin Estuary but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay. Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand.
hardhead *Mylopharodon conocephalus*	--/SSC/No	Tributary streams in the San Joaquin drainage; large tributary streams in the Sacramento River and the main stem. Resides in low to mid-elevation streams and prefer clear, deep pools and runs with slow velocities. They also occur in reservoirs.
Central Valley steelhead *Oncorhynchus mykiss*	T/--/No	Sacramento River and tributary Central Valley rivers. Occurs in well-oxygenated, cool, riverine habitat with water temperatures from 7.8°C to 18°C. Habitat types are riffles, runs, and pools.
eulachon *Thaleichthys pacificus*	T/--/No	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.
longfin smelt *Spirinchus thaleichthys*	--/SSC/Yes	Occurs in estuaries along the California coast. Adults concentrated in Suisun, San Pablo, and North San Francisco Bays. Prior to spawning, these fish aggregate in deepwater habitats available in the northern Delta, including, primarily, the channel habitats of Suisun Bay and the Sacramento River. Spawning occurs in fresh water on the San Joaquin River below Medford Island and on the Sacramento River below Rio Vista.
MAMMALS		
American badger *Taxidea taxus*	--/SSC/Yes	In California, badgers occur throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties. Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground.
pallid bat *Antrozous pallidus*	--/SSC/No	Roosts in rock outcrops, hollow trees, abandoned mines, barns, and attics.
riparian (San Joaquin Valley) woodrat *Neotoma fuscipes riparia*	E/SSC, FP /Yes	Historical distribution along the San Joaquin, Stanislaus, and Tuolumne Rivers, and Caswell State Park in San Joaquin, Stanislaus, and Merced Counties; presently limited to San Joaquin County at Caswell State Park and a possible second population near Vernalis. Riparian habitats with dense shrub cover, willow thickets, and an oak overstory.
riparian brush rabbit *Sylvilagus bachmani riparius*	E/E/Yes	Limited to San Joaquin County at Caswell State Park near the confluence of the Stanislaus and San Joaquin Rivers and Paradise Cut area on Union Pacific right-of-way lands. Native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees.
San Joaquin kit fox *Vulpes macrotis mutica*	E/T/Yes	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County. Saltbush scrub, grassland, oak, savanna, and freshwater scrub.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*HABITAT REQUIREMENTS*
San Joaquin pocket mouse *Perognathus inornatus*	--/--/Yes	Grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert. Associated with fine-textured, sandy, friable soils.
Townsend's big-eared bat *Corynorhinus townsendii*	--/SSC/No	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
western mastiff bat *Eumops perotis californicus*	--/SSC/Yes	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.
REPTILES		
Alameda whipsnake *Masticophis lateralis euryxanthus*	T/T/No	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.
California glossy snake *Arizona elegans occidentalis*	--/SSC/No	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.
coast horned lizard *Phrynosoma blainvillii*	--/SSC/No	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.
giant garter snake *Thamnophis couchi gigas*	T/T/Yes	Central Valley from the vicinity of Burrel in Fresno County north to near Chico in Butte County; has been extirpated from areas south of Fresno. Sloughs, canals, low gradient streams and freshwater marsh habitats where there is a prey base of small fish and amphibians; they are also found in irrigation ditches and rice fields; requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter.
northern California legless lizard *Anniella pulchra*	--/SSC/No	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.
San Joaquin coachwhip *Masticophis flagellum ruddocki*	--/SSC/No	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and oviposition sites.
western pond turtle *Emys marmorata*	--/SSC/Yes	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PE = PROPOSED FOR ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
PT = PROPOSED FOR THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.
D = DELISTED FROM FEDERAL LISTING STATUS.
BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE STATE ENDANGERED SPECIES ACT.
FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.
WL = WATCH LIST.
SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.1.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the California Department of Fish and Wildlife (CDFW), USFWS, U.S. Army Corps of Engineers (USACE), and the CVRWQCB. These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a "take" unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, posses, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles as well as their nests and eggs from willful damage or injury.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under

normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the CVRWQCB. To obtain the water quality certification, the CVRWQCB must indicate that the proposed fill would be consistent with the standards set forth by the state.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code §2050-2097 – California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 – California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling

such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 – Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called "raptors," are protected. The law indicates that it is unlawful to take, posses, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a "Streambed Alteration Agreement" from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code §21000 - California Environmental Quality Act

CEQA identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines § 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.

- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate state water quality and protect beneficial uses.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and fresh water replenishment. Major issues and the general conditions of existing beneficial uses in the SJR are as follows:

- Water Supply: The SJR is not currently a source of municipal water supply for the City of Lathrop and is not identified as a source for the proposed Project, although some farms in the region use the river as a source of water for irrigation. The City currently uses groundwater only and surface water from the South San Joaquin Irrigation District (SSJID) South County Surface Water Supply Project (SCSWSP), which does not rely on the SJR. However, the SSJID obtains water from the Stanislaus River, which is a tributary to the SJR.
- Agricultural Supply: Extensive use is made of SJR and Delta waters for agricultural purposes. Annual water diversions from the Delta by the State Water Project (SWP) and the Central Valley Project (CVP) for agriculture are estimated to reach 4.3 million acre-feet (MAF) per year by 2030. In addition, about 2,000 privately owned agricultural water supply diversions are scattered throughout the Delta, generally consisting of riverside pumping stations.
- Recreation: Water-dependent recreation uses of the SJR and the Delta include swimming, wading, waterskiing, sport fishing, and a variety of other activities that involve contact with

the water. Noncontact (water-enhanced) recreation uses include picnicking, camping, pleasure boating, hunting, bird watching, education, and aesthetic enjoyment.

- Groundwater Recharge: Water from the SJR and the Delta recharges the San Joaquin Valley groundwater basin. Recharge serves to maintain salt balance in the soil column, prevent saltwater intrusion into freshwater aquifers, and provide for water supplies. Groundwater is replenished through deep percolation of streamflow, precipitation, and applied irrigation water. Groundwater quality is generally adequate throughout the San Joaquin Valley and the Delta, although at shallow depths within the Delta the water is often saline and contains high levels of total dissolved solids (TDS) and dissolved minerals. There are primary and secondary maximum contaminant levels established for TDS, per state and federal drinking water regulations. The need for treatment generally depends on consumer acceptance.
- Fish and Wildlife: The SJR and the waterways of the Delta provide important habitat for a diverse variety of aquatic life and terrestrial wildlife. This includes temporary habitat and migration routes for anadromous and other migratory species, as well as permanent habitat for resident species. Fish dependent on the Delta as a migration corridor, nursery, or permanent residence include Chinook salmon, steelhead, delta smelt, Sacramento splittail, striped bass, American shad, sturgeon, catfish, largemouth bass, and numerous other estuary and freshwater species. The amount and quality of water flowing through the Delta greatly influences the overall productivity of the area on an annual basis. A large assemblage of wildlife uses the Delta either seasonally or year round, including waterfowl; migratory and resident songbirds; mice, rabbits, and other small mammals; water dependent mammals, such as beaver and muskrat; and predators such as skunk, raccoon, northern harrier, and coyote.

LOCAL

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. An approved HCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under FESA during development activities.

A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. An approved NCCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under CESA during growth and development activities.

BACKGROUND

The key purpose of the SJMSCP, is to provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); providing and maintaining multiple-use Open Spaces which contribute to the

quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to Project Proponents and society at large.

San Joaquin County's past and future (2001-2051) growth has affected and will continue to affect 97 special status plant, fish and wildlife species in 52 vegetative communities scattered throughout San Joaquin County's 1,400+ square miles and 900,000+ acres, which include 43% of the Sacramento-San Joaquin Delta's Primary Zone. The SJMSCP, in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan, hereinafter referred to as "SJMSCP Covered Species". In addition, the SJMSCP provides some compensation to offset the impacts of open space land conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial Open Space uses.

The SJMSCP compensates for Conversions of Open Space for the following activities: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, maintenance of existing facilities for non-federal irrigation district projects, utility installation, maintenance activities, managing Preserves, and similar public agency projects. These activities will be undertaken by both public and private individuals and agencies throughout San Joaquin County and within the County's incorporated cities of Escalon, Lathrop, Lodi, Lathrop, Ripon, Stockton and Tracy. Public agencies including Caltrans (for transportation projects), and the San Joaquin Council of Governments (for transportation projects) also will undertake activities which will be covered by the SJMSCP. In addition, 5,340 acres is allocated for anticipated projects (e.g., annexations, general plan amendments)

The 97 SJMSCP Covered Species include 25 state and/or federally listed species. The SJMSCP Covered Species include 27 plants (6 listed), 4 fish (2 listed), 4 amphibians (1 listed), 4 reptiles (1 listed), 33 birds (7 listed), 15 mammals (3 listed) and 10 invertebrates (5 listed).

IMPLEMENTATION

The SJMSCP is administered by a Joint Powers Authority consisting of members of the San Joaquin County Council of Governments (SJCOG), the CDFW, and the USFWS. Development project applicants are given the option of participating in the SJMSCP as a way to streamline compliance with required local, State and federal laws regarding biological resources, and typically avoid having to approach each agency independently. According to the SJMSCP, adoption and implementation by local planning jurisdictions provides full compensation and mitigation for impacts to plants, fish and wildlife. Adoption and implementation of the SJMSCP also secures compliance pursuant to the state and federal laws such as CEQA, the National Environmental Policy Act (NEPA), the Planning and Zoning Law, the State Subdivision Map Act, the Porter-Cologne Act and the Cortese-Knox Act in regard to species covered under the SJMSCP.

Applicants pay mitigation fees on a per-acre basis, as established by the Joint Powers Authority according to the measures needed to mitigate impacts to the various habitat and biological resources. Different types of land require different levels of mitigation; i.e., one category requires that one acre of a similar land type be preserved for each acre developed, while another type requires that two acres be preserved for each acre developed. The entire County is mapped according to these categories so that land owners, project proponents and project reviewers are easily aware of the applicable SJMSCP fees for the proposed development.

The appropriate fees are collected by the City and remitted to SJCOG for administration. SJCOG uses the funds to preserve open space land of comparable types throughout the County, often coordinating with other private or public land trusts to purchase conservation easements or buy land outright for preservation. Development occurring on land that has been classified under the SJMSCP as "no-pay" would not be required to pay a fee. This category usually refers to already urbanized land and infill development areas. Although the fees are automatically adjusted on an annual basis, based on the construction cost index, they often cannot keep pace with the rapidly rising land prices in the Central Valley.

City of Lathrop General Plan

The City of Lathrop General Plan contains the following goals and policies related to biological resources:

GOALS OF THE GENERAL PLAN

Goal No. 5: Enhancing the Quality of Life and Biological Resources: It is a goal of the General Plan to enhance the quality of living by preventing the degradation of the natural environment, and by taking steps to off-set and alleviate the effects of that degradation which already has occurred, or which cannot be avoided. Biological resources are to be protected and preserved. Where feasible, natural conditions should be emulated as features of the community's systems of public and private open space.

PART V: RESOURCE MANAGEMENT ELEMENT

Vegetation, Fish and Wildlife Policies:

1. The objective of habitat retention calls for:

    - The integration of waterway habitat areas as part of the area wide system of open space.
    - The preservation of all stands of vegetation along waterways which provide habitat, and achieving a standard of "no net loss of wetland acreage".
    - The careful introduction of public and private recreation activities within habitat areas which will not disturb natural conditions either through intensity of operations, high levels of noise generation, or scarring of the landscape through development activity.

- The retention of hedgerows and other habitat areas within intensively farmed acreage which are compatible with agricultural operations.
- The protection of fisheries by preventing discharge of contaminated surface waters to waterways.

2. The objective of habitat enhancement calls for:

   - The improvement of natural habitat along waterways.
   - The creation of new habitat within multi-purpose open space area designated for reuse of treated wastewater for wildlife management and recreation.
   - Cooperative approaches among landowners to manage farmlands so as to increase the numbers of desirable species of wildlife.

3. The City has adopted (effective October 15, 1996) a Habitat Conservation Plan (HCP) for the Swainson's hawk. The acquisition of lands required as replacement habitat for nesting and foraging is to be funded by fees imposed upon developers whose land development activities would threaten, endanger or eliminate existing habitat within the Lathrop Planning Area. The HCP shall be based upon a current habitat field survey taken during the Swainson's hawk nesting season to determine whether Core Conservation Areas or only foraging habitat exists.

   It is the intent of the City of Lathrop to be a good steward of its biological resources for the benefit of its citizens and the general public. The General Plan EIR acknowledges that significant impacts would occur to Swainson's hawks, and potentially significant impacts could occur to other species. Mitigation measures are provided in the General Plan EIR to mitigate the impacts. The purpose of the following information is to clarify the proposed mitigation as a matter of General Plan policy.

   a. A mitigation concept is presented on page 8-D-8 which states that the City should adopt its own HCP, or possibly participate in the plan being prepared by the City of Stockton. The City intends to prepare an HCP, in cooperation with other jurisdictions that would mutually benefit from Lathrop's HCP. Information and data from Stockton's HCP will be used to the extent appropriate. The City shall implement the following to fully mitigate impacts described in this policy and the EIR:

4. An HCP developed by the City, which meets the standards specified by the State of California Department of Fish and Game.
5. Participation in the “Stockton Plan”. The “Stockton Plan’ is a Habitat Management Plan which is, as of April 22, 1992, being developed by the Cities of Stockton, Tracy and Lathrop and the County of San Joaquin.
6. Until it is participating in an HCP, the City shall not pre-zone and/or annex any real property or approve a specific plan for the development of real property, unless these conditions are met:

a. For each acre annexed to, pre-zoned by or which is the subject of a specific plan (subject to an event), the City will mitigate the loss of Swainson's hawk habitat by providing a one-to-one ratio habitat, including foraging habitat, or equal value.

b. All property subject to an event shall be considered Swainson's hawk habitat. Habitat acquired for will be called the "preserve acreage". "Preserve Acreage" may also consist of conservation easements, and in lien fee ownership of property and shall be subject to the following conditions:

    1. The "preserve acreage" must meet regulations specified by the State of California Department of Fish and Game.
    2. The "preserve acreage" must be located within one mile of the property subject to the event.
    3. The "preserve acreage" shall be deeded to the Department of Fish and Game, or the Land Utilization Trust.
    4. A mitigation fee shall not be sufficient mitigation for real property subject to an event, but actual mitigation by acquisition of real property or a conservation easement shall be required.
    5. A management fee will be collected in an amount to ensure that sufficient income will be available to manage the preserve property.

c. Lathrop's HCP will be completed prior to the City allowing specific project EIR's to be completed for projects proposed west of Interstate 5. This will ensure that the necessary mitigation plans and agreements with the State Department of Fish and Game (DFG) are in place for protection of Swainson's hawks. The HCP process will commence as soon as reasonably possible after General Plan adoption, involving close cooperation with DFG. It is recognized that foraging habitat is one of the most important elements required for preservation of Swainson's hawks.

7. Developments proposed in sensitive biological areas shall be required to provide a site-specific analysis of the impacts of the project on fish and wildlife habitat. Because of the large-scale character of development proposed in the vicinity of biologically sensitive environments, including the conversion of several thousand acres of agricultural land to urban use, project proposals should be made to address ways in which new or enhanced habitat may be created as a trade-off to the general environmental impacts on biological resources associated with development under the General Plan.
8. Land use within areas of riparian habitat shall be restricted to nature-oriented passive recreation, which may include an arboretum, zoological gardens, hiking and nature study essential linear infrastructure and other such uses compatible with existing or enhanced riparian habitats. Structures, which would reduce the amount of area available for water detention, should be prohibited within the Paradise Cut flood plain unless they are accompanied by concurrent expansion of such detention areas in or adjacent to Paradise Cut.

9. A naturally landscaped corridor shall be provided along the western perimeter of SPA #2, which lies west of Interstate 5. This corridor should be wide enough to serve as a major component of the recreation and open space system, and should provide for a system of pedestrian, bicycle and equestrian trails where such uses are compatible with riparian habitats, where they exist. This corridor will also assure public access to the San Joaquin River as required by State policy and law and as permitted by RD-17.
10. The visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments by the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams or similar features which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites. The multi-purposes use of water bodies for surface water drainage, flood control, wastewater reclamation, wildlife management, recreation and visual amenity is encouraged.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on biological resources if it will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.1-1: The proposed project has the potential to result in direct or indirect effects on special-status species. (Less than Significant with Mitigation)

INVERTEBRATES

According to the CNDDB, there are 11 special-status invertebrates that are documented within the 9-quad region for the project site. Six of these species are covered species under the SJMSCP including: conservancy fairy shrimp (*Branchinecta conservation*) (FE), curved-foot hygrotus diving beetle (*Hygrotus curvipes*), vernal pool fairy shrimp (*Branchinecta lynchi*) (FT), vernal pool tadpole shrimp (*Lepidurus packardi*) (FE), molestan blister beetle (*Lytta molesta*), and Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (FT). The following five species are not covered and do not have a federal or state protective status of threatened or endangered: California linderiella (*Linderiella occidentalis*), crotch bumble bee (*Bombus crotchii*), midvalley fairy shrimp (*Branchinecta mesovallensis*), Sacramento anthicid beetle (*Anthicus sacramento*), and western bumble bee (*Bombus occidentalis*).

AMPHIBIANS

According to the CNDDB, there are four special-status amphibians that are documented within the 9-quad region for the project site, including: California tiger salamander (*Ambystoma californiense*) (FT/SSC), California red-legged frog (*Rana aurora draytoni*) (CT/SSC), foothill yellow-legged frog (*Rana boylii*) (CC/SSC), and western spadefoot (*Spea hammondii*). All of these species are covered species under the SJMSCP.

BIRDS

According to the CNDDB, there are 18 special-status birds that are documented within the 9-quad region for the project site. Seventeen of these species are covered species under the SJMSCP including: Aleutian goose (*Branta canadensis leucopareia*) (FD), burrowing owl (*Athene cunicularia*) (SSC), California black rail (*Laterallus jamaicensis coturniculus*) (CT), California horned lark (*Eremophila alpestris actia*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), great blue heron (*Ardea Herodias*), loggerhead shrike (*Lanius ludovicianus*) (SSC), merlin (*Falco columbarius*), northern harrier (*Circus hudsonius*) (SSC), short-eared owl (*Asio flammeus*) (SSC), song sparrow (Modesto population) (*Melospiza melodia*) (SSC), Swainson's hawk (*Buteo swainsoni*) (CT), tricolored blackbird (*Agelaius tricolor*) CT), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) (FT/CE), white-tailed kite (*Elanus leucurus*) (CP), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*) (SSC). The least Bell's vireo (*Vireo bellii pusillus*) (FE/CE) is not covered, but is not a resident of the regional vicinity.

FISH

According to the CNDDB, there are five special-status fish that are documented within the 9-quad region for the project site. Two of these species are covered species under the SJMSCP including: Delta smelt (*Hypomesus transpacificus*) (FT/CT), and longfin smelt (*Spirinchus thaleichthys*) (SSC). The following three species are not covered: Hardhead (*Mylopharodon conocephalus*) (SSC), Central Valley steelhead (*Oncorhynchus mykiss*) (FT), and eulachon (*Thaleichthys pacificus*) (FT).

MAMMALS

According to the CNDDB, there are eight special-status mammals that are documented within the 9-quad region for the project site. Six of these species are covered species under the SJMSCP including: American badger (*Taxidea taxus*) (SSC), riparian (San Joaquin Valley) woodrat (*Neotoma fuscipes riparia*) (FE/SSC), riparian brush rabbit (*Sylvilagus bachmani riparius*) (FE/CE), San Joaquin kit fox (*Vulpes macrotis mutica*) (FE/CT), San Joaquin pocket mouse (*Perognathus inornatus*), and western mastiff bat (*Eumops perotis californicus*) (SSC). The following two species are not covered and do not have a federal or state protective status of threatened or endangered: pallid bat (*Antrozous pallidus*) (SSC) and Townsend's big-eared bat (*Corynorhinus townsendii*) (SSC).

REPTILES

According to the CNDDB, there are seven special-status reptiles that are documented within the 9-quad region for the project site. Three of these species are covered species under the SJMSCP including: Alameda whipsnake (*Masticophis lateralis euryxanthus*)(FT/CT), giant garter snake (*Thamnophis couchi gigas*) (FT/CT), and western pond turtle (*Emys marmorata*). The following species are not covered and do not have a federal or state protective status of threatened or endangered: California glossy snake (*Arizona elegans occidentalis*) (SSC), coast horned lizard (*Phrynosoma blainvillii*) (SSC), northern California legless lizard (*Anniella pulchra*) (SSC), San Joaquin coachwhip (*Masticophis flagellum ruddocki*) (SSC).

PLANTS

According to the CNDDB, there are 33 special-status plants that are documented within the 9-quad region for the project site. Seventeen of these species are covered species under the SJMSCP including: alkali milk-vetch (*Astragalus tener var. tener*), bristly sedge (*Carex comosa*), Caper-fruited tropidocarpum (*Tropidocarpum capparideum*), Delta button-celery (*Eryngium racemosum*), Delta mudwort (*Limosella australis*), Delta tule pea (*Lathyrus jepsonii var. jepsonii*), diamond-petaled California poppy), *Eschscholzia rhombipetala*), heartscale (*Atriplex cordulata var. cordulata*), Hospital Canyon larkspur (*Delphinium californicum ssp. interius*), large-flowered fiddleneck (*Amsinckia grandiflora*), Mason's lilaeopsis (*Lilaeopsis masonii*), recurved larkspur (*Delphinium recurvatum*), Sanford's arrowhead (*Sagittaria sanfordii*), showy golden madia (*Madia radiata*), slough thistle (*Cirsium crassicaule*), Suisun Marsh aster (*Symphyotrichum lentum*), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*). The following sixteen species are not covered: big tarplant (*Blepharizonia plumose*), Brewer's western flax (*Hesperolinon breweri*), California alkali grass (*Puccinellia simplex*), chaparral harebell (*Campanula exigua*), chaparral ragwort (*Senecio aphanactis*), Lemmon's jewelflower (*Caulanthus lemmonii*), lesser saltscale (*Atriplex minuscula*),

long-styled sand-spurrey (*Spergularia macrotheca var. longistyla*), marsh skullcap) (*Scutellaria galericulata*), palmate-bracted bird's-beak (*Chloropyron palmatum*), saline clover (*Trifolium hydrophilum*), San Joaquin spearscale (*Extriplex joaquinana*), shining navarretia (*Navarretia nigelliformis* ssp. *radians*), spiny-sepaled button-celery (*Eryngium spinosepalum*), watershield (*Brasenia schreberi*), and woolly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*).

PROJECT IMPACTS

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects, the construction of which could potentially disturb special status species and/or their habitats. The Water System CIPs address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of water supply sources within the City's distribution system. The Wastewater System CIPs were developed to remove and replace the existing pipe with a larger diameter pipe for each gravity sewer capacity deficiency. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. The Plan considers the installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas. The Recycled Water System Master Plan includes the City's current expansion of its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF. Most Phase 2A improvements have been completed, with the exception of the following: conversion of the low-pressure PMP-10 to a high-pressure pump station, installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs, and establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Phase 2B will include the following improvements: increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5), and install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B.

These projects are all designed to be within areas that are either existing roadway, existing urban areas, existing vacant fields, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would have minimal, if any, disturbance to special status species and/or their habitats given that this area is already disturbed and provides little to no habitat value. The CIP projects that would be constructed in the agricultural areas would also be considered low impact on special status species for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field or vacant field, but the irrigation system would change from surface water well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The net impact from a

new LAA would be negligible because the agricultural field would remain as foraging habitat for a variety of species that use the fields.

The Recycled Water Master Plan includes development of new storage ponds during Phase 2A and 2B. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas. The new and existing ponds provide some habitat value for water fowl and other wildlife.

SJMSCP

The key purpose of the SJMSCP, is to provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); providing and maintaining multiple-use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to Project Proponents and society at large.

San Joaquin County's past and future (2001-2051) growth has affected and will continue to affect 97 special status plant, fish and wildlife species in 52 vegetative communities scattered throughout San Joaquin County's 1,400+ square miles and 900,000+ acres, which include 43% of the Sacramento-San Joaquin Delta's Primary Zone. The SJMSCP, in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan, hereinafter referred to as "SJMSCP Covered Species". In addition, the SJMSCP provides some compensation to offset the impacts of open space land conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial Open Space uses.

The SJMSCP compensates for Conversions of Open Space for the following activities: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, maintenance of existing facilities for non-federal irrigation district projects, utility installation, maintenance activities, managing Preserves, and similar public agency projects. These activities will be undertaken by both public and private individuals and agencies throughout San Joaquin County and within the County's incorporated cities of Escalon, Lathrop, Lodi, Lathrop, Ripon, Stockton and Tracy. Public agencies including Caltrans (for transportation projects), and the San Joaquin Council of Governments (for transportation projects) also will undertake activities which will be covered by the SJMSCP. In addition, 5,340 acres is allocated for anticipated projects (e.g., annexations, general plan amendments)

The 97 SJMSCP Covered Species include 25 state and/or federally listed species. The SJMSCP Covered Species include 27 plants (6 listed), 4 fish (2 listed), 4 amphibians (1 listed), 4 reptiles (1 listed), 33 birds (7 listed), 15 mammals (3 listed) and 10 invertebrates (5 listed).

According to the SJMSCP, adoption and implementation by local planning jurisdictions provides full compensation and mitigation for impacts to plants, fish and wildlife. Adoption and implementation of the SJMSCP also secures compliance pursuant to the state and federal laws such as CEQA, the National Environmental Policy Act (NEPA), the Planning and Zoning Law, the State Subdivision Map Act, the Porter-Cologne Act and the Cortese-Knox Act in regard to species covered under the SJMSCP.

Applicants pay mitigation fees on a per-acre basis, as established by the Joint Powers Authority according to the measures needed to mitigate impacts to the various habitat and biological resources. Different types of land require different levels of mitigation; i.e., one category requires that one acre of a similar land type be preserved for each acre developed, while another type requires that two acres be preserved for each acre developed. The entire County is mapped according to these categories so that land owners, project proponents and project reviewers are easily aware of the applicable SJMSCP fees for the proposed development.

The appropriate fees are collected by the City and remitted to SJCOG for administration. SJCOG uses the funds to preserve open space land of comparable types throughout the County, often coordinating with other private or public land trusts to purchase conservation easements or buy land outright for preservation. Development occurring on land that has been classified under the SJMSCP as “no-pay” would not be required to pay a fee. This category usually refers to already urbanized land and infill development areas. Although the fees are automatically adjusted on an annual basis, based on the construction cost index, they often cannot keep pace with the rapidly rising land prices in the Central Valley.

As presented above, there are a variety of special status species known to occur within the regional vicinity of the proposed Project. The CIP projects would be located in areas that are generally very low-quality habitat given their urban/developed nature. The agricultural areas provide a higher quality habitat for some species known to occur in the area.

Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land represents potentially suitable nesting habitat for the ground-nesting birds, as well as foraging habitat for many species. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the project site in any given year. Additionally, the proposed project would temporarily disturb some agricultural areas, which serve as potential foraging habitat for birds throughout the year.

Mitigation Measure 3.1-1 requires participation in the SJMSCP. As part of the SJMSCP, SJCOG requires preconstruction surveys for projects that occur during the avian breeding season (March 1 – August 31). When active nests are identified, the biologists develop buffer zones around the active

nests as deemed appropriate until the young have fledged. SJCOG also uses the fees to purchase habitat as compensation for the loss of foraging habitat. Implementation of the proposed project, with the Mitigation Measure 3.1-1, would ensure that potential impacts to special status birds are reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.1-1*: Prior to commencement of any grading activities, the project proponent shall seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*

Impact 3.1-2: The proposed project would not result in adverse effects on riparian habitat, a sensitive natural community, protected wetlands, or jurisdictional waters. (Less than Significant)

The CNDDB record search revealed documented occurrences of seven sensitive habitats within the 9-quad radius of the project site, including: Alkali Meadow, Coastal and Valley Freshwater Marsh, Elderberry Savanna, Great Valley Cottonwood Riparian Forest, Great Valley Mixed Riparian Forest, Great Valley Valley Oak Riparian Forest, and Valley Sink Scrub. There are also a variety of wetlands and jurisdictional areas in the region, including the San Joaquin River, various sloughs, and certain irrigation canals.

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would have no disturbance to riparian habitats, sensitive natural communities, protected wetlands, or jurisdictional waters.

The CIP projects that would be constructed in the agricultural areas would include installation of underground pipes, pump stations, meters, control valves, and a SCADA system. The footprint of these facilities would not be located in riparian habitats, sensitive natural communities, protected wetlands, or jurisdictional waters. The new LAA would be in an agricultural field, which is not considered riparian habitats, sensitive natural communities, protected wetlands, or jurisdictional waters. The construction of a new Pond would not be in any riparian habitats, sensitive natural communities, protected wetlands, or jurisdictional waters. The Pond itself will be a man-made structure and will not be jurisdictional.

The CIP projects are not located such that they would require disturbance to riparian habitats, any sensitive natural community, protected wetlands, or jurisdictional waters. Implementation of the proposed project would have a **less than significant** impact relative to this topic.

Impact 3.1-3: The proposed project would not result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

The CNDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites. Special status fish species documented within the region include: Delta smelt (*Hypomesus transpacificus*), hardhead (*Mylopharodon conocephalus*), Central Valley steelhead (*Oncorhynchus mykiss*), eulachon (*Thaleichthys pacificus*), and longfin smelt (*Spirinchus thaleichthys*). The closest major natural movement corridor for native fish that are documented in the region is the San Joaquin River, that runs through the project site. There are also SSJID irrigation canals that run through the region that are known to have native fish enter the canal system approximately 10 miles north of Lathrop at the French Camp Slough.

The CIP projects are all designed to be within areas that are either existing roadway, existing urban areas, existing vacant fields, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would have no disturbance to the San Joaquin River or its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat for the above listed fish species.

All stormwater generated in the City, including in the CIP project areas, is subject to the Lathrop Municipal Code Title 13 (Public Services) Chapter 13.28 (Stormwater Management and Discharges), which establish minimum storm water management requirements and controls. Storm water drainage is managed through the implementation of best management practices to the extent they are technologically achievable to prevent and reduce pollutants. The City requires reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would interfere or impede fish or wildlife. Implementation of these required measures would ensure that this potential impact is reduced to a **less than significant** level.

Impact 3.1-4: The proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

It is a goal of the General Plan to enhance the quality of living by preventing the degradation of the natural environment, and by taking steps to off-set and alleviate the effects of that degradation which already has occurred, or which cannot be avoided. Biological resources are to be protected and preserved. Where feasible, natural conditions should be emulated as features of the community's systems of public and private open space.

The Resource Management Element of the General Plan establishes numerous policies related to vegetation, fish, and wildlife. The policies are presented below:

Policy 1 seeks to retain habitat by integrating waterway habitat areas as part of an open space system, preserving standards of vegetation along waterways, achieving a "no net loss" of wetland acreage, careful introduction of recreation into habitat areas, retention of hedgerows and other habitat areas within farmland, and protection of fisheries by preventing discharge of contaminated surface waters to waterways.

Policy 2 seeks to enhance habitat by improving natural habitat along waterways, creating new habitat within multi-purpose open space areas, and cooperating with landowners to manage farmlands to increase numbers of desirable wildlife.

Policy 3, 4, 5, and 6 reference an old/outdated Swainson's Hawk Habitat Conservation Plan (HCP), and Stockton Plan, and the need to prepare an HCP for the City. The older plans are no longer relevant, given that they were replaced with the SJMSCP.

Policy 7 calls for a site-specific analysis of the impacts of the project on fish and wildlife habitat on new projects located in a sensitive area.

Policy 8 calls for restrictions of land use within areas of riparian habitat to be nature-oriented passive recreation, which may include an arboretum, zoological gardens, hiking and nature study essential linear infrastructure and other such uses compatible with existing or enhanced riparian habitats.

Policy 9 calls for a naturally landscaped corridor to be provided along the western perimeter of SPA #2, which lies west of Interstate 5.

Policy 10 calls for visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments by the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams or similar features which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites.

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The Water System CIPs address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of water supply sources within the City's distribution system. The Wastewater System CIPs were developed to remove and replace the existing pipe with a larger diameter pipe for each gravity sewer capacity deficiency. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. The Plan considers the installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas. The Recycled Water System Master Plan includes the City's current expansion of its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF. Most Phase 2A improvements have been completed, with the

exception of the following: conversion of the low-pressure PMP-10 to a high-pressure pump station, installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs, and establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Phase 2B will include the following improvements: increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5), and install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B.

These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would have minimal, if any, disturbance to special status species and/or their habitats given that this area is already disturbed and provides little to no habitat value. The CIP projects that would be constructed in the agricultural areas would also be considered low impact on special status species for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field or vacant field, but the irrigation system would change from well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The net impact from a new LAA would be negligible because the agricultural field would remain as foraging habitat for a variety of species that use the fields. The Recycled Water Master Plan includes development of new storage ponds during Phase 2A and 2B. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas. The new and existing ponds provide some habitat value for water fowl and other wildlife. The project is subject to the SJMSCP, which would require the payment of fees as determined by SJCOG, as well as preconstruction surveys to be performed by an SJCOG biologist.

The proposed project does not conflict with any of the above referenced General Plan policies protecting biological resources. There are no tree preservation ordinances or other ordinances protecting biological resources. The proposed project would have a **less than significant** impact relative to this topic.

Impact 3.1-5: The proposed project has the potential to conflict with an adopted Habitat Conservation Plan. (Less than Significant with Mitigation)

The proposed project is subject to the SJMSCP, which is an adopted Habitat Conservation Plan (USFWS) and Natural Community Conservation Plan (CDFW). The key purpose of the SJMSCP, is to provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (FESA) or the California Endangered Species Act (CESA); providing and

maintaining multiple-use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to Project Proponents and society at large.

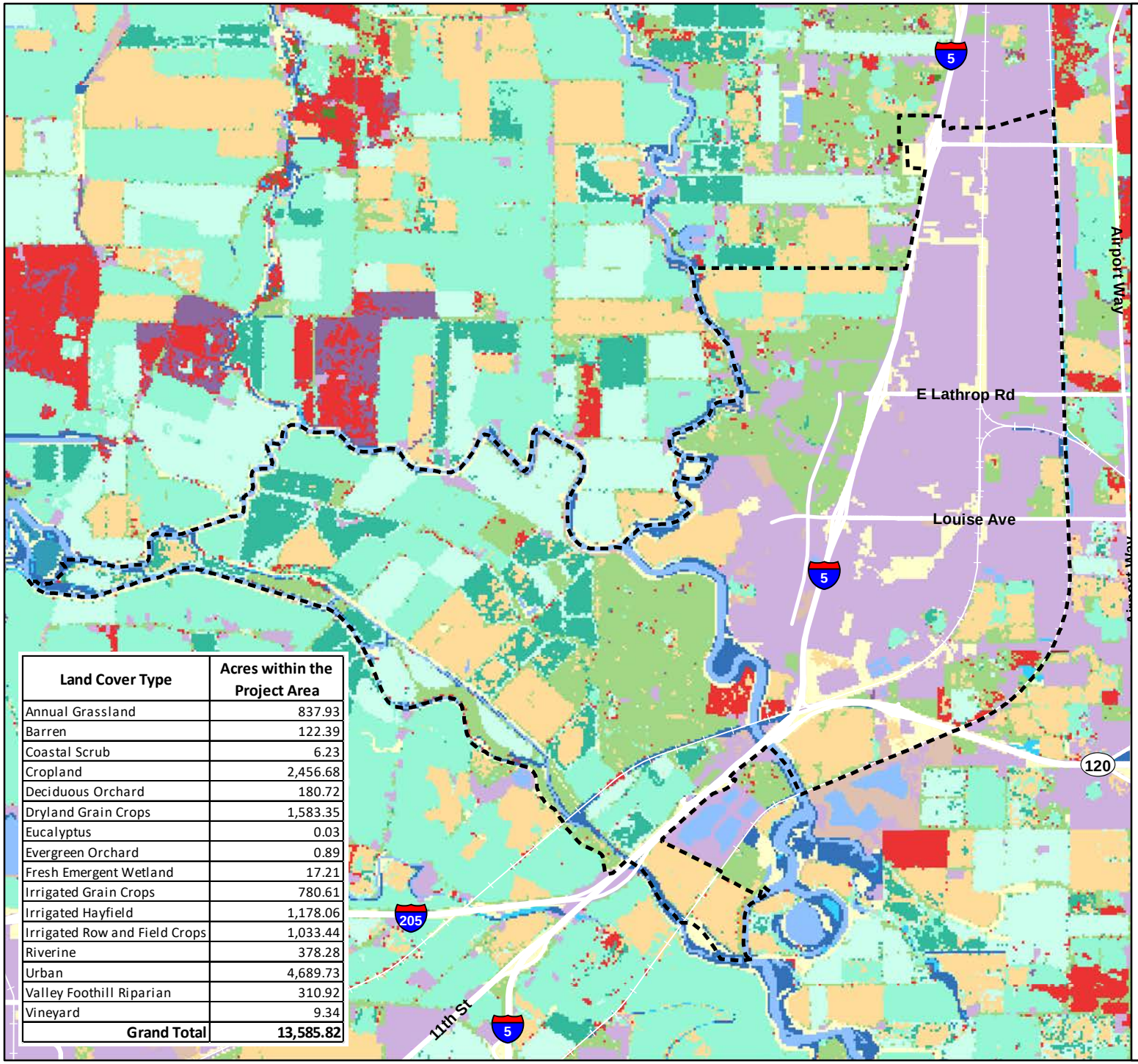
The proposed Project is subject to the SJMSCP. Mitigation Measure 3.1-1 requires participation in the SJMSCP. The proposed project does not conflict with the SJMSCP. Therefore, the proposed project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Implement **Mitigation Measure 3.1-1**.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 3.1-1.
Land Cover Types



Land Cover Type	Acres within the Project Area
Annual Grassland	837.93
Barren	122.39
Coastal Scrub	6.23
Cropland	2,456.68
Deciduous Orchard	180.72
Dryland Grain Crops	1,583.35
Eucalyptus	0.03
Evergreen Orchard	0.89
Fresh Emergent Wetland	17.21
Irrigated Grain Crops	780.61
Irrigated Hayfield	1,178.06
Irrigated Row and Field Crops	1,033.44
Riverine	378.28
Urban	4,689.73
Valley Foothill Riparian	310.92
Vineyard	9.34
Grand Total	**13,585.82**

Legend

Project Boundary

Land Cover Type

- Annual Grassland
- Barren
- Coastal Scrub
- Cropland
- Deciduous Orchard
- Dryland Grain Crops
- Eucalyptus
- Evergreen Orchard
- Fresh Emergent Wetland
- Irrigated Grain Crops
- Irrigated Hayfield
- Irrigated Row and Field Crops
- Pasture
- Rice
- Riverine
- Saline Emergent Wetland
- Urban
- Valley Foothill Riparian
- Vineyard

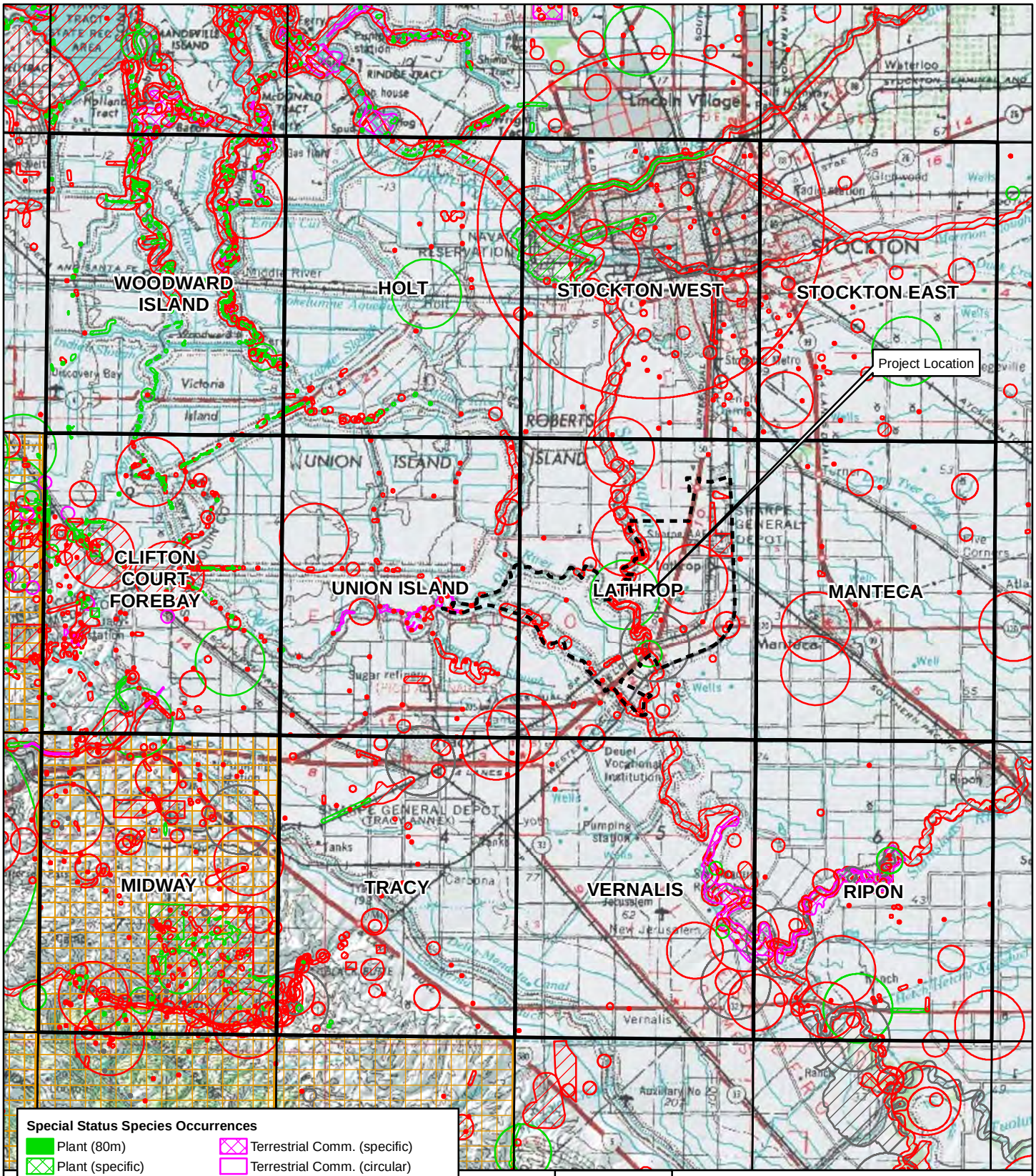
N

0 ½ 1
Miles

Sources: San Joaquin County; CalFire-FRAP Vegetation (fveg_2015). Map date: March 18, 2019.

De Novo Planning Group

This page left intentionally blank.



LATHROP INTEGRATED WATER RESOURCES MASTER PLAN

Figure 3.1-2. California Natural Diversity Database

9-Quad Search*

** Because the project area overlaps two (2) USGS 7.5' quadrangles, the CNDDB 9-quad search actually covers 12 quads. CNDDB version 03/2019. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status*

This page left intentionally blank.

This section provides a discussion of the prehistoric period background, ethnographic background, historic period background, known cultural resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the *Comprehensive General Plan for the City of Lathrop, California* (adopted 1991), and the *City of Lathrop General Plan Update Existing Conditions Report – Admin Draft* (City of Lathrop, 2018).

There were no comments received during the Notice of Preparation (NOP) comment period regarding cultural and tribal resources.

3.2.1 ENVIRONMENTAL SETTING

PROJECT SETTING

The project site is located throughout Lathrop, California. The IWRMP includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area.

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's existing recycled water distribution system is generally contiguous with the City limits, and some of the future facilities are planned for north of the City limits.

ARCHAEOLOGICAL BACKGROUND

The Central Valley region was among the first in the state to attract intensive cultural and historical fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data. In the early decades of the 1900s, E. J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W. E. Schenck (Schenck and Dawson, 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and exploration were conducted by the Sacramento Junior College (Lillard and Purves, 1936). Excavation data, in particular, from the stratified Windmiller Site (CA-Sac-107) suggested two

temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California enabled the investigators to identify a third cultural tradition intermediate between the previously postulated early and late horizons. The three-horizon sequence was based on discrete changes in ornamental artifacts and mortuary practices as well as an observed difference in soils within sites (Lillard, Heizer and Fenenga, 1939). This sequence was later refined by Beardsley (1954), with an expanded definition of artifacts diagnostic of each time period and was extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

The Windmiller Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads, a high percentage of burials with grave goods, frequent presence of red ocher in graves, large projectile points, of which 60 percent are of materials other than obsidian; rectangular *Haliotis* beads; *Olivella* shell beads (types Ala and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

The Cosumnes Culture (Middle Horizon) displays considerable changes from the preceding cultural expression. The burial mode is predominately flexed, with variable cardinal orientation and some cremations present. There are a lower percentage of burials with grave goods, and ocher staining is common in graves. *Olivella* beads of types C1, F and G predominate, and there is abundant use of green *Haliotis* sp. rather than red *Haliotis* sp. Other characteristic artifacts include perforated canid teeth, asymmetrical and "fishtail" charmstones, usually unperforated; cobble mortars and evidence of wooden mortars; extensive use of bone for tools and ornaments; large projectile points, with considerable use of rock other than obsidian; and use of baked-clay.

The Hotchkiss Culture (Late Horizon) burial pattern retains the use of the flexed mode, and there is widespread evidence of cremation, lesser use of red ocher, heavy use of baked clay, *Olivella* beads of Types E and M, extensive use of *Haliotis* ornaments of many elaborate shapes and forms, shaped mortars and cylindrical pestles, bird-bone tubes with elaborate geometric designs, clamshell disc beads, small projectile points indicative of the introduction of the bow and arrow, flanged tubular pipes of steatite and schist, and use of magnetite (Moratto, 1984:181-183). The characteristics noted above are not all-inclusive, but cover the more important traits.

There have been other chronologies proposed for this general region. Fredrickson (1973) has correlated his research with Bennyhoff's (1977) work, and has defined, based upon the work of Bennyhoff, patterns, phases and aspects. Fredrickson also proposed periods of time associated heavily with economic modes, which provides a temporal term for comparing contemporary cultural entities.

ETHNOGRAPHIC BACKGROUND

The City of Lathrop lies within the northern portion of the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925; Latta 1949). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Yokuts held portions of the San Joaquin Valley from the Tehachapis in the south to Stockton in the north. On the north they were bordered by the Plains Miwok, and on the west by the Saclan or Bay Miwok and Costonoan peoples. Although neighbors were often from distinct language families, differences between the people appear to have been more influenced by environmental factors as opposed to linguistic affinities. Thus, the Plains Miwok were more similar to the nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varied with distance from other groups and proximity to culturally diverse people. The material culture of the southern San Joaquin Yokuts was therefore more closely related to that of their non-Yokuts neighbors than to that of Delta members of their own language group.

Trade was well developed, with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. The housepit depressions for the structures ranged in diameter from 3 meters to 18 meters (Wallace 1978:470).

HISTORIC PERIOD BACKGROUND

The northern section of the City of Lathrop on a portion of the Rancho Campo de los Franceses, the ranch named for the early camp first occupied by French-Canadian trappers employed by the

Hudson's Bay Company in 1832. The site of the present-day location of French Camp was the terminus of the Oregon Trail used by the trappers between 1832 and 1845. In 1843, William Gulnac, likely one of the trappers who had become a Mexican citizen, with Charles Weber, later founder of Stockton, organized a company of 12 men for the purpose of forming a colony at French Camp. Gulnac filed for a land grant, and was awarded a large tract of land including French Camp and the later site of Stockton by the Mexican government.

Much of the remainder of the land is a portion of the El Pescadero land grant. The Mexican land grant of 35,546 acres, lying in portions of what is now San Joaquin and Alameda counties, was awarded in 1843 to Antonio Maria Pico. Pico sold one half of the property to Henry Morris Naglee in 1849. Pico sold one half of the remainder of the property in 1852 to John C. Frémont. After California became a state, a claim was filed for the grant in 1852 and rejected in 1854, but ultimately the land grant was patented to Pico and Naglee in 1865. The land grant was settled by numerous squatters, and Fremont sold his land to Charles McLaughlin in 1867.

Lathrop first was a station on the Central Pacific, established in 1869 when the last stretch of the transcontinental railroad was built from Sacramento through this region, and crossing the San Joaquin River at Mossdale to reach the Bay Area.

The site of Lathrop was first known as Wilson's Station, and included a store and a schoolhouse on land belonging to Thomas A. Wilson. Due to conflicts in the City of Stockton that infuriated Leland Stanford, the Central Pacific Railroad switched many operations to Wilson's Station, later re-named for Charles Lathrop, brother-in-law of Leland Stanford. The town drew significant commerce away for the City of Stockton. The railroad's machine shops and roundhouse were built here, and the town became an important division point and major stop on the railroad line beginning in 1871. The Visalia Division of the Stockton of the Southern Pacific Railroad was completed at that time, serving the San Joaquin Valley. Lathrop became an important shipping point for agricultural products.

The early major building in Lathrop was the 1871 Central Pacific Railroad restaurant, serving passengers from trains from the Bay Area to Sacramento, and passengers travelling to the San Joaquin Valley. In 1889, in this restaurant, attorney David S. Terry was shot and killed by Field's bodyguard after he struck United States Supreme Court Justice Stephen Field.

Lathrop remained important for the railroads, and in 1890, had about 500 residents. Daily, there were twelve passenger and 44 freight trains passing through. But that changed in the early 1890s with the growth of Tracy, and the transfer of the machine shop and roundhouse to that community. The completion of the Western Pacific railroad in 1909 did not affect the town, with the local station located about ¾ miles from the town.

In 1942, the Lathrop Holding and Reconsignment Point was established in the Lathrop vicinity on what had been a sheep ranch, holding supplies for shipment through Bay Area ports. As many as 450 railroad cars would be loaded and unloaded each day.

The facility has gone through many changes with the changing needs of the military during times of conflict. After the end of World War II, the depot went through administrative and supply

mission changes, a new name applied in 1948: Sharpe General Depot. The conflict in Korea brought a demand for increased services as the staffing, shipments and missions doubled during the three years of the war. The Army curtailed supply operations, and the Sharpe site began providing medical supplies and subsistence items on a larger scale. In 1962, the facility became the Sharpe Army Depot.

In 1965, with the escalation of the war in Vietnam, Sharpe became the major conduit for supplies moving to Southeast Asia. The Sharpe facility has continued to operate with a large part of the staffing switched to the Tracy facility beginning in 1999.

In the 1950s, several industrial plants were built in the Lathrop area, providing additional employment in the region. Beginning in the 1980s, improvements to community infrastructure and the attractive pricing of homes brought even more growth. The pattern of rapid growth continues to this day, with industrial and commercial development in the area, as well as many residents commuting daily to the Bay Area. The City of Lathrop incorporated in 1989.

KNOWN CULTURAL RESOURCES

Prehistoric period settlement in this region was focused on areas with elevated terrain closer to permanent water sources.

Cultural Resources

One hundred and seventy-two cultural resources have been identified within the City of Lathrop General Plan Study Area, according to files maintained by the Central California Information Center (CCIC) of the California Historical Resources Information System (CHRIS). The 172 recorded cultural resources span both the prehistoric and historic periods and range from a Native American village site to historic period railroads, a school, buildings and single-family homes. The recorded resources include a Point of Historical Interest and two California Historical Landmarks. The greatest number of recorded cultural resources are buildings at the Sharpe facility.

There are no properties or districts currently listed on the National Register of Historic Places (NRHP) or California Register of Historic Places (CRHR) for the City of Lathrop.

Paleontological Resources

Among the natural resources deserving conservation and preservation are the often-unseen records of past life buried in the sediments and rocks below the pavement, buildings, soils, and vegetation which now cover most of the area. Fossils constitute a non-renewable resource: Once lost or destroyed, the exact information they contained can never be reproduced.

Paleontology is the science that attempts to unravel the meaning of these fossils in terms of the organisms they represent, the ages and geographic distribution of those organisms, how they interacted in ancient ecosystems and responded to past climatic changes, and the changes through time of all of these aspects.

The sensitivity of a given area or body of sediment with respect to paleontological resources is a function of both the potential for the existence of fossils and the predicted significance of any fossils which may be found there. The primary consideration in the determination of paleontological sensitivity of a given area, body of sediment, or rock formation is its potential to include fossils. Information that can contribute to assessment of this potential includes: 1) direct observation of fossils within the project area; 2) the existence of known fossil localities or documented absence of fossils in the same geologic unit (e.g., "Formation" or one of its subunits); 3) descriptive nature of sedimentary deposits (such as size of included particles or clasts, color, and bedding type) in the area of interest compared with those of similar deposits known elsewhere to favor or disfavor inclusion of fossils; and 4) interpretation of sediment details and known geologic history of the sedimentary body of interest in terms of the ancient environments in which they were deposited, followed by assessment of the favorability of those environments for the preservation of fossils.

The most general paleontological information can be obtained from geologic maps, but geologic cross sections (slices of the layer cake to view the third dimension) must be reviewed for each area in question. These usually accompany geologic maps or technical reports. Once it can be determined which formations may be present in the subsurface, the question of paleontological resources must be addressed. Even though a formation is known to contain fossils, they are not usually distributed uniformly throughout the many square miles the formation may cover. If the fossils were part of a bay environment when they died, perhaps a scattered layer of shells will be preserved over large areas. If on the other hand, a whale died in this bay, you might expect to find fossil whalebone only in one small area of less than a few hundred square feet. Other resources to be considered in the determination of paleontological potential are regional geologic reports, site records on file with paleontological repositories and site-specific field surveys. A search of the University of California Museum of Paleontology (UCMP) collections database identified 984 paleontological resources in San Joaquin County. These paleontological resources consist of 756 vertebrates 211 microfossils, and 17 invertebrate fossils.

Generally, Paleontologists consider all vertebrate fossils to be of the greatest significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations.

Much of the area west of the San Joaquin River within the project area is underlain by younger Holocene-age sediments (Holocene alluvial floodplain deposits), which due to their recent age structure are considered to have a low potential (low sensitivity) rating for containing significant paleontological resources. However, even a designated low potential site may yield fossils as sedimentary deposits associated with the Pleistocene Modesto Formation (generally located east of the San Joaquin River within the Planning Area) could also underlie alluvial floodplain deposits at certain depths.

A portion of the project site is located within sediments of the Modesto Formation, which is considered a paleontologically sensitive rock unit under the Society of Vertebrate Paleontology guidelines (1995, 1996). In addition, the occurrence of Pleistocene vertebrate fossil remains in

sediments referable to the Modesto Formation from the nearby cities of Manteca, Stockton, and Tracy suggests that the potential exists for uncovering additional similar fossil remains during construction related earth-moving activities in the project site.

Consultation

In accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18, the City of Lathrop contacted the following Native American tribal groups: Buena Vista Rancheria of Me-Wuk Indians, California Valley Miwok Tribe, California Valley Miwok Tribe AKA Sheep Rancheria of Me-Wuk Indians of California, Ione Band of Miwok Indians, North Valley Yokuts Tribe, United Auburn Indian Community of the Auburn Rancheria, and Wilton Rancheria. Each group was provided with information regarding the proposed project on March 29, 2019. The City requested that the tribes supply any information they might have concerning prehistoric sites or traditional use areas within the project site. To date, none of the tribes have responded to the tribal consultation letters.

3.2.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the NRHP. The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

STATE

California Register of Historic Resources

The CRHR was established in 1992 and codified in the Public Resource Code §5020, 5024 and 21085. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1. NRHP eligibility is based on similar criteria outlined in Section 106 of the NHPA (16 U.S. Code [USC] 470).

Cultural resources, under CRHR and NRHP guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the CRHR and/or NRHP if it:

- is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- is associated with the lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, but does meet the definition of a "unique" site as outlined in PRC §21083.2, it may still be treated as a significant resource if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- it has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- it is directly associated with a scientifically recognized important prehistoric or historic event.

California Environmental Quality Act

CEQA Guidelines §15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource, including archaeological sites, is generally considered a significant impact. Determining the CRHR eligibility of historic and prehistoric properties is guided by CCR §§15064.5(b) and Public Resources Code (PRC) §§21083.2 and 21084.1. NRHP eligibility is based on similar criteria outlined in Section 106 of the NHPA (16 U.S. Code [USC] 470).

CEQA also provides for the protection of Native American human remains (CCR §15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

Assembly Bill 52

AB 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   A) Included or determined to be eligible for inclusion in the CRHR
   B) Included in a local register of historical resources as defined in PRC Section 5020.1(k)
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1 (c). In applying the criteria set forth in PRC Section 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a "non-unique archaeological resource" as defined in PRC Section 21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

Assembly Bill 978

In 2001, AB 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

LOCAL

City of Lathrop General Plan

The City of Lathrop General Plan contains the following policies that are relevant to cultural resources:

Policy 7.3: Significant natural open space and cultural resources should be identified prior to development and incorporated into site-specific development project design.

PART V: RESOURCE MANAGEMENT ELEMENT

Archaeological and Cultural Resource Policies:

1. Existing known archaeological and cultural resources are to be protected, beginning with the filing of an application for development in the immediate vicinity of such resources. The City shall follow the procedures set forth in Appendix K, CEQA Guidelines. Confidentiality shall be maintained between the City and developer to avoid vandalism or desecration of such resources. Alternatives for development design intended to protect cultural resources shall be reviewed by a Native American having competence in understanding and interpreting the importance of the resources and of the most desirable methods to assure their preservation.

2. The potential loss as of yet unknown archaeological and cultural resources shall be avoided by close monitoring of the development process. The close proximity of properties intended for development to natural watercourses or to known archaeological or cultural resources shall be taken as a signal by the City and developer of a potential for unearthing unknown resources. In such cases, the City shall instruct the developers, construction foreman and City inspectors of the potential for damage to artifacts and sites, and provide written instructions requiring a halt to all excavation work in the event of any find until the significance of the find can be evaluated by competent archaeological and Native American specialists. The costs of such protective work shall be the responsibility of the developer.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project is considered to have a significant impact on cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5;
- Cause a substantial adverse change in the significance of archaeological resource pursuant to CEQA Guidelines §15064.5;
- Directly or indirectly destroy a unique paleontological resource;
- Disturb any human remains, including those interred outside of formal cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either:
    1) a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California

Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

2) a resource determined by a lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1 (c), and considering the significance of the resource to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The proposed project has the potential to cause a substantial adverse change to a significant historical resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074. (Less than Significant with Mitigation)

As noted previously, 172 cultural resources have been identified within the City of Lathrop General Plan Study Area, according to files maintained by the CCIC. The 172 recorded cultural resources span both the prehistoric and historic periods and range from a Native American village site to historic period railroads, a school, buildings and single-family homes. The recorded resources include a Point of Historical Interest and two California Historical Landmarks. The greatest number of recorded cultural resources are buildings at the Sharpe facility. There are no properties or districts currently listed on the NRHP or CRHR for the City of Lathrop.

As with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of a previously unknown historical resource or tribal cultural resource. Implementation of Mitigation Measure 3.2-1 would require construction to halt in the event that a buried and previously undiscovered cultural or historical resource is encountered during construction activities so that it can be appropriately evaluated by a qualified professional. Implementation of the following mitigation measure would ensure that this potential impact is reduced to a ***less than significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.2-1: *All construction workers shall receive a sensitivity training session before they begin site work. The sensitivity training shall inform the workers of their responsibility to identify and protect any cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources, within the project site. The sensitivity training shall cover laws pertaining to cultural resources, examples of cultural resources that may be discovered in the project site, and what to do if a cultural resource, or anything that may be a cultural resource, is discovered.*

If any subsurface historic remains, prehistoric or historic artifacts, paleontological resources, other indications of archaeological resources, or cultural and/or tribal resources are found during grading and construction activities, all work within 100 feet of the find shall cease, the City of Lathrop Community Development Department shall be notified, and the applicant shall retain an

archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, to evaluate the find(s). If tribal resources are found during grading and construction activities, the applicant shall notify the Native American Heritage Commission. If paleontological resources are found during grading and construction activities, a qualified paleontologist shall be retained to determine the significance of the discovery.

The archaeologist and/or paleontologist shall define the physical extent and the nature of any built features or artifact-bearing deposits. The investigation shall proceed immediately into a formal evaluation to determine the eligibility of the feature(s) for inclusion in the California Register of Historical Resources. The formal evaluation shall include, at a minimum, additional exposure of the feature(s), photo-documentation and recordation, and analysis of the artifact assemblage(s). If the evaluation determines that the feature(s) and artifact(s) do not have sufficient data potential to be eligible for the California Register, additional work shall not be required. However, if data potential exists (e.g., an intact feature is identified with a large and varied artifact assemblage), further mitigation would be necessary, which might include avoidance of further disturbance to the resource(s) through project redesign. If avoidance is determined to be infeasible, additional data recovery excavations shall be conducted for the resource(s), to collect enough information to exhaust the data potential of those resources.

Pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Data recovery efforts can range from rapid photographic documentation to extensive excavation depending upon the physical nature of the resource. The degree of effort shall be determined at the discretion of a qualified archaeologist and should be sufficient to recover data considered important to the area's history and/or prehistory. Significance determinations for tribal cultural resources shall be measured in terms of criteria for inclusion on the California Register of Historical Resources (Title 14 CCR, §4852[a]), and the definition of tribal cultural resources set forth in Public Resources Code Section 21074 and 5020.1 (k). The evaluation of the tribal cultural resource(s) shall include culturally appropriate temporary and permanent treatment, which may include avoidance of tribal cultural resources, in-place preservation, and/or re-burial on project property so the resource(s) are not subject to further disturbance in perpetuity. Any re-burial shall occur at a location predetermined between the landowner and the Native American Heritage Commission. The landowner shall relinquish ownership of all sacred items, burial goods, and all archaeological artifacts that are found on the project area to the Native American Heritage Commission for proper treatment and disposition. If an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.

The language of this mitigation measure shall be included on any future grading plans, utility plans, and subdivision improvement drawings approved by the City for the development of the project.

Impact 3.2-2: The proposed project has the potential to cause a substantial adverse change to a significant archaeological resource, as defined in CEQA Guidelines §15064.5. (Less than Significant with Mitigation)

The project site is located in an area known to have cultural resources. As with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of previously unknown significant archeological resources. Implementation of Mitigation Measure 3.2-1 would require construction to halt in the event that a buried and previously undiscovered cultural or historical resource is encountered during construction activities so that it can be appropriately evaluated by a qualified professional. Implementation of the following mitigation measure would ensure that this potential impact is ***less than significant***.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.2-1.***

Impact 3.2-3: The proposed project has the potential to directly or indirectly destroy a unique paleontological resource or sit or unique geologic feature. (Less than Significant with Mitigation)

The project site is not expected to contain subsurface paleontological resources, although it is possible. The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. Some of the proposed improvements, particularly those related to recycled water, would be located on agricultural areas near the San Joaquin River. There will be a temporary impact to agricultural lands during construction of the water and recycled water pipes, land application areas for recycled water, and storage ponds for recycled water. Paleontological resources are not likely to be found in the urban areas of the City, and would be more likely to occur in areas near the San Joaquin River.

Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.2-1 would require construction to halt in the event that a paleontological resource is encountered during construction activities so that it can be appropriately evaluated by a qualified professional. This mitigation measure would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.2-1.***

Impact 3.2-4: The proposed project has the potential to disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Indications suggest that humans have occupied San Joaquin County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

Implementation of Mitigation Measure 3.2-2 would require construction to halt in the event that human remains are encountered during construction activities. The following mitigation measure would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.2-2: *If human remains are discovered during the course of construction during any phase of the project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:*

- *The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants from the deceased individual. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.*
- *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:*
    - *The Native American Heritage Commission is unable to identify a descendent.*
    - *The descendant identified fails to make a recommendation.*
    - *The City of Lathrop or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion. This section is based in part on the following: *Comprehensive General Plan for the City of Lathrop, California* (adopted 1991), *City of Lathrop General Plan Update Existing Conditions Report – Admin Draft* (City of Lathrop, 2018), Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2019), and Interactive Fault Map provided by the U.S. Geological Survey (USGS, 2019). There were no comments received during the NOP scoping process related to this environmental topic.

As discussed in in the Initial Study prepared for the proposed project, the proposed project would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Septic tanks or septic systems are not proposed as part of the project. As such, this CEQA topic will not be further discussed.

3.3.1 ENVIRONMENTAL SETTING

GEOLOGIC SETTING

Regional Geology

The project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is located in the southern portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural trough (or basin) about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west.

The San Joaquin Valley (Valley) is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the Valley, and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

Local Setting

The project site is located throughout Lathrop, California. The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level. The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's existing recycled water distribution system is generally contiguous with the City limits, and some future facilities are planned north of the City limits.

A Custom Soil Survey was completed for the project site using the NRCS Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.3-1. Table 3.3-1 identifies the type and range of soils found in the project site.

TABLE 3.3-1: PROJECT SITE SOILS

NAME	*ACRES IN AOI*
Bisgani loamy coarse sand, partially drained, 0 to 2 percent slopes	163.29
Boggiano clay loam, 0 to 2 percent slopes	5.40
Columbia fine sandy loam, channeled, partially drained, 0 to 2 percent slopes, frequently flooded	79.62
Columbia fine sandy loam, clayey substratum, partially drained, 0 to 2 percent slopes	1,385.71
Columbia fine sandy loam, drained, 0 to 2 percent slopes, MLRA 17	127.13
Columbia fine sandy loam, partially drained, 0 to 2 percent slopes, occasionally flooded	328.55
Delhi loamy sand, 0 to 2 percent slopes, MLRA 17	226.48
Dello clay loam, drained, 0 to 2 percent slopes, overwashed	109.19
Dello loamy sand, drained, 0 to 2 percent slopes	50.52
Dello sand, partially drained, 0 to 2 percent slopes, occasionally flooded	14.45
Dello sandy loam, clayey substratum, drained, 0 to 2 percent slopes	267.48
Egbert silty clay loam, partially drained, 0 to 2 percent slopes, MLRA 16	2,357.03
Grangeville clay loam, partially drained, 0 to 2 percent slopes	329.53
Grangeville fine sandy loam, partially drained, 0 to 2 percent slopes	333.23
Guard clay loam, drained, 0 to 2 percent slopes	149.44
Honcut sandy loam, 0 to 2 percent slopes	17.32
Manteca fine sandy loam, 0 to 2 percent slopes	654.16
Merritt silty clay loam, partially drained, 0 to 2 percent slopes	1,265.80
Merritt silty clay loam, partially drained, 0 to 2 percent slopes, occasionally flooded	307.61
Scribner clay loam, partially drained, 0 to 2 percent slopes, MLRA 16	120.94
Timor loamy sand, 0 to 2 percent slopes	472.26
Tinnin loamy coarse sand, 0 to 2 percent slopes	1,588.40
Urban land	1,165.30
Valdez silt loam, organic substratum, partially drained, 0 to 2 percent slopes, MLRA 16	66.51
Veritas fine sandy loam, 0 to 2 percent slopes	1,556.00
Water	444.50

SOURCE: NRCS CUSTOM SOIL SURVEY 2019.

As shown in Table 3.3-1, the majority of soils within the Planning Area consist of course and fine sands and sandy loams. Below is a brief description of the most prominent soils within the Planning Area.

Columbia fine sandy loam, clayey substratum, partially drained. The Columbia series consists of deep, moderately well drained soils formed in alluvium from mixed sources. These soils are on flood plains and natural levees. The mean annual precipitation is 12 to 25 inches, (305 to 635 mm) and the mean annual temperature is about 61 degrees F, (16 degrees C). These soils are used for irrigated hay, small grain, and orchard and row crops. Vegetation consists of a fairly dense cover of oaks, cottonwoods, willows, vines, shrubs and grasses near stream channels, but more open away from the channels. These soils occur in the central valley of California. The soils are moderately expansive.

Merritt silty clay loam, partially drained. Merritt soils are on nearly level recent alluvial fans and flood plains at elevations of 5 feet below sea level to 60 feet above. The Merritt series consists of deep, poorly drained soils formed in alluvium from sedimentary rocks. Generally, the soils are

poorly drained; slow runoff; and have moderately slow permeability. Merritt soils are associated with recent alluvial fans and flood plains and have slopes of 0 to 2 percent. The soils are under intensive cultivation and are irrigated, producing a wide variety of field and row crops.

Egbert silty clay loam, partially drained. This very deep, poorly drained, nearly level soil formed in alluvium. Permeability is slow in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is moderate to high. The risk of corrosion is high for uncoated steel, and moderate for concrete. Soil limitations on building site development are considered moderate to severe, due to shrink-swell and flooding potential.

Manteca fine sandy loam. This moderately well drained, nearly level soil formed in alluvium. Permeability is moderate in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential and the existence of cemented pan.

Tinnin loamy coarse sand. This series consists of well drained soils on low fan terraces and alluvial fans. These soils are very deep, and form in alluvium derived from granitic rock sources. Slopes range from 0 to 2 percent. This series is characterized as well draining, slow runoff, and rapid permeability. Common uses for this series are irrigated cropland growing primarily almonds, alfalfa, onions, tomatoes, small grains, grapes and pasture. Vegetation consists of red brome, filaree, soft chess, wildoats, ripgut brome and scattered valley oaks.

Veritas fine sandy loam. This series consists of deep to duripan, moderately well drained soils. They formed in alluvium derived from mixed rock sources. Veritas soils are on low fan terraces. They have slow runoff and moderately rapid permeability. Common uses for this series include irrigated cropland. Alfalfa, barley and corn are the principal crops. Vegetation is annual grasses, forbs and scattered valley oaks.

FAULTS AND SEISMICITY

Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.3-2 presents the California fault activity rating system.

TABLE 3.3-2: FAULT ACTIVITY RATING

FAULT ACTIVITY RATING	*GEOLOGIC PERIOD OF LAST RUPTURE*	*TIME INTERVAL (YEARS)*
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000-1.6 Million Years
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million

SOURCE: CALIFORNIA GEOLOGICAL SURVEY

The 2010 Fault Activity Map provided by the California Department of Conservation identified potential seismic sources within 100 kilometers (62 miles) of the project area. The closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 20 miles to the west. The Vernalis Fault located approximately 6 miles to the southwest has had movement as recently as the Quaternary Period (Pliocene Epoch 2.588 million years ago to 11.7 thousand years ago), thus, is considered a potentially active fault. Other faults that could potentially affect the project area include the Mount Diablo, Calaveras, Hayward, Ortigalita and San Andreas Faults. Figure 3.3-2 provides a map of known area faults.

Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude-frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault. The partition of moment and the weights for multiple models are given in the following summary.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with 9.0 being the strongest, measures the magnitude of an earthquake relative to ground shaking. Table 3.3-3 provides a description and a comparison of intensity and magnitude.

TABLE 3.3-3: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
0.1 – 0.9	I	Earthquake shaking not felt
1.0 – 2.9	II	Shaking felt by those at rest.
3.0 – 3.9	III	Felt by most people indoors, some can estimate duration of shaking.
4.0 – 4.5	IV	Felt by most people indoors. Hanging objects rattle, wooden walls and frames creak.
4.6 – 4.9	V	Felt by everyone indoors, many can estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle and glasses clink. Doors open, close and swing.

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
5.0 – 5.5	VI	Felt by all who estimate duration of shaking. Sleepers awaken, liquids spill, objects are displaced, and weak materials crack.
5.6 – 6.4	VII	People frightened and walls unsteady. Pictures and books thrown, dishes and glass are broken. Weak chimneys break. Plaster, loose bricks and parapets fall.
6.5 – 6.9	VIII	Difficult to stand. Waves on ponds, cohesionless soils slump. Stucco and masonry walls fall. Chimneys, stacks, towers, and elevated tanks twist and fall.
7.0 – 7.4	IX	General fright as people are thrown down, hard to drive. Trees broken, damage to foundations and frames. Reservoirs damaged, underground pipes broken.
7.5 – 7.9	X	General panic. Ground cracks, masonry and frame buildings destroyed. Bridges destroyed, railroads bent slightly. Dams, dikes and embankments damaged.
8.0 – 8.4	XI	Large landslides, water thrown, general destruction of buildings. Pipelines destroyed, railroads bent.
8.5 +	XII	Total nearby damage, rock masses displaced. Lines of sight/level distorted. Objects thrown into air.

SOURCE: UNITED STATES GEOLOGICAL SURVEY.

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, San Joaquin County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong.

Alquist-Priolo Special Study Zone

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a project site.

The project site is not within an Alquist-Priolo Special Study Zone. The nearest Alquist-Priolo fault zone, the Greenville fault zone, is located approximately 20 miles southwest of Lathrop.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking in the project site is expected during the life of the proposed

project. All improvements will be built in accordance with the California Building Code's seismic design standards.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e. earthquake) or slow (i.e. fault creep). The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. Figure 3.3-2 provides a map of known area faults.

Liquefaction

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Soil data from the NRCS Web Soil Survey (NRCS 2017) suggests that the potential for liquefaction ranges from low to high within the project site given that many soils are high in sand and the water table is moderately high.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. The potential for liquefaction is moderate to high in many areas of the city, however because the project area is essentially flat lateral spreading of soils has not been observed within the project area.

Landslides

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The project area is essentially flat; therefore, the potential for a landslide in the project site is low.

NON-SEISMIC HAZARDS

Expansive Soils

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering.

According to the NRCS Web Soil Survey, the soils in the project area vary from a low shrink-swell potential to a moderate shrink-swell potential. Figure 3.3-3 provides a map of the shrink-swell potential of the soils at the project site and in the vicinity.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e. rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

The *Custom Soils Report* identified the erosion potential for the soils in the project area. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factors K for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Planning Area, the erosion factor K varies from 0.02 to 0.37, which is considered a low to moderate potential for erosion. Furthermore, given the drainage characteristics of the majority of the soils and the nearly level topography of the Planning Area, runoff erosion hazard is considered low. The wind erosion potential ranges from moderate-to-high during the spring, summer, and fall, however this potential for wind erosion diminish during the winter.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the project area as an issue. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Subsidence has not been identified as an issue in the Lathrop area.

3.3.2 REGULATORY SETTING

FEDERAL

Uniform Building Code (UBC)

The purpose of the Uniform Building Code (UBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. UBC standards address foundation design, shear wall strength, and other structurally related conditions.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

STATE

The State of California has established a variety of regulations and requirements related to seismic safety and structural integrity, including the California Building Code, the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act.

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or just "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts including: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CALGreen Code), California Reference Standards Code. Through the CBSC, the state provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. It also regulates grading activities, including drainage and erosion control.

California Building Code

The California Building Code, Title 24, Part 2, Chapter 16 addresses structural design, Chapter 17 addresses structural tests and special inspections, and Chapter 18 addresses soils and foundations. Section 1610 provides structural design standards for foundation walls and retaining walls to ensure resistance to lateral soil loads. Section 1613 provides structural design standards for earthquake loads. Section 1704.7 requires special inspections for existing site soil conditions, fill placement and load-bearing requirements during the construction as specified in Table 1704.7 of this section. Sections 1704.8 through 1704.16 provide inspection and testing requirements for various foundation types, and construction material types. Section 1803.1.1.1 requires each city and county enact an ordinance which requires a preliminary soil report and that the report be based upon adequate test borings or excavations, of every subdivision, where a tentative and final map is required pursuant to Section 66426 of the Government Code. Section 1803.5.3 defines expansive soils and specifies that in areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Section 1803.5.4 specifies that a subsurface soil investigation must be performed to determine whether the existing ground-water table is above or within 5 feet (1524 mm) below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation. Section 1803.5.8 provides specific standards where shallow foundations will bear on compacted fill material more than 12 inches (305 mm) in depth. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Section 1804 provides standards and requirements for excavation, grading, and fill. Section 1808, 1809, and 1810 provides standards and requirements for the construction of varying foundations.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and Criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and

- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various "seismic hazard zones."

- Cities and Counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.

- The State Mining and Geology Board provides additional regulations, policies, and criteria, to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.

- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

Caltrans Seismic Design Criteria

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC), which is an encyclopedia of new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations. Memo 20-1 outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic demands and capacities on structural components and seismic design practices that collectively make up Caltrans' seismic design methodology.

LOCAL

City of Lathrop General Plan

The existing Lathrop General Plan includes the following goals and policies related to geology and soils:

GOALS OF THE GENERAL PLAN

Goal No. 7: Seismic Hazards: Goals for achieving and maintaining safety from seismic events include preventing serious injury, loss of life, serious damage to critical facilities involving large assemblies of people, and loss of continuity in providing services.

PART VI: HAZARD MANAGEMENT ELEMENT

Seismic Policies:

1. Inventory all buildings which are unsound under conditions of "moderate" seismic activity; buildings having questionable structural resistance should be considered for either rehabilitation or demolition. Structures determined by the City's Building Official to be structurally unsound are to be reported to the owner and recorded with the County Recorder to insure that future owners are made aware of hazardous conditions and risks.

2. All new building construction shall conform to the latest seismic requirements of the Uniform Building Code as a minimum standard.

3. The present building height limit of 50 feet shall be maintained, with a maximum of four stories. This policy should stay in force until such time that high rise construction is desired and capability for evacuation and fire fighting in upper stories is possible through the availability of appropriate equipment. For Sub-Plan Area #3, at that time the maximum building height limit shall be 125 feet, with a maximum of ten stories.

4. Facilities necessary for emergency service should be capable of withstanding a maximum credible earthquake and remain operational to provide emergency response.

5. Preliminary soil compaction tests and geotechnical analysis of soil conditions shall be submitted as part of the justification for development proposals contained in any Specific Plan.

6. Soil compaction tests, and geotechnical analysis of soil conditions and behavior under seismic conditions shall be required of all subdivisions and of all commercial, industrial and institutional structures over 6,000 square feet in area (or in the case of institutional structures, those which hold 100 or more people).

7. A preliminary soils report is to be prepared by a registered geo-technical engineer for any residential development project, based upon adequate test borings. If the report indicates the presence of critically expansive soils or other soil problems which, if not corrected,

would lead to structural defects, the developer shall provide for and submit the findings of a soil investigation of each non-residential lot or housing site proposed. The soil investigation shall be prepared by a state-registered civil engineer and shall recommend corrective action likely to prevent structural damage to each dwelling to be constructed. Prior to the issuance of a building permit, any recommended action approved by the Building Official shall be incorporated into the construction of each dwelling.

8. A preliminary geologic report, prepared by a state-certified engineering geologist and based on adequate test borings, shall be submitted to the Building Official for every subdivision, planned development or other residential project at the time of submitting a tentative map or other type of development application to the City.

9. If the preliminary geologic report indicates the presence of critically expansive soils or other soil problems (e.g., potential for liquefaction which if not corrected could lead to structural defects, the developer shall provide such additional soils investigation for each development site as may be requested by the Building Official. The geologic investigation shall be prepared by a state-certified engineering geologist and shall, recommend further corrective action likely to prevent structural damage to dwelling units. Prior to the issuance of a building permit, any recommended action approved by the Building Official shall be incorporated into site preparation and the construction of each dwelling.

10. The provisions of policy nos. 6 - 9, above, shall be applicable to all commercial, industrial, institutional and public development projects.

11. The City should adopt an Earthquake Disaster Plan in coordination with San Joaquin County and local special districts. The Plan should identify hazards that may occur as the result of an earthquake of major magnitude. The Plan should be sufficiently broad in scope to include the designation of evacuation routes and means to coordinate all local government agencies in assisting local residents in the event of a major earthquake, large-scale fire or explosion, or hazardous chemical spill or release of hazardous air-borne gas.

12. All lines which are part of the domestic water distribution system should be looped to assure adequate pressure in the event of major fire, earthquake, or explosion. Emergency standby power generation capability should be available at all water wells to assure water availability in the event of a major power failure.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on geology and soils if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction or
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impacts associated with paleontological resources or unique geologic features are discussed in Section 3.2, Cultural and Tribal Cultural Resources.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: The proposed project may directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic related ground failure, or landslides. (Less than Significant)

The California Geologic Survey (CGS) evaluates faults and determines if a fault should be zoned as active, potentially active, or inactive. All active faults are incorporated into a Special Studies Zone, also referred to as an Alquist-Priolo Special Study Zone. The project site is not within an Alquist-Priolo Special Study Zone. Additionally, the project area is essentially flat; therefore, the potential for a landslide in the project site is low.

The 2010 Fault Activity Map provided by the California Department of Conservation identified potential seismic sources within 100 kilometers (62 miles) of the project area. The closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 20 miles to the west. The Vernalis Fault located approximately 6 miles to the southwest has had movement as recently as the Quaternary Period (Pliocene Epoch 2.588 million years ago to 11.7 thousand years ago), thus, is considered a potentially active fault. Other faults that could potentially affect the project area include the Mount Diablo, Calaveras, Hayward, Ortigalita and San Andreas Faults. Figure 3.3-2 provides a map of known area faults.

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, San Joaquin County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent

within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong. The Uniform Building Code places all of California in the zone of greatest earthquake severity because recent studies indicate high potential for severe ground shaking.

There will always be a potential for groundshaking caused by seismic activity anywhere in California, including the project site. Seismic activity could come from a known active fault such as the Greenville fault, or any number of other faults in the region. It is noted, however, that the project does not propose any housing or other structures or buildings that would result in direct population growth. Generators would be provided in conjunction with the proposed water pump station improvements. These generators would typically be enclosed within a building or semi-enclosed within a masonry wall enclosure in order to help attenuate noise. However, these structures would not house any people and would only require routine, temporary maintenance and inspections by Public Works staff.

Nevertheless, in order to minimize potential damage to the site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.3.2 Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these state requirements, which have been adopted by the City of Lathrop, include design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 specifically provides structural design standards for earthquake loads. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level. Because all development in the project site must be designed in conformance with these state and local standards and policies, and because the project would not result in people or structures, any potential impact would be considered **less than significant**.

Impact 3.3-2: The proposed project may result in substantial soil erosion or the loss of topsoil. (Less than Significant with Mitigation)

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion and the loss of topsoil is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, storm water runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses

the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

> *"…Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded…"*

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

> *"Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed…Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions…All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended…"*

To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other

ground cover. The BMPs and overall SWPPP is reviewed by the State Water Resources Control Board (SWRCB) as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the SWRCB and/or the lead agency.

The *Custom Soils Report* identified the erosion potential for the soils in the project area. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factors K for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Planning Area, the erosion factor K varies from 0.02 to 0.37, which is considered a low to moderate potential for erosion. Furthermore, given the drainage characteristics of the majority of the soils and the nearly level topography of the Planning Area, runoff erosion hazard is considered low. The wind erosion potential ranges from moderate-to-high during the spring, summer, and fall, however this potential for wind erosion diminish during the winter.

Regardless of the potential for erosion, there is always the potential for human caused erosion associated with construction activities or through the operational phase of a project. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities temporarily expose soils and increase the potential for soil erosion and sedimentation during rail events. Construction activities can also result in soil compaction and wind erosion effects that can adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

In accordance with the NPDES Stormwater Program, Mitigation Measure 3.3-1 requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the SWRCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The SWRCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the SWRCB and are existing regulatory requirements. Implementation of Mitigation Measures 3.3-1 would ensure that the proposed project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-1: *Prior to clearing, grading, and disturbances to the ground such as stockpiling, or excavation for each phase of the project, the project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the SWRCB to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ amended by 2010-0014-DWQ &*

2012-0006-DWQ). The SWPPP shall be designed with Best Management Practices (BMPs) that the RWQCB has deemed as effective at reducing erosion, controlling sediment, and managing runoff. These include: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. Sediment control BMPs, installing silt fences or placing straw wattles below slopes, installing berms and other temporary run-on and runoff diversions. These BMPs are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Final selection of BMPs will be subject to approval by City of Lathrop and the SWRCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the SWRCB.

Impact 3.3-3: The proposed project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse. (Less than Significant with Mitigation)

LIQUEFACTION

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Soil data from the NRCS Web Soil Survey (NRCS 2017) suggests that the potential for liquefaction ranges from low to high within the project site given that many soils are high in sand and the water table is moderately high.

LATERAL SPREADING

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. The potential for liquefaction is moderate to high in many areas of the city, however because the project area is essentially flat lateral spreading of soils has not been observed within the project area.

LANDSLIDES

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The project area is essentially flat; therefore, the potential for a landslide in the project site is low.

COLLAPSIBLE SOILS

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the project area as an issue. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Subsidence has not been identified as an issue in the Lathrop area.

CONCLUSION

The project site does not have a significant risk of becoming unstable as a result landslide, subsidence, or soil collapse. There is a potential for liquefaction, liquefaction induced settlement, and lateral spreading. However, through the implementation of Mitigation Measure 3.3-2, the proposed project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-2*: Prior to earthmoving activities for each phase of the project, a certified geotechnical engineer, or equivalent, shall be retained to perform a final geotechnical evaluation of the soils at a design-level as required by the requirements of the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction or lateral spreading. The grading and improvement plans for each phase of the project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.*

Impact 3.3-4: The proposed project has the potential to be located on expansive soils which may create substantial risks to life or property. (Less than Significant with Mitigation)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. Expansion is a typical characteristic of certain varieties of clay-type soils. Expansive soils shrink and swell in volume during changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections.

According to the NRCS Web Soil Survey, the soils in the project area vary from a low shrink-swell potential to a moderate shrink-swell potential. Figure 3.3-3 provides a map of the shrink-swell potential of the soils at the Project site and in the vicinity.

As noted previously, the project does not propose any housing or other structures or buildings that would result in direct population growth. Generators would be provided in conjunction with the proposed water pump station improvements. These generators would typically be enclosed within a building or semi-enclosed within a masonry wall enclosure in order to help attenuate noise. However, these structures would not house any people and would only require routine, temporary maintenance and inspections by Public Works staff. Therefore, risks to life or property would low.

Nevertheless, the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when a preliminary geotechnical evaluation determines that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. Mitigation Measure 3.3-2, presented above, provides the requirement for a final geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people (including maintenance workers) or structures (which would house the generators). The grading and improvement plans are required to be designed in accordance with the recommendations provided in the final geotechnical evaluation. With the implementation of Mitigation Measure 3.3-2 (requiring a final Geotechnical Evaluation, and site recommendations) the proposed project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Implement **Mitigation Measure 3.3-2**.

This page left intentionally blank.

Insert Figure 3.3-1

This page left intentionally blank.

Insert Figure 3.3-2

This page left intentionally blank.

Insert Figure 3.3-3

This page left intentionally blank.

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the project site and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the project is built and operated in the future. This section is based in part on the *Comprehensive General Plan for the City of Lathrop, California* (adopted 1991), and the *City of Lathrop General Plan Update Existing Conditions Report – Admin Draft* (City of Lathrop, 2018).

There were no comments received during the Notice of Preparation (NOP) comment period regarding hazards and hazardous materials.

3.4.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

Project Location

The project site is located throughout Lathrop, California. The IWRMP includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan. Figures 2.0-1 and 2.0-2 found in Section 2.0 illustrate the regional location and project vicinity.

The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area.

The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's existing recycled water distribution system is generally contiguous with the City limits, and some future facilities are planned north of the City limits.

Site Topography

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

HAZARDS ASSESSMENT

For the purposes of this EIR, "hazardous material" is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.

- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are countless categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop (MCPP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE)), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

Envirostor Data Management System

A search of local, state, and federal agency databases for the project area and known contaminated sites in the vicinity was performed.

The U.S. Environmental Protection Agency (EPA) Toxic Release Inventory (TRI) lists six sites in the City of Lathrop (USEPA, 2019). The sites are summarized in Table 3.4-1.

TABLE 3.4-1: TOXIC RELEASE INVENTORY SITES

NAME	*LOCATION*	*TYPE OF PERMIT/FACILITY*
Tesla, Inc.	18260 Harlan Rd., Lathrop	General Permit Covered Facility
Boral Roofing LLC	342 Roth Rd., Lathrop	General Permit Covered Facility
California Natural Products	1250 E. Lathrop Rd., Lathrop	Toxic Release Inventory Facility
Calaveras Materials, Inc.	1945 E. Lathrop Rd., Lathrop	Toxic Release Inventory Facility
CBC Steel Buildings	1700 E. Louise Ave., Lathrop	General Permit Covered Facility
J.R. Simplot Co. Lathrop	16777 Howland Rd., Lathrop	Toxic Release Inventory Facility

SOURCE: U.S. ENVIRONMENTAL PROTECTION AGENCY TOXIC RELEASE INVENTORY DATABASE, 2019.

The DTSC maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. This site cleanup information includes: Federal Superfund Sites (NPL), State Response Sites, Voluntary Cleanup Sites, School Cleanup Sites, Corrective Action Sites, Tiered Permit Sites, and Evaluation / Investigation Sites. The hazardous waste facilities include: Permitted–Operating, Post-Closure Permitted, and Historical Non-Operating.

There are 18 locations with a Lathrop address that are listed in the Envirostor database. Seven sites are listed as school investigation sites with no action required, three sites are listed as certified (two State Response and one corrective action), two sites are listed as active (one is listed as a corrective action and one is listed as a Federal Superfund), two sites are referred to the RWQCB (one evaluation and one State Response), one site is referred to the Site Mitigation and Brownfields Reuse Program (SMBRP) (corrective action), and one site is listed as a military evaluation with no further action. Table 3.4-2 lists the Envirostor sites within Lathrop. Following the table is a background discussion of these sites.

TABLE 3.4-2: SITE CLEANUP AND HAZARDOUS FACILITIES LIST (ENVIROSTOR)

NAME	STATUS DATE	LOCATION
ACTIVE – FEDERAL SUPERFUND		
Sharpe Army Depot	5/1/1986	61 mi. East of San Francisco
ACTIVE – CORRECTIVE ACTION		
J R Simplot Co.	6/14/2011	16777 Howland Ave.
NO FURTHER ACTION –MILITARY INVESTIGATION		
Lathrop Quinones Armed Forces Reserve Center	12/19/2001	400 E. Roth Rd.
NO FURTHER ACTION –SCHOOL INVESTIGATION		
East Union HS District Farm Project	12/10/2010	2901 E. Louise Ave.
Joe Widmer Elementary School	6/23/2000	Stonebridge Lane/I-5
Lathrop High School	1/30/2006	526 & 600 W. Dos Reis Rd. & 15225 Matheny Rd.
Louise Avenue Community School	10/19/2001	245 Louise Ave.
Mossdale School Site	7/3/2003	500 W. Louise Ave./17599 S. Matheny Rd.
Proposed River Islands MS/ES	1/22/2007	San Joaquin Rd. & north of Stewart Rd.
Terry School	6/10/2003	401/801 W. Louise Ave.
CERTIFIED – CORRECTIVE ACTION		
Defense Dist Depot/San Joaquin/Sharpe	2/25//2009	Roth Rd. Buildings S-4
CERTIFIED – STATE RESPONSE		
J. R. Simplot, Lathrop – Soil Removal	6/1/1983	16777 Howland Ave.
Lague Sales	3/1/1990	2112 E. Louise Ave.
UNDERGOING CLOSURE – NON-OPERATING		
Defense Dist Depot/San Joaquin/Sharpe	N/A	Roth Rd. Buildings S-4
J R Simplot Co.	N/A	16777 Howland Ave.
REFER – OTHER AGENCY		
Occidental Chemical Corp	6/19/2013	16777 Howland Rd.
Oxychem-Lathrop	1/1/1984	2715 E. Louise Ave.
Libbey-Owens-Ford Glass Co.	11/15/1982	500 E. Louise Ave.

SOURCE: CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL, ENVIROSTOR DATABASE, 2017.

ACTIVE SITES

There are two active sites with a Lathrop address that are listed in the Envirostor database: The J R Simplot Co Corrective Action site, and the Sharpe Army Depot Federal Superfund site.

The J R Simplot Co. Corrective Action site has an active cleanup status as of June 14, 2011. This approximately one-acre site is located at 16777 Howland Avenue. The site has been used for many years for formulating and storing agricultural fertilizers. Previous operations also included pesticide formulation in the Ag Chem area near the west side of the site. The soil at this site may be contaminated with 1,2-Dribomo-3-Chloropropane (DBCP).

In 1981, the California Department of Health Services (DHS, the predecessor agency to the DTSC) issued OxyChem the Interim Status Document (ISD) to regulate the storage of hazardous wastes at

the plant. OxyChem continued operation of the plant through 1982, including storage of wastewater in aboveground storage tank (AST) 128 and storage of stormwater in AST 127. In 1982, OxyChem initiated a groundwater remediation program that continues to this date. Groundwater containing DBCP and ethylene dibromide (EDB) is extracted from shallow wells, treated, and re-injected into deeper wells under the direction of the California RWQCB. This groundwater remediation program is not a part of the Ag Chem Area closure plan. In 1983, Simplot purchased the Lathrop Plant from OxyChem and requested that the DHS rescind the ISD because wastewater storage would be limited to less than 90 days in duration. The ISD was rescinded by DHS in 1983. AST 127 and AST 128 continued to be used for short-term storage of wastewater. In 1988, after pesticide formulation ceased, Simplot discontinued wastewater storage and cleaned AST 127, AST 128, and associated piping. Stormwater was stored in AST 127 from 1988 until 1991, when it was converted for use in storing fertilizer. AST 128 remained in place and unused since 1988.

In 1993, the DTSC issued Simplot a Report of Violation (ROV) indicating that the former hazardous waste storage tanks had not been closed in accordance with current requirements. Simplot responded to the ROV by transmitting documentation concerning the 1988 tank/piping cleanout to the DTSC. Subsequently, Simplot and DTSC entered into a Consent Agreement to complete closure of the Ag Chem Area. In 1995, and on behalf of Simplot, Geomatrix prepared the closure plan, which was approved by the DTSC in 1996.

The DTSC met with facility representatives and the Human and Ecological Risk Division (HERD) to discuss the future work. Based on this meeting, J R Simplot submitted a Closure/Risk Assessment which has been reviewed by DTSC. A letter will be mailed to the facility with comments regarding the Health Risk Assessment (HRA) portion. Occidental Chemical Corp. has signed a Voluntary Cleanup Agreement (VRA) with DTSC to provide for the completion of a Removal Action Workplan to remove contaminants from the site area.

The Sharpe Army Depot Federal Superfund site has an active cleanup status as of May 1, 1986. This site is discussed in further detail below.

Cortese List

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. California Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. There are not sites within Lathrop that are listed on the Cortese List.

There is one site within Lathrop that is listed on the Envirostor database as a Federal Superfund Cleanup Site. This site, the DDJC - Sharpe (site 39970002), was previously known as Sharpe Army Depot and was operated by the U.S. Army. The site was established in 1941 and consists of 727

acres. As of July 1990, the Defense Logistics Agency (DLA) took over operation of the Sharpe Army Depot site and is now known as the DDJC-Sharpe. The repair and reconditioning of heavy equipment and aircraft was conducted onsite until 1976. The majority of operations have ceased and the base is in the process of being decommissioned. The U.S. Army and Coast Guard have some remaining offices on Roth Road at the north end of the DDJC – Sharpe site, and an Army and Air Force Exchange Service facility operates on southern portion of the site.

The Sharpe facility is divided into three general contamination areas: North Balloon, South Balloon, and Central areas. Groundwater treatment removal actions were initiated in the North and South Balloon areas in November 1990, and April 1987, respectively. The Sharpe facility was listed on the federal National Priorities List in July 1987. On July 19, 1989, the U.S. Army, U.S.EPA, the RWQCB, and DTSC entered into a Federal Facility Agreement (FFA) for Sharpe.

Past disposal sites include burial areas, burn pits, fire training areas, and leaking underground storage tanks. Soil and groundwater contamination by volatile organic compounds (VOCs), primarily trichloroethylene (TCE) and perchloroethylene (PCE), has been found at the site. Presently, two offsite TCE plumes can be found west of the Central Area as well as in the North Balloon. Elevated arsenic concentrations have also been detected in the soils and groundwater at Sharpe. Lead and chromium contamination have also been found in the soil.

DDJC-Sharpe has completed all but one of its planned soil removal actions. Specifically, Site S-26 is scheduled to be excavated in Spring 2006 to remove lead and chromium from soil in the North Balloon. Additionally, DDJC-Sharpe has closed all the Soil Vapor Extraction sites. DDJC-Sharpe completed its Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Five-Year Review in September of 2003. DDJC-Sharpe is currently evaluating its selected remedy and will develop an alternative remedy once an evaluation of innovative technologies is completed.

GeoTracker

GeoTracker is the California Water Resource Control Board's data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense, Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites.

LEAKING UNDERGROUND STORAGE TANKS (LUST)

There are 14 locations with a Lathrop address that are listed in the GeoTracker database for Leaking Underground Storage Tanks (LUST). All of the locations have undergone LUST cleanup and the State has closed the cases. Table 3.4-3 lists the location of open and closed cases for LUSTs in Lathrop.

TABLE 3.4-3: LUST CLEANUP SITES

NAME	*STATUS*	*LOCATION*
ARCO #6080 Case #1	Completed - Case Closed	85 Louise Ave. E.
ARCO #6080 Case #2	Completed - Case Closed	85 Louise Ave. E.
Central Valley Construction	Completed - Case Closed	146 Klo Rd.
Circle-K #1205	Completed - Case Closed	16470 Cambridge Rd.
City of Lathrop	Completed - Case Closed	15688 Harlan Rd.
DiSalvo Trucking	Completed - Case Closed	1444 Lathrop Rd.
Fuller Mobile Home Park	Completed - Case Closed	365 Louise Ave. E.
Joe's Texaco	Completed - Case Closed	15600 Harlan Rd. S.
Langston's Market ARCO	Completed - Case Closed	15615 7th St. S
Libbey Owens Ford Company	Completed - Case Closed	500 Louise Ave. E.
MBP Mossdale	Completed - Case Closed	444 Mossdale St.
Phillips 66	Completed - Case Closed	16500 Harlan Rd. S.
Quaresma Property	Completed - Case Closed	91 Thomsen Rd. E.
Segura & Sons Transportation	Completed - Case Closed	12796 Harlan Rd. S.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2017.

PERMITTED UNDERGROUND STORAGE TANK (UST)

There are 12 locations with a Lathrop address that have Underground Storage Tanks (UST) that are permitted through the California Water Resources Control Board. Table 3.4-4 lists the location of the permitted USTs in Lathrop.

TABLE 3.4-4: PERMITTED UST SITES

NAME	*LOCATION*
A & W Farms	12965 Manthey Rd. S.
ARCO 06080	85 Louise Ave. E.
Brown Sand Inc.	800 Mossdale Ave. W.
Colonial Energy CE 40135 (DBA Power Mart)	192 Lathrop Rd.
Fast Lane Central Valley	116 Roth Rd.
Joes Travel Plaza	15600 Harlan Rd. S.
Lathrop Gas & Food Inc.	140 Lathrop Rd. E.
Lathrop Shell	16500 Harlan Rd. S.
Mossdale Chevron	444 Mossdale Ave. W.
Pilot Travel Center Lathrop – 1017	345 Roth Rd.
Super Store Industries – Grocery Division	16888 McKinley Ave.
Two Guys Food & Fuel	147 Lathrop Rd. E.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2017.

WATER BOARD PROGRAM CLEANUP SITES

There are 12 locations with a Lathrop address that are listed in the GeoTracker database for Water Board Cleanup Sites. Five of the locations have undergone cleanup and the State has closed the case. There are seven locations in Lathrop with an open case. Table 3.4-5 lists the location of open and closed cases for Water Board Program Cleanup Sites in Lathrop.

TABLE 3.4-5: WATER BOARD CLEANUP SITES

NAME	LOCATION
OPEN - REMEDIATION	
Former Pilkington North America	500 Louise Ave. E.
Former Pilkington North America	500 Louise Ave. E.
Occidental Chemical Agricultural Products Company	16777 Howland Rd.
OPEN – SITE ASSESSMENT	
J. R. Simplot Company	16777 Howland Rd.
OPEN – VERIFICATION MONITORING	
J. R. Simplot Company	16777 Howland Rd.
OPEN - INACTIVE CASE	
Channel Construction Along Shulte Road	Shulte Rd.
OPEN - ACTIVE CASE	
San Joaquin Cogen LLC	17200 Murphy Pkwy.
CLOSED CASES (CLEANUP COMPLETED)	
California Natural Products	1250 Lathrop Rd. E.
D'Arcy Parkway Road Extension	400-500 D'Arcy Pkwy.
Hayre's Egg Producers	12565 S. Manthey Rd.
Lague Sales Salvage Yard	2112 Louise Ave. E.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD GEOTRACKER DATABASE, 2017.

Solid Waste Information System (SWIS)

The Solid Waste Information System (SWIS) is a database of solid waste facilities that is maintained by the California Integrated Waste Management Board (CIWMB). The SWIS data identifies active, planned and closed sites. The City of Lathrop has two solid waste facilities listed in the database, both of which are closed. The site details are listed in Table 3.4-6 below.

TABLE 3.4-6: CIWMB FACILITIES/SITES

NUMBER	NAME	ACTIVITY	REGULATORY	STATUS
39-AA-0012	Windeler Ranch Glass Disposal Site	Solid Waste Disposal Site	Permitted	Closed
39-CR-0022	Pilkington North America, Inc.	Solid Waste Disposal Site	Unpermitted	Closed

SOURCE: CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY, 2017.

The Windeler Ranch Glass Disposal Site is located at 640 Mossdale Road. The facility is owned by Raab, G. and is inspected four times each year. The most recent inspection of this facility (as of December 2017) by the Local Enforcement Agency (San Joaquin County Environmental Health Department) shows no violations or areas of concern.

The Pilkington North America, Inc. Site is located at 500 E Louise Avenue. The facility is inspected four times each year. The most recent inspections of this facility (as of December 2017) by the Local Enforcement Agency (San Joaquin County Environmental Health Department) shows no violations or areas of concern.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City of Lathrop Planning Area is subject to various federal, state, and local regulations. The following provisions are included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous related materials.

- The Highway Patrol designates the routes in California which are to be used for the transportation of explosives. (Section 31616)
- The CVC applies when the explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (Section 31601(a))
- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (Section 31602(b) and Section 32104(a))
- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (Section 31614(a))
- Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The Highway Patrol designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (Section 32100 and Section 32102(b))

In addition to area roadways, hazardous materials are routinely transported on Union Pacific Railroad lines that follow the Lathrop City Limits. Hazardous materials are transported on these lines. The risk of accidents, and more specifically accidents involving hazardous materials, is relatively low. The U.S. Department of Transportation Federal Railroad Administration found the UPRR company train accident rate to be 4.18 train accidents per one million train miles traveled, resulting in a less than 0.001% chance of an accident. Risk of a railroad accident containing hazardous materials is considered much lower, as only an average of eight accidents involving hazardous material spills occur annually in California.

The Union Pacific Railroad Company does implement a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172 Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. The plan includes requirements to enhance the security of transported hazardous materials and ensures proper cleanup procedures in the instance of an accidental release.

FIRE HAZARDS

Wild fires are a major hazard in the State of California. Wild fires burn natural vegetation on developed and undeveloped lands and include timber, brush, woodland, and grass fires. While low intensity wild fires have a role in the County's ecosystem, wild fires put human health and safety,

structures (e.g., homes, schools, businesses, etc.), air quality, recreation areas, water quality, wildlife habitat and ecosystem health, and forest resources at risk.

The City of Lathrop contains areas with “moderate” and “non-wildland fuel” ranks. The areas warranting “moderate” fuel ranks possess combustible material in sufficient quantities combined with topographic characteristics that pose a wildfire risk. CalFire data for the areas immediately surrounding the Planning Area also include “moderate” and “non-wildland fuel” ranks. Some areas in Stockton, approximately 10 miles or further north of the Planning Area, are designated as “moderate” fuel ranks.

Local Responsibility Areas

The majority of the Planning Area is not located within a Local Responsibility Area (LRA). Four portions of the Planning Area are located in an LRA: a developed area adjacent south of the Defense Depot San Joaquin Sharpe site and the Sharpe AAF Airport, a developed area near D’Arcy Parkway, an area along the San Joaquin River, just west of Interstate 5, and an undeveloped area along the San Joaquin River in the westernmost Planning Area. According to the City’s 2016 Municipal Services Review and Sphere of Influence Amendment, the Lathrop Sphere of Influence is covered by two independent Fire Protection Districts: the Lathrop-Manteca Fire Protection District (LMFD) and French Camp-McKinley Fire District (French Camp). The LMFD provides fire protection services for all lands within the City of Lathrop being primarily lands south of Roth Road in addition to providing service to some 84.7 square miles of rural area around Manteca in the southern San Joaquin County area. The French Camp provides fire protection for the rural area primarily south of Stockton and north of Roth Road both east and west of Interstate 5. French Camp service boundaries include some 16 square miles, including a small portion of Stockton. Approximately 805 acres of the French Camp Fire District is in the Lathrop Area of Interest and about 149 acres is in the Sphere of Influence.

The City of Lathrop is not categorized as a "Very High" FHSZ by CalFire. No cities or communities within San Joaquin County are categorized as a "Very High" FHSZ by CalFire. See Figure 4.3-1. As shown in the figure, much of the Lathrop Sphere of Influence east of the San Joaquin River is located in a Local Responsibility Area: Urban Unzoned. The remaining portions of the City east and west of the River are located in a Local Responsibility Area: Non-Wildland/Non-Urban. There are a few areas within the City that are located in a Local Responsibility Area: Moderate Hazard. These include scattered areas along the San Joaquin River, an area adjacent to Howland Road and north of D’Arcy Parkway, and an area south of E. Lathrop Road and east of McKinley Avenue. Additionally, a Federal Responsibility Area: Moderate Hazard is located adjacent north of E. Lathrop Road, east of McKinley Avenue.

State Responsibility Areas

There are no State Responsibility Areas (SRAs) within the vicinity of the Planning Area.

Federal Responsibility Areas

There is one Federal Responsibility Area (FRA) within the Planning Area. The Defense Depot San Joaquin Sharpe site and the Sharpe AAF Airport are located within a FRA. The Depot and Airport

are located in northern Lathrop, west of Interstate 5, north of W. Lathrop Road, and south of Roth Road.

AIRPORTS AND AIRSTRIPS

There are no private or public airport facilities in the City of Lathrop. The Stockton Metropolitan Airport is the closest airport to the City.

The Stockton Metropolitan Airport is located approximately 2.5 miles north of the Lathrop City limits. This airport is a County-owned facility that occupies approximately 1,609 acres at an elevation of 23 feet above Mean Sea Level (MSL). The acreage within Airport Influence Area is 56,184 acres.

The northernmost portion of the Lathrop City limits is located within the airport influence area for the Stockton Metropolitan Airport identified in the Airport Land Use Compatibility Plan (ALUCP). Much of this land within the airport influence area is zoned for industrial uses by the City's General Plan. Other land uses within the airport influence area include commercial, public, open, low density residential, and medium density residential.

The lands within the City limits that are located in the airport influence area for the Stockton Metropolitan Airport are not within the Airport's noise exposure contours. Additionally, the lands within the City that are located in the airport influence area are not within the Airport's Safety Zones.

3.4.2 REGULATORY SETTING

FEDERAL

The primary federal agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Several laws governing the transport, storage, and use of hazardous materials are governed by these agencies as well as oversight for contaminated sites cleanup. Federal laws and regulations that are applicable to hazards and hazardous materials are presented below.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of

USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs were in compliance with the required standards.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (the Act) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. The Act deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

STATE

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (OES), California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC), California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Water Quality Control Board, and the California Air Resources Board. Several laws governing the generation, transport, and disposal of hazardous materials are administered by these agencies. State laws and regulations that are applicable to hazards and hazardous materials are presented below.

California Health and Safety Code

Cal-EPA has established rules governing the use of hazardous materials and the management of hazardous wastes. Many of these regulations are embodied in the California Health and Safety Code. The code includes regulations that govern safe drinking water, substances control, land reuse and revitalization, remediation, restoration, and methamphetamine contaminated cleanups.

California Code of Regulations Title 22 and Title 26

The California Code of Regulations (CCR) Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, Cal/EPA established the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

LOCAL

City of Lathrop General Plan

The City of Lathrop General Plan contains the following goals and policies related to hazards and hazardous materials:

GOALS OF THE GENERAL PLAN

Goal No. 8: Public Safety Hazards: Goals for public safety seek to accomplish the following:

1. The reduction of loss of life or property due to crime, fire, earthquake, flooding or other disasters or hazards.
2. The provision of adequate medical and emergency services to reduce the effects of natural or manmade disasters.
3. The promotion of citizen awareness and preparedness for emergency/disaster situations or potential for the incidence of crime.
4. The implementation of adequate inter-agency disaster planning.

PART VI: HAZARD MANAGEMENT ELEMENT

Goals related to Safety:

GOAL 1: The reduction of loss of life or property due to crime, fire, earthquake, flooding or other disasters or hazards.

GOAL 2: The provision of adequate medical and emergency services to reduce the effects of natural or manmade disasters.

GOAL 3: The promotion of citizen awareness and preparedness for emergency/disaster situations or potential for the incidence of crime.

GOAL 4: The implementation of adequate inter-agency disaster planning, including evacuation of all or parts of the community to safe areas of the County.

Policies related to Safety:

POLICY 3: The City will maintain a street system which is capable of providing access to any fires that may develop within the urban area, and which is capable of providing for the adequate evacuation of residents in the event of an emergency condition of magnitude.

POLICY 4: The City will continue to maintain and update emergency service plans, including plans for managing emergency operations, the handling of hazardous materials and the rapid cleanup of hazardous materials spills.

POLICY 5: The City will continue to cooperate with the County of San Joaquin and other agencies in pre-disaster planning activities such as evacuation required in the event of a serious breach of an upstream dam capable of flooding the community.

POLICY 6: The City will seek to reduce the risks and potential for hazards to the public through planning and zoning practices and regulations which avoid hazardous land use relationships, and by the continued and timely adoption of new-edition building and fire codes.

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. The San Joaquin County Department of Environmental Health is the CUPA designated for San Joaquin County. The San Joaquin County Department of Environmental Health is responsible for the implementation of statewide programs within its jurisdiction, including: Underground storage of hazardous substances (USTs), Hazardous Materials Business Plan (HMP) requirements, California Accidental Release Prevention (Cal-ARP) program, etc. Implementation of these programs involves permitting, inspecting, providing education/guidance, investigations, and enforcement.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: The proposed project has the potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

Construction activities would occur in phases through the development of the proposed improvements. Construction equipment and materials would likely require the use of petroleum based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The use of these materials at a construction site will pose a reasonable risk of release into the environment if not properly handled, stored, and transported. A release into the environment could pose significant impacts to the health and welfare of people and/or wildlife, and could result in contamination of water (groundwater or surface water), habitat, and countless important resources.

The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. Some of the proposed improvements, particularly those related to recycled water, would be located on agricultural areas near the San Joaquin River. Construction of the improvements would require fuel for the construction equipment. Additionally, depending on the ultimate design of the generator enclosures, paint or solvents may be used.

Mitigation Measure 3.4-1 presented below requires a Soils Management Plan (SMP) to be submitted and approved by the San Joaquin County Department of Environmental Health. The SMP will establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. Implementation of Mitigation Measure 3.4-1 will ensure that this potential impact is reduced to a **less than significant** level.

OPERATIONAL PHASE IMPACTS

The operational phase of the project will occur after construction is completed and the water, wastewater and recycled water improvements have been brought on-line. The proposed pump stations, pipelines, agriculture irrigation areas, storage ponds, and related improvements would not involve the handling of hazardous materials.

The proposed emergency generators would use diesel fuel, although the generators would only be run for maintenance and air quality permit testing requirements. Diesel fuel may also be stored on-site, such as within a building. If handled appropriately, diesel fuel would not pose a significant risk. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by San Joaquin County Environmental Health Division and the Lathrop Fire Department. Implementation of Mitigation Measure 3.4-2 will ensure that this potential impact is reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1*: A Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health prior to the issuance of the first grading permit for each phase of the project. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.*

Mitigation Measure 3.4-2*: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Division (CUPA) for review and approval. If during the construction process the contractors or the subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*

Impact 3.4-2: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

There are a variety of other schools located within one-quarter mile of the proposed project site, which spans throughout the City. Some of the schools within one-quarter mile of the proposed improvements include, but are not limited to: Lathrop High School, Mossdale Elementary School, Joseph Widmer Elementary School, and Lathrop Elementary School.

The proposed project is not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Generators would be provided in conjunction with the proposed water pump station improvements. The generators will be added as the new essential facilities are constructed and brought on-line. The generators would all be for emergency operations in the event of a power outage, and would only be run for maintenance and air quality

permit testing requirements. These generators would use diesel fuel. Since the use of the emergency generators would only occur during emergency scenarios, and otherwise only be run very briefly for maintenance and air quality testing requirements, the amount of diesel fuel used by these generators over the course of the lifetime of the proposed project would be minimal. No other proposed improvements would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste.

Overall, implementation of the proposed project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.4-3: The proposed project would not result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Less than Significant)

The hazards assessment included a site reconnaissance, interviews, historical land use research, and database research. The assessment revealed no evidence of historical or existing Recognized Environmental Conditions in connection with the project site. One site within the City is listed on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. There is one site within Lathrop that is listed on the Envirostor database as a Federal Superfund Cleanup Site. This site, the DDJC - Sharpe (site 39970002), was previously known as Sharpe Army Depot and was operated by the U.S. Army. The site was established in 1941 and consists of 727 acres.

The vast majority of the proposed improvements would not be located near the Sharpe Army Depot. One wastewater system improvement would be located north of Lathrop Road, within the vicinity of the Sharpe Army Depot site. This improvement, a pump or lift station, is shown in Figure 2.0-5 (Wastewater System Improvement Projects) in Chapter 2.0, Project Description. The development of this improvement would not prohibit the ongoing cleanup efforts at the Sharpe Army Depot site.

Implementation of the proposed project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.4-4: The proposed project has the potential to result in a safety hazard or excessive noise for people residing or working on the project site as a result of a public airport or public use airport. (Less than Significant)

There are no documented public airports or public use airports within close proximity to the project site. The Stockton Metropolitan Airport is located approximately 2.5 miles north of the Lathrop City limits. The northernmost portion of the Lathrop City limits is located within the airport influence area for the Stockton Metropolitan Airport identified in the ALUCP. The lands within the City that are located in the airport influence area are not within the Airport's Safety Zones.

The project includes development of Supervisory Control and Data Acquisition (SCADA) communication towers. Currently, SCADA towers are located at the City of Lathrop Corporation Yard (2112 E. Louise Avenue), the City of Lathrop City Hall (390 Town Centre Drive), the Lathrop

Consolidated Treatment Facility (18800 Christopher Way), and at a few other locations in the River Islands and Central Lathrop Specific Plan development areas. The proposed SCADA towers are required in order to provide a line-of-sight for radio communications between the facilities. The towers would be 50- to 100-feet in height, or taller.

According to the ALUCP, hazards to flight and landfills are prohibited uses in the airport influence area. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. Land use development that may cause the attraction of birds or other wildlife hazards to increase is also prohibited. Such uses (e.g. stormwater management facilities, other waterways, golf courses) are further detailed in FAA Advisory Circular 150/5200-33B or subsequent advisory (Hazardous Wildlife Attractants On or Near Airports). Further, airspace review for objects taller than 100 feet are required. Because the proposed SCADA towers are not over 100 feet, airspace review is not required.

Implementation of the proposed project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.4-5: The proposed project has the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

The Office of Emergency Services (OES) maintains an Emergency Operations Plan (EOP) that serves as the official Emergency Plan for San Joaquin County. It includes planned operational functions and overall responsibilities of County Departments during an emergency situation. The Emergency Plan also contains a threat summary for San Joaquin County, which addresses the potential for natural, technological and human-caused disasters (County Code, Title 4-3007).

The County OES also prepared a Hazardous Materials Area Plan (§2720 H&S, 2008) that describes the hazardous materials response system developed to protect public health, prevent environmental damage and ensure proper use and disposal of hazardous materials. The plan establishes effective response capabilities to contain and control releases, establishes oversight of long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. This plan is now implemented by the San Joaquin County Environmental Health Department.

The San Joaquin County Environmental Health Department maintains a Hazardous Materials Business Plan Program. The Hazardous Materials Business Plan Program describes agency roles, strategies and processes for responding to emergencies involving hazardous materials.

In San Joaquin County, all major roads are available for evacuation, depending on the location and type of emergency that arises. The proposed project does not include any actions that would impair or physically interfere with any of San Joaquin County's emergency plans or evacuation routes. Future maintenance workers for the proposed improvements will have access to the County resources that establish protocols for safe use, handling and transport of hazardous materials. Construction activities are not expected to result in any unknown significant road

closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Implementation of the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.4-6: The proposed project has the potential to expose people or structures to a risk of loss, injury or death from wildland fires. (Less than Significant)

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The County has areas with an abundance of flashy fuels (i.e. grassland) in the foothill areas of the eastern and western portion of the County.

The project site is located in an area that is predominately agricultural and urban, which is not considered at a significant risk of wildfire. The proposed project would have a **less than significant** impact with regards to this environmental issue.

This page intentionally left blank.

This section describes the regulatory setting, regional hydrology and water quality, impacts that are likely to result from project implementation, and measures to reduce potential impacts to water quality. This section is based in part on the following documents, reports and studies: *Comprehensive General Plan for the City of Lathrop, California* (adopted 1991), *2015 Urban Water Management Plan for the City of Lathrop* (City of Lathrop, 2017), *California Water Plan Update 2013* (DWR, 2013), *California's Groundwater Bulletin 118, San Joaquin Valley Groundwater Basin, Eastern San Joaquin Subbasin* (DWR, 2006), *California's Groundwater* (DWR, 2003), *2014 Eastern San Joaquin Integrated Regional Water Management Plan Update* (Eastern San Joaquin County Groundwater Basin Authority, 2014), *Eastern San Joaquin Groundwater Basin Groundwater Management Plan* (Northeastern San Joaquin County Groundwater Banking Authority, 2004), *Custom Soils Report for San Joaquin County, California* (NRCS, 2016), *and Web Soil Survey* (NRCS, 2016).

Comments received during the Notice of Preparation (NOP) comment period regarding hydrology and water quality include: Central Valley Regional Water Quality Control Board (RWQCB) (March 14, 2019), River Islands (March 21, 2019), and Terra Land Group (March 18, 2019). Full comments received are included in Appendix A.

3.5.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

San Joaquin County is located in the San Joaquin River watershed. The San Joaquin River is about 300 miles long. It begins in the Sierra Nevada mountain range on California's eastern border. The river runs down the western slope of the Sierra and flows roughly northwest through the Central Valley, to where it meets the Sacramento River at the Sacramento-San Joaquin Delta, a 1,000-square-mile maze of channels and islands that drains more than 40 percent of the state's lands (SJRGA 2013).

Because the Central Valley receives relatively little rainfall (12 to 17 inches a year, falling mostly October through March), snowmelt runoff from the mountains is the main source of fresh water in the San Joaquin River. Over its 300-mile length, the San Joaquin River is fed by many other streams and rivers, most notably the Stanislaus, Tuolumne and Merced rivers.

Most of the surface water in the upper San Joaquin River is stored and diverted at Millerton Lakes' Friant Dam, near Fresno. From Friant Dam, water is pumped north through the Madera Canal and south through the Friant-Kern canal to irrigation districts and other water retailers, which then deliver the water directly to the end users in the southern portion of the watershed.

In the central and northern portions of the watershed, many agricultural and municipal users receive water from irrigation districts, such as the Modesto, Merced, Oakdale, South San Joaquin and Turlock Irrigation Districts. That water is provided through diversions from rivers that are tributary to the San Joaquin, such as the Mokelumne, Stanislaus, Tuolumne and Merced rivers.

In an average year, about 1.5 million acre-feet of water is diverted from the San Joaquin River at Friant Dam, leaving little flow in the river until the Merced River joins the San Joaquin northwest of the City of Merced. Additional water also reaches the river via flows returning to the river from municipal wastewater treatment plants, as well as urban and agricultural runoff. The rest of the area's water supply needs are met by importing water from northern California (via the Central Valley Project) and by pumping water from the groundwater basin (SJRGA 2013).

Climate

Summers in the region are warm and dry ranging from an average high in July of 93°F to an average low of approximately 59°F. Winters are cool and mild, with an average high of 53°F and a low of 37°F in January. The average annual precipitation is approximately 13.81 inches. Precipitation occurs as rain most of which falls between the months of November through April, peaking in January at 2.85 inches. The average temperatures range from December lows of 37.5 F to July highs of 94.3 F.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.5-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.5-1. STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2012.

Hydrologic Region

San Joaquin County is located in the San Joaquin River Hydrological Region. The San Joaquin River is the principal river of the region, and all other streams of the region are tributary to it. The Mokelumne River and its tributary the Cosumnes River originate in the central Sierra Nevada, along with the more southerly Stanislaus and Tuolumne rivers. The Merced River flows from the south central Sierra Nevada and enters the San Joaquin near the City of Newman. The Chowchilla and Fresno rivers also originate in the Sierra south of the Merced River and trend westward toward the San Joaquin River. Creeks originating in the Coast Range and draining eastward into the San Joaquin River include Del Puerto Creek, Orestimba Creek, and Panoche Creek. Del Puerto Creek enters the San Joaquin near the City of Patterson, and Orestimba Creek enters north of the City of Newman. During flood years, Panoche Creek may enter the San Joaquin River or the Fresno Slough near the town of Mendota. The Kings River is a stream of the Tulare Lake Hydrologic Region, but in flood years it may contribute to the San Joaquin River, flowing northward through the James Bypass and Fresno Slough to enter near the City of Mendota. The Mud, Salt, Berrenda, and Ash sloughs also add to the San Joaquin River, and numerous lesser streams and creeks also enter the system, originating in both the Sierra Nevada and the Coast Range. The entire San Joaquin river system drains northwesterly through the Delta to Suisun Bay (DWR 2013, pg. SJR-5).

Local Watersheds (Hydrologic Sub-Areas)

Within the San Joaquin River Hydrological Region, the project site is located in the Upper Old River, Oakwood Lake-San Joaquin River, and Town of French Camp-San Joaquin River watersheds as shown on Figure 3.5-1.

Groundwater Basin

The City overlies the Tracy Groundwater Subbasin (DWR 5-22.15), which is a subbasin of the San Joaquin Valley Groundwater Basin (DWR 5-22).

The Tracy Subbasin is a 539-square mile subbasin that includes the northwestern most portion of the San Joaquin Valley Groundwater Basin around the Sacramento-San Joaquin Delta and extends south into the central portion of the San Joaquin Valley. The extent of the Tracy Subbasin is defined by the extent of unconsolidated and semi-consolidated sedimentary deposits that are bounded by the Diablo Range on the west; the Mokelumne and San Joaquin Rivers on the north; the San Joaquin River to the east; and the San Joaquin-Stanislaus County border on the south.

The City of Lathrop was formerly within two groundwater basins: the Tracy Groundwater Subbasin and the Eastern San Joaquin (ESJ) Subbasin. The Department of Water Resources (DWR) approved a basin boundary modification in February 2019, which consolidated the entire City of Lathrop into the Tracy Subbasin. The Tracy Subbasin is not adjudicated, and a basin management plan has not been created. The City of Lathrop is working with the other GSAs in the Tracy subbasin to develop a Memorandum of Understanding (MOA) and a Groundwater Sustainability Plan for compliance with the Sustainable Groundwater Management Act (SGMA).

Most of the fresh groundwater within the subbasin is estimated to be located at depths of less than 1,000 feet, and most of this shallow groundwater is unconfined. Several hydrologic formations

underlie the Lathrop area; however, only the top two, the Victor and the Laguna formations, are currently utilized as a source of fresh water. The Victor formation is the uppermost formation and extends from the ground surface to a maximum depth of about 150 feet. The formation consists primarily of stream-deposited unconsolidated gravel, sand, silt, and clay. Compared to the underlying formations, the Victor formation is generally more permeable and the groundwater is typically unconfined.

Local Drainage

The City provides and maintains a system of storm drains, detention basins, and pumping facilities as well as monitoring and control of the operations of the storm drain system. Additionally, the City enforces storm drain regulations established by the US EPA and the State of California.

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain (J.B. Anderson, 2016).

LOCAL SETTING

The City of Lathrop is located 10 miles south of downtown Stockton, 20 miles northwest of Modesto, and 60 miles east of San Francisco. The project area is situated in the south-central portion of San Joaquin County. The San Joaquin River bisects the project area.

Lathrop is located in northern San Joaquin Valley. The San Joaquin Valley is the southern section of the Great Central Valley of California; the Sacramento Valley is the northern section. The Great Central Valley is a sedimentary basin, with the Coast Range to the west and the Sierra Nevada to the east. Almost all of the sediments that fill the Great Central Valley eroded from the Sierra Nevada. The oldest of these sediments are full of fragments of volcanic rocks eroded from its early volcanoes. As erosion stripped the cover of volcanic rocks from the granites of the Sierra Nevada, their detritus of pale quartz and feldspar sand began to wash into the Great Central Valley. Drainage into the San Joaquin Valley is mainly from the Sierra Nevada. The sediments on the valley floor were deposited within the past one-two million years, some within the past few thousand years.

Within the project area, the elevation ranges from approximately five to 25 feet above sea level, gently along the San Joaquin River.

Flooding

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

FEMA FLOOD ZONES

FEMA mapping provides important guidance for the City in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps (FIRMs). The FEMA FIRM for the project area is shown on Figure 3.5-2.

Areas that are subject to flooding are indicated by a series of alphabetical symbols, indicating anticipated exposure to flood events:

- **Zone A:** Subject to 100-year flooding with no base flood elevation determined. Identified as an area that has a one percent chance of being flooded in any given year.
- **Zone AE:** Subject to 100-year flooding with base flood elevations determined.
- **Zone AH:** Subject to 100-year flooding with flood depths between one- and three-feet being areas of ponding with base flood elevations determined.
- **500-year Flood Zone:** Subject to 500-year flooding. Identified as an area that has a 0.2 percent chance of being flooded in a given year.

The project area is subject to flooding problems along the natural creeks and drainages that traverse the area. The primary flood hazard is the San Joaquin River and its tributaries, notably Paradise Cut (along the southwestern SOI boundary). A levee running from Airport Way in Manteca west and northwest along the San Joaquin River provides flood protection for the land north and east of the River. This levee is under the jurisdiction of Reclamation District (RD) No. 17.

Additionally, the levees maintained by RD 2062 provides 200-year flood protection for the River Islands development. The RD 2062 is located within the City of Lathrop and is bounded by the San Joaquin River, Paradise Cut, and Old River. RD 2062 is authorized to acquire, build and operate reclamation work, as defined by the Water Code. This includes flood control, drainage, and water supply infrastructure, as well as drains, canals, sluices, bulkheads, water gates, levees, embankments, pumping plants, dams, diversion works and irrigation works. It also includes bridges and road systems to ensure access to the reclamation works. RD 2062 currently owns and operates approximately 17 miles of levees, several lakes, and several different pumping systems. The Delta levees are shown in Figure 3.5-3.

The 100-year flood plain is largely confined to the southern and western portions of the City limits and SOI. Additionally, the 500-year flood plain is located in the eastern and northern portions of the City limits and SOI.

SB 5 FLOOD ZONES

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in

the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year Urban Level of flood protection (or a finding of adequate progress toward 200-year flood protection) in order to approve development. The 200-year floodplain for the project area, as mapped for the City of Lathrop and San Joaquin County, is shown on Figure 3.5-2. As shown in the figure, nearly the entire City and SOI is located in the 200-year floodplain. The portions of the River Island area that are currently developed are not within the 200-year floodplain.

RD 17 created a Joint Powers Authority (JPA) that includes San Joaquin County, Stockton, Manteca, and Lathrop to issue bonds to fund the local share of Phase 1 through 3 Improvements to the RD 17 levees. Lathrop is working with RD 17 to update that JPA to fund the local share of the needed Urban Level of Protection (ULOP) improvements to the RD 17 levees, to adopt fee programs and/or exactions paid and advanced from property owners in areas of entitled and planned development within RD17, and a new Enhanced Infrastructure Financing District. As of February 2016, Lathrop and Manteca have funded the required Urban Levee Design Criteria analysis of the RD 17 levees, identified the 200-year floodplain, calculated an estimated cost to provide the ULOP improvements, and requested State funds for the State share of this work. Lathrop will continue to work with all public agencies within RD 17 to provide for final design and construction of ULOP improvements that will allow findings of Adequate Progress toward providing ULOP as the improvements are constructed.

Dam Failure

The Project site is located within dam failure inundation areas. Potential inundation from the New Melones Lake, San Luis Reservoir, and Tulloch Reservoir are shown in Figure 3.5-4. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. Larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Stormwater Quality

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the city and in the regional vicinity of the project area that are impaired are referred as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

The City of Lathrop, in collaboration with San Joaquin Country, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent

guidance for municipal workers, developers and builders in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ).

3.5.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Control Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL AND STATE

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Federal Emergency Management Agency (FEMA)

San Joaquin County is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of

protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Clean Water Act (CWA)

The Clean Water Act (CWA), initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2013-001-DWQ-DWQ).

California Water Code

The Federal Clean Water Act places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although this does establish certain guidelines for the States to follow in developing their programs and allows the Environmental Protection Agency to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Sustainable Groundwater Management Act (SGMA)

In 2014, the State of California adopted legislation to help manage its groundwater, the Sustainable Groundwater Management Act (SGMA) . According to the SGMA, local Groundwater Sustainability Agencies (GSAs) must be formed for all high and medium priority basins in the state. These GSAs must develop and implement Groundwater Sustainability Plans (GSPs) for managing and using groundwater without causing undesirable results: significant groundwater-level declines, groundwater-storage reductions, seawater intrusion, water-quality degradation, land subsidence, and surface-water depletions; these are also referred to as sustainability indicators.

The first major SGMA milestone was the requirement to form GSAs by June 30, 2017. The portion of the City located west of the San Joaquin River and overlying the Tracy Subbasin is managed by the Stewart Tract GSA, formed by RD 2062. For the portion of the City that was formerly located with the ESJ Subbasin, the City of Lathrop formed an exclusive GSA for its jurisdiction, and was worked under a Joint Powers Authority formed with the other GSAs in the ESJ Subbasin to develop a GSP for the ESJ Subbasin. DWR approved a basin boundary modification in February 2019 that moved the City of Lathrop entirely within the Tracy subbasin, and the City's GSA is currently participating with all GSAs in the Tracy Subbasin to develop a GSP for management for the Tracy Subbasin.

200-Year Flood Protection in the Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2016 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2025. Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;
2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;
3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number

of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

2014 Eastern San Joaquin Integrated Regional Water Management Plan

The Northeastern San Joaquin County Groundwater Banking Authority (GBA) was established in 2001 to collectively develop locally supported projects to strengthen water supply reliability in Eastern San Joaquin County. On July 25, 2007, the GBA adopted the Eastern San Joaquin Integrated Regional Water Management Plan (IRWMP). The IRWMP defines and integrates key water management strategies to establish protocols and courses of action to implement the Eastern San Joaquin Integrated Conjunctive Use Program. The 2014 Eastern San Joaquin IRWMP is an update and expansion of the 2007 IRWMP prepared for the Eastern San Joaquin Region. There has been significant progress toward implementing the goal of improving the sustainability and reliability of water supplies in the Region, but the process is ongoing and as yet incomplete. The Plan update complies with the most recent DWR guidelines and adds additional considerations including examination of climate change impacts, inter-regional cooperation, and expanded analysis of stormwater and floodwater management.

LOCAL

City of Lathrop General Plan

The City of Lathrop General Plan contains the following goals and policies related to hydrology and water quality.

GOALS OF THE GENERAL PLAN

Goal No. 7: Seismic Hazards: Goals for achieving and maintaining safety from seismic events include preventing serious injury, loss of life, serious damage to critical facilities involving large assemblies of people, and loss of continuity in providing services.

Goal No. 8: Public Safety Hazards: Goals for public safety seek to accomplish the following:

1. The reduction of loss of life or property due to crime, fire, earthquake, flooding or other disasters or hazards.

Goal No. 10: Water Supply, Wastewater and Surface Water Management: It is the goal of the General Plan to provide for a secure source of fresh water for existing and future residents, and for the reuse of wastewater and surface water so that there is no net increase in water pollution, including point and non-point sources.

PART V: RESOURCE MANAGEMENT ELEMENT

Seismic Hazards Policy:

12. All lines which are part of the domestic water distribution system should be looped to assure adequate pressure in the event of a major fire, earthquake, or explosion. Adequate

emergency standby power generation capability should be available at water wells to assure water availability in the event of a major power failure.

Public Safety Policy:

5. The City will continue to cooperate with the County of San Joaquin and other agencies in pre-disaster planning activities such as evacuation required in the event of a serious breach of an upstream dam capable of flooding the community.

Lathrop Municipal Code

The City of Lathrop Municipal Code contains the following chapters and sections related to hydrology and water quality.

CHAPTER 12.28: PROTECTION OF WATER COURSES

12.28.020 Rules and regulations.

A. It shall be unlawful for any person to interfere with, destroy or use in any manner whatsoever any levee, embankment, channel, dam, reservoir, rain or stream gauges, telephone line, piling; or other stream protection work constructed by the city or by any drainage district organized under the laws of the state, without having received a written permit therefor from the public works director, which permit shall be revocable whenever, in the opinion of the public works director the public interest and welfare require the revocation thereof. Application for the use of any levee, embankment, channel, dam or reservoir shall be made to the public works director, setting forth the particular use desired, and the purpose and duration thereof. The public works director shall investigate such applications and may impose such terms and conditions as may be necessary to insure the proper maintenance of the property for flood control and drainage purposes.

B. It shall be unlawful for any person to place on or cause to be placed in any drainage ditch, water course, channel or conduit, or upon any property over which the city or any drainage district has an easement for flood control or drainage purposes duly recorded in the office of the city clerk, any wires, fence, building or other structure, or any refuse, rubbish, tin cans or other matter that may impede, retard or change the direction of the flow of water in such drainage ditch, water course, channel or conduit, or that will catch or collect debris carried by such water, or is placed where the natural flow of the storm and flood waters would carry the same downstream to the damage and detriment of either private or public property adjacent to said drainage ditch, water course, channel or conduit.

C. It shall be unlawful for any person to change the drainage on his or her property so as to divert the drainage to the nearest public road, without first obtaining a permit to do so from the public works director.

D. It shall be unlawful for any person to fill or obstruct or maintain any fill or obstruction in any drainage ditch, water course, channel or conduit carrying storm or drainage water unless a permit to do so has been obtained from the public works director.

E. It shall be unlawful for any person to do anything to any drainage ditch, water course, channel or conduit carrying storm or drainage water that will in any manner obstruct or interfere with the flow of water through such ditches, water courses, channels or conduits unless a permit to do so has been obtained from the public works director.

F. It shall be unlawful for any person to level land in a manner which would flood adjacent properties or public roadways.

G. Every property owner, whether it be a person or his lessee or tenant, through whose property a drainage ditch, water course, channel or conduit carrying storm or drainage water passes, shall keep and maintain the same free from obstacles that will prevent or retard the flow of water through such ditch, water course, channel or conduit except that same may be filled or altered if a permit to do so has been first obtained pursuant to this chapter. (Prior code § 158.02)

CHAPTER 13.28: STORMWATER MANAGEMENT AND DISCHARGE CONTROL

13.28.020 Purpose and intent. The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within the city of Lathrop, pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. Section 1251 et seq.) and the Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.). This chapter seeks to meet that purpose through the following objectives:

A. To comply with all federal and state laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;

B. To prohibit any discharge which may interfere with the operation of, or cause any damage to the storm drain system or impair the beneficial use of the receiving waters;

C. To prohibit illicit discharges into the storm drain system;

D. To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable;

E. Minimize increases in stormwater and runoff from any development in order to reduce flooding, siltation, and streambank erosion and maintain the integrity of drainage channels;

F. Minimize nonpoint source pollution caused by stormwater runoff from development that would otherwise degrade local water quality; and

G. Minimize the total annual volume of surface water runoff that flows from any specific site during and following development. (Ord. 07-265 § 1)

13.28.130 Requirement to Prevent, Control, and Reduce Stormwater Pollutants.

A. Authorization to Adopt and Impose Best Management Practices (BMPs). The city may adopt requirements identifying best management practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the United States. Where best management practice requirements are promulgated by the city or any federal, state of California, or regional agency for any activity, operation, or facility which would otherwise cause the discharge of pollutants to the storm drain system or a waters of the United States, every person undertaking such activity or operation, or owning or operating such facility shall comply with such requirements.

B. New Development and Redevelopment. The city may adopt requirements identifying appropriate design standards and best management practices to control the volume, rate, and potential pollutant load of stormwater runoff from new development and redevelopment projects as may be appropriate to minimize the generation, transport and discharge of pollutants. The city shall incorporate such requirements in any land use entitlement and construction or building-related permit to be issued relative to such development or redevelopment. The owner and developer shall comply with the terms, provisions, and conditions of such land use entitlements and building permits as required in this chapter.

C. Responsibility to Implement Best Management Practices. Notwithstanding the presence or absence of requirements promulgated pursuant to subsections A and B of this section, any person engaged in activities or operations, or owning facilities or property which will or may result in pollutants entering stormwater, the storm drain system, or waters of the United States shall implement best management practices to the extent they are technologically achievable to prevent and reduce such pollutants. The owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense.

D. Maintenance Agreements. All structural and nonstructural permanent stormwater BMPs not in the control of the city of Lathrop shall have an enforceable maintenance agreement to ensure the system functions as designed. The agreement shall include any and all maintenance easements required to access and inspect the stormwater BMPs, and to perform routine maintenance as required. Such agreements shall specify the parties responsible for the proper maintenance of all stormwater BMPs.

City of Lathrop Stormwater Management Program

The City adopted a Storm Water Ordinance, construction standards, and design review guidelines to reduce contaminants in stormwater runoff. Of particular relevance to the proposed project is the City's coordination of BMP review and implementation under the construction site runoff control

program. New development and redevelopment control measures include development of structural controls, development of nonstructural controls, development of ordinances or regulatory mechanisms, and development of long-term operation and maintenance (O&M) practices.

Pollution prevention/good housekeeping for municipal operations addresses routine O&M activities for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. The pollution prevention/good housekeeping program also includes a training component to prevent and reduce stormwater pollution from municipal operations. The pollution prevention/good housekeeping BMPs can be separated into two broad categories: source controls and materials management.

Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, street maintenance staff training, flood control projects, and litter ordinances. Materials management BMPs are designed to reduce pollutants with nonstructural controls such as pesticide education and spill prevention control.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
    - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION

Impact 3.5-1: The proposed project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during construction. (Less than Significant with Mitigation)

BACKGROUND

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, storm water runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

> *"…Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded…"*

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

"Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed…Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions…All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended…"

Additionally, as noted previously, the City of Lathrop, in collaboration with San Joaquin Country, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers and builders in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ).

DISCUSSION

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands.

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency.

In accordance with the NPDES Stormwater Program, Mitigation Measure 3.3-1 contained in Section 3.3 Geology and Soils, ensures compliance with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what

should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement. Additionally, the plans for construction of project stormwater control would be reviewed and inspected by the City under its Small MS4 permit as part of its stormwater management program. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.3-1**.*

Impact 3.5-2: The proposed project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during operation. (Less than Significant)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. As noted above, these projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Mitigation Measure 3.3-1 ensures compliance with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities.

The long-term operations of the proposed project would not result in long-term impacts to surface water quality from urban stormwater runoff. The proposed project would not include urban uses which would create new impervious surfaces or generate polluted runoff. The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. Some of the proposed improvements, particularly those related to recycled water, would be located on agricultural areas. The undergrounding of the utilities within the agricultural or undeveloped areas will be restored to the existing agricultural/undeveloped condition at the completion of the proposed project.

Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Impact 3.5-3: The proposed project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (Less than Significant)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The Water System CIPs

address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of water supply sources within the City's distribution system. The Wastewater System CIPs were developed to remove and replace the existing pipe with a larger diameter pipe for each gravity sewer capacity deficiency. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. The Plan considers the installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas. The Recycled Water System Master Plan includes the City's current expansion of its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF. Most Phase 2A improvements have been completed, with the exception of the following: conversion of the low-pressure PMP-10 to a high-pressure pump station, installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs, and establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Phase 2B will include the following improvements: increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5), and install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B.

These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would result in minimal, if any, impervious surfaces which could decrease groundwater recharge. The CIP projects that would be constructed in the agricultural areas would also be considered to have a low impact to groundwater supplies for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field or vacant field, but the irrigation system would change from well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The Recycled Water Master Plan includes development of new storage ponds during Phase 2A and 2B. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas. The new and existing ponds provide limited opportunities for groundwater recharge.

The proposed project would result in some impervious surfaces that could reduce rainwater infiltration and groundwater recharge. Some of the proposed ponds (if unlined) and/or pump stations could create new impervious surfaces. However, these impervious surfaces would be minimal. The proposed project would not require ground water supplies, and, as such would not interfere with groundwater recharge.

The project site is located in the Tracy Groundwater Subbasin (DWR 5-22.15), which is a subbasin of the San Joaquin Valley Groundwater Basin (DWR 5-22). The basin is not adjudicated and a basin

management plan has not been created. The Department of Water Resources (DWR) approved a basin boundary modification in February 2019, which consolidated the entire City of Lathrop into the Tracy Subbasin. The City of Lathrop was formerly within two groundwater basins: the Tracy Groundwater Subbasin and the ESJ Subbasin. The City of Lathrop is working with the other GSAs in the Tracy subbasin to develop a MOA and a Groundwater Sustainability Plan for compliance with the SGMA.

As noted previously, the 2014 Eastern San Joaquin IRWMP is an update and expansion of the 2007 IRWMP prepared for the Eastern San Joaquin Region by the Northeastern San Joaquin County GBA. The mission of the GBA is to employ a consensus-based approach to collaboratively develop stakeholder-supported projects and programs that mitigate and prevent the impacts of long-term groundwater overdraft. Managing the underlying groundwater basin is critical in providing reliable water supplies, which are essential for the economic, social, and environmental viability of the San Joaquin Region. The 2014 Eastern San Joaquin IRWMP complies with the most recent DWR guidelines and adds additional considerations including examination of climate change impacts, inter-regional cooperation, and expanded analysis of stormwater and floodwater management. The 2014 Eastern San Joaquin IRWMP describes groundwater features and conditions and provides objectives, evaluation criteria, and prioritization criteria.

Additionally, pursuant to the SGMA, the City of Lathrop formed an exclusive GSA for its jurisdiction within the Tracy Groundwater Subbasin (formerly the Eastern San Joaquin Subbasin).

Most of the fresh groundwater is encountered at depths of less than 1,000 feet, and most of this shallow groundwater is unconfined. The Victor formation is the uppermost formation and extends from the ground surface to a maximum depth of about 150 feet. Compared to the underlying formations, the Victor formation is generally more permeable and the groundwater is typically unconfined. The underlying Laguna formation includes discontinuous lenses of unconsolidated to semi-consolidated sands and silts interspersed with lesser amounts of clay and gravel. The Laguna formation is hydraulically connected to the Victor formation and is estimated to be 750 to 1,000 feet thick. Moderate permeability has been reported within the Laguna formation with some highly permeable coarse-grained beds.

Because the project would not increase water demand, the proposed project would not cause the substantial depletion of groundwater supplies. Because the amount of new impervious surfaces would be minimal, the project would not interfere substantially with groundwater recharge. As such, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Impact 3.5-4: The proposed project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or impede or redirect flood flows. (Less than Significant)

As noted above, the proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would result in minimal, if any, impervious surfaces which could decrease groundwater recharge or alter the drainage pattern of the area. The CIP projects that would be constructed in the agricultural areas would also be considered to have a low impact to drainage patterns for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field or vacant field, but the irrigation system would change from surface water or well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The Recycled Water Master Plan includes development of new storage ponds during Phase 2A and 2B. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas.

As discussed in Impact 3.5-2, implementation of the proposed project would not result in many new impervious surfaces which would alter the existing drainage pattern of the site.

The proposed project would not alter a stream or river. The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. Some of the proposed improvements, particularly those related to recycled water, would be located on agricultural areas. The undergrounding of the utilities within the agricultural or undeveloped areas will be restored to the existing agricultural/undeveloped condition at the completion of the proposed project. The undergrounding of the utilities within the roadway rights-of-way will also be restored to the existing condition. Therefore, the proposed project would have a ***less than significant*** impact relative to this topic.

Impact 3.5-5: The proposed project would not release pollutants due to project inundation by a flood, tsunami, or seiche. (Less than Significant)

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. Tsunami can cause catastrophic damage to shallow or exposed shorelines. The project site is approximately

50 miles from San Francisco Bay and 70 miles from the coast, which is sufficiently distant to preclude effects from a tsunami. Therefore, the proposed project would not release pollutants due to project inundation by a tsunami.

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influences by the external causes. The project site is not adjacent to any lakes that pose significant a risk from a seiche event. Therefore, the proposed project would not release pollutants due to project inundation by a seiche.

As shown on Figure 3.5-2, the project site is within the 100-year and 500-year flood zones as delineated by FEMA. Portions of the project site are also located within the 200-year floodplain as delineated on the most recent 200-year flood plain maps for Lathrop.

The project site is subject to flood inundation as a result of levee failure (200-year flood). The levees protected the project site are maintained by Reclamation District 0017 (RD 17). The RD 17 levee system was originally constructed in the 1960's and substantially upgraded in 1988. In 1990 the RD 17 levee was accredited by FEMA, which removed large areas of Stockton, Lathrop, Lathrop and the County from the 100-year floodplain.

Following the accreditation in 1990, standards for flood protection have been changing and in May 2007 FEMA extended an offer of a Provisionally Accredited Levee (PAL) Agreement for the RD 17 levee system. A PAL is a levee that meets the FEMA requirements for flood protection but requires additional supporting documentation. Since August 2007, RD 17 has been implementing improvements to the levee system and constructed a seepage berm (a bank of earth placed against the existing levee) along the east levee of the San Joaquin River with the RD 17 area. The purpose of these improvements is to meet the flood protection requirements of FEMA and maintain the levee accreditation. FEMA has determined based on the current condition of the levee and the additional supporting documentation, that the RD 17 levee will maintain its accreditation.

As shown in Figure 3.5-4, the project site is subject to flood inundation as a result of dam failure. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. As discussed previously, larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, DSD. The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

As discussed in the previous impact discussions, the proposed project would not result in the release of pollutants as a result of long-term operation. Therefore, overall, this impact is considered ***less than significant***.

Impact 3.5-6: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant)

The Water Quality Control Plan for the Central Valley Region and the 2014 Eastern San Joaquin IRWMP are the two guiding documents for water quality and sustainable groundwater management in the project area. Consistency with the two plans are discussed below.

WATER QUALITY CONTROL PLAN FOR THE CENTRAL VALLEY REGION

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where known.

As discussed in Impacts 3.5-1 and 3.5-2, impacts related to water quality during construction and operation would be less-than-significant with implementation of the mitigation measure in Section 3.3, Geology and Soils. The proposed project would not include urban uses which would create new impervious surfaces or generate polluted runoff. The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. The long-term operations of the proposed project would not result in long-term impacts to surface water quality from urban stormwater runoff.

2014 EASTERN SAN JOAQUIN IRWMP

The 2014 Eastern San Joaquin IRWMP defines and integrates key water management strategies to establish protocols and courses of action to implement the Eastern San Joaquin Integrated Conjunctive Use Program. The 2014 Eastern San Joaquin IRWMP is an update and expansion of the 2007 IRWMP prepared for the Eastern San Joaquin Region. There has been significant progress toward implementing the goal of improving the sustainability and reliability of water supplies in the Region, but the process is ongoing and as yet incomplete. The IWRMP does not include requirements for individual projects, such as the proposed project. Instead, the IWRMP outlines projects to be carried out which achieve regional goals, such as reduced water demand, improved efficiency, improved water quality, and improved flood management.

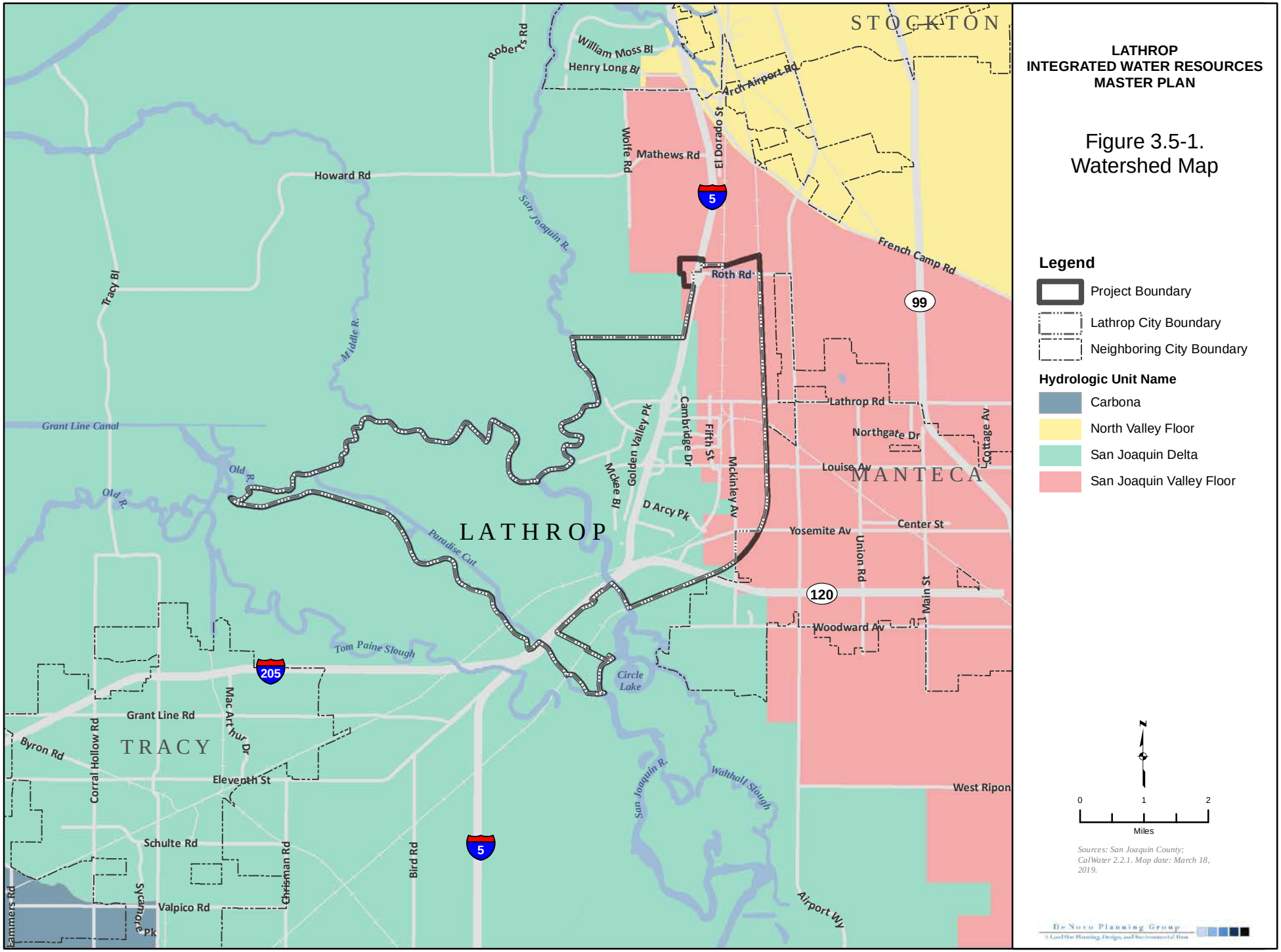
As discussed previously, the City of Lathrop formed an exclusive GSA for its jurisdiction within the Tracy Groundwater Subbasin (formerly the Eastern San Joaquin Subbasin). The entire City overlays the Tracy Sub-basin. The City is no longer in the ESJ sub-basin and is working to develop a GSP with

the GSAs in the Tracy sub-basin for SGMA compliance. As discussed in Impact 3.5-3, the project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The proposed project would not result in new impervious surfaces that could reduce rainwater infiltration and groundwater recharge. The proposed project would not require ground water supplies, and, as such would not interfere with groundwater recharge.

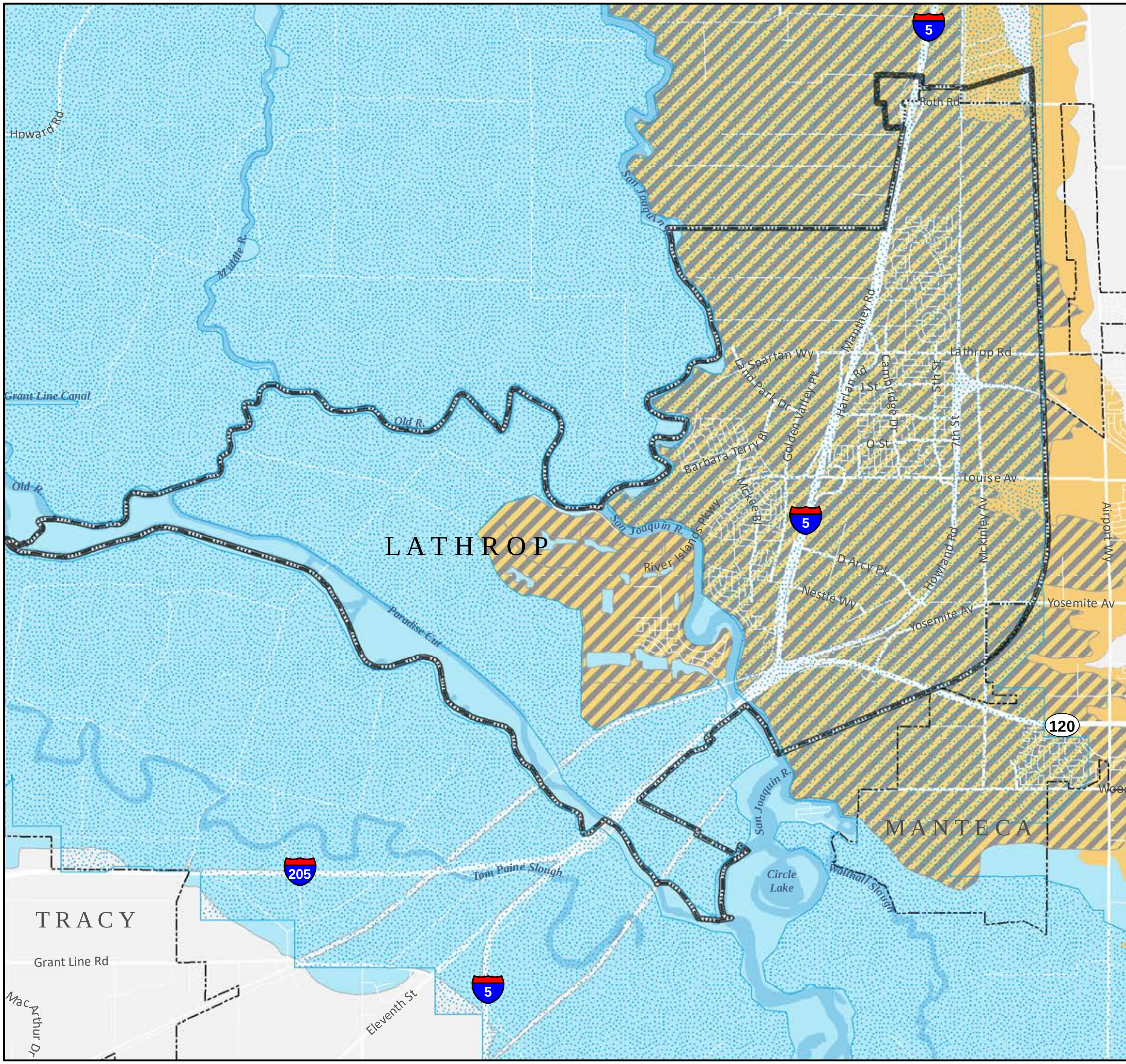
CONCLUSION

Overall, implementation of the proposed project would have a ***less than significant*** impact related to conflicts with the Basin Plan and the Groundwater Management Plan.

This page left intentionally blank.


LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN
Figure 3.5-1.
Watershed Map
Legend
Project Boundary
Lathrop City Boundary
Neighboring City Boundary
Hydrologic Unit Name
Carbona
North Valley Floor
San Joaquin Delta
San Joaquin Valley Floor
STOCKTON
MANTECA
TRACY
LATHROP
Howard Rd
Mathews Rd
Roth Rd
French Camp Rd
Lathrop Rd
Northgate Dr
Louise Av
Yosemite Av
Center St
Woodward Av
Grant Line Rd
Eleventh St
Schulte Rd
Valpico Rd
West Ripon
Airport Wy
Grant Line Canal
Old R.
Middle R.
San Joaquin R.
Tom Paine Slough
Paradise Cut
Circle Lake
Walthall Slough
Tracy Bl
Wolfe Rd
El Dorado St
Arch Airport Rd
William Moss Bl
Henry Long Bl
Roberts Rd
Golden Valley Pk
Cambridge Dr
Fifth St
Mckinley Av
Mckee Bl
D Arcy Pk
Union Rd
Main St
Cottage Av
Mac Arthur Dr
Corral Hollow Rd
Byron Rd
Chrisman Rd
Bird Rd
Sycamore Pk
Tammers Rd
5
99
120
205
0
1
2
Miles
Sources: San Joaquin County; CalWater 2.2.1. Map date: March 18, 2019.
De Novo Planning Group

This page left intentionally blank.



LATHROP INTEGRATED WATER RESOURCES MASTER PLAN

Figure 3.5-2.
FEMA Flood Insurance Rate Map

Legend

- Project Boundary
- Lathrop City Boundary
- Neighboring City Boundary

FEMA Flood Zone Designation

- 1% Annual Chance Flood Hazard (100-yr Flood)
- 0.2% Annual Chance Flood Hazard (500-yr Flood)
- Area with Reduced Risk due to Levee
- *unshaded* Area of Minimal Flood Hazard

DWR Best Available

- SB 5 200-yr Flood Plain

N

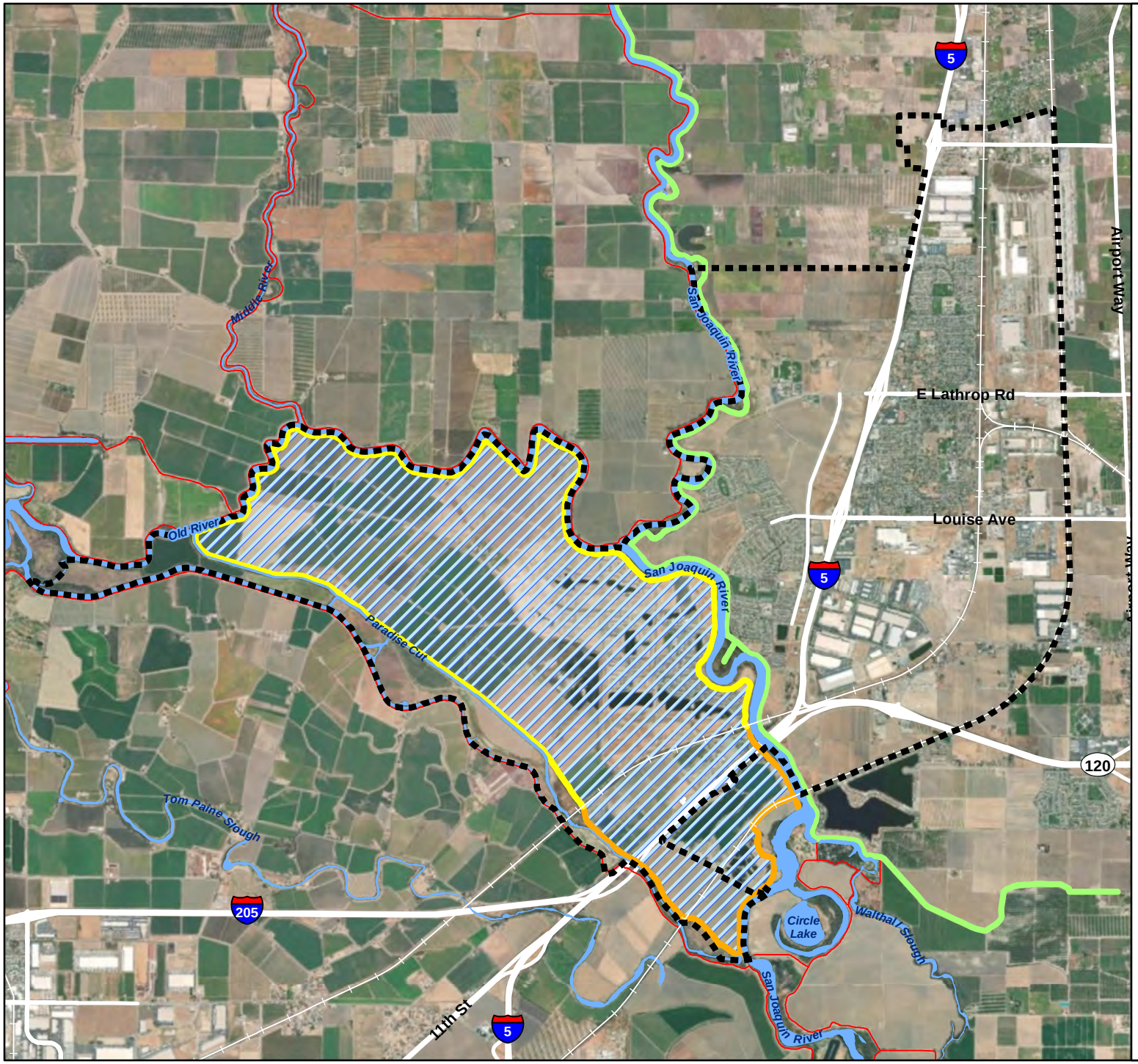
0 ½ 1
Miles

Sources: San Joaquin County; FEMA Official Flood Hazard Layer, California Department of Water Resources Best Available Maps (BAM). Map date: May 31, 2019.

De Novo Planning Group

French Camp Rd

This page left intentionally blank.



LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

Figure 3.5-3. Delta Levees

Legend

- Project Boundary
- RD 2062 (Stewart Tract Levee)
- RD 2107 (Mossdale Levee)
- RD 17 Levee
- Other Delta Levees
- Levee-protected Area

N

0 ½ 1

Miles

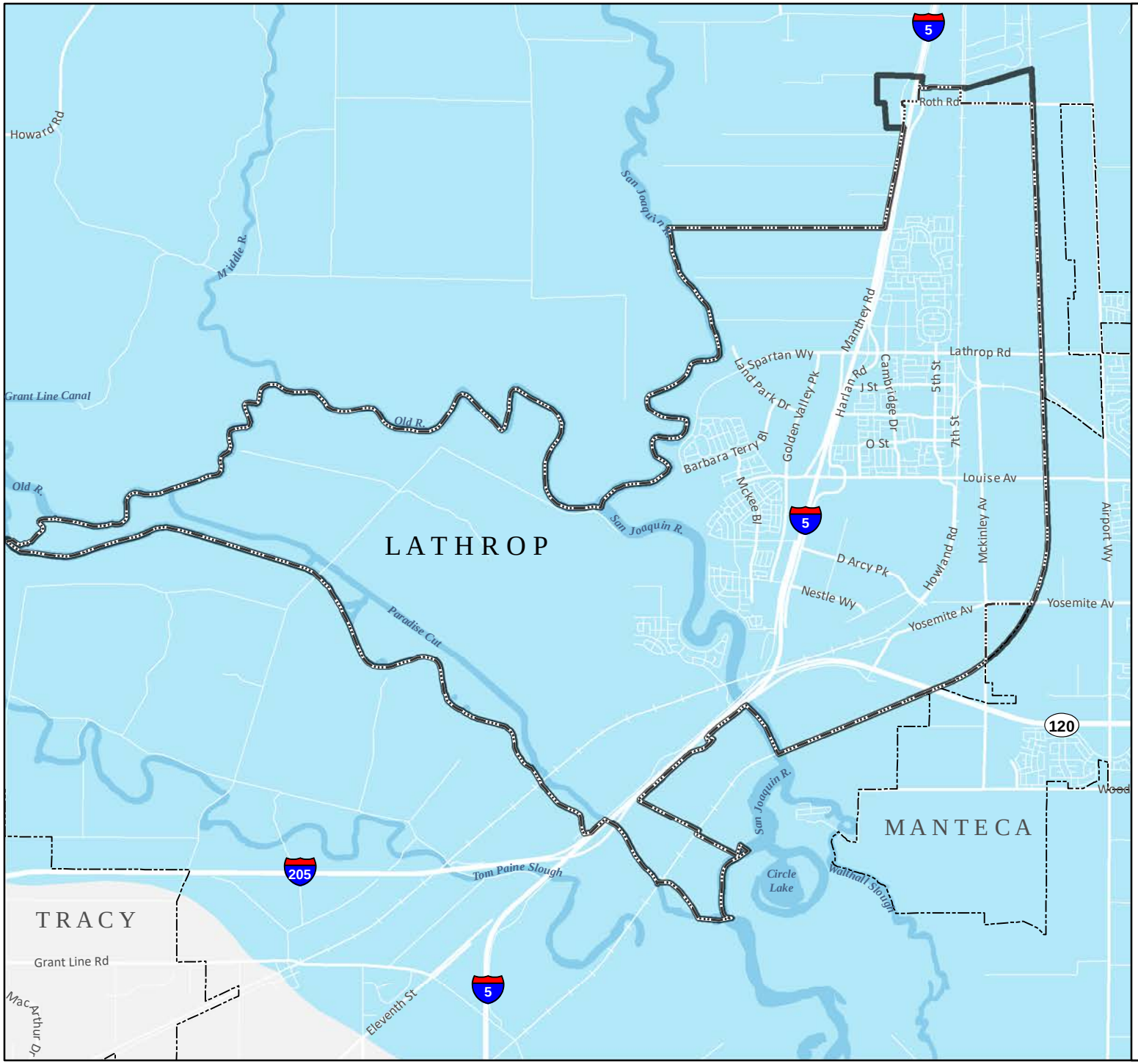
Sources: DWR; San Joaquin County; ArcGIS Online World Imagery Map Service. Map date: June 14, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 3.5-4.
Dam Inundation Map



Legend

- Project Boundary
- Lathrop City Boundary
- Neighboring City Boundary
- Dam Inundation Areas Combined
  - *Lake McClure Dam*
  - *New Melones Dam**
  - *Pine Flat Dam*
  - *San Luis Dam**
  - *Tulloch Dam*

** Indunation area affects the entire project area. If not noted with an asterisk, the inundation area only affects a portion of the project area.*

N

0 ½ 1
Miles

Sources: San Joaquin County; California OES. Map date: March 18, 2019.

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

This page left intentionally blank.

This section describes the regulatory setting, impacts associated with wastewater services, water services, storm drainage, and solid waste disposal that are likely to result from project implementation, and measures to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. Therefore, storm water drainage and infrastructure are not addressed in this EIR section. This section is based in part on the following documents, reports and studies: *California's Groundwater,* CalRecycle *Solid Waste Information System,* CalRecycle *Jurisdiction Diversion/Disposal Rate Summary*, the *San Joaquin Groundwater Basin Groundwater Management Plan*, *South County Surface Water Supply Project EIR* (South San Joaquin Irrigation District [SSJID], 1999), *Lathrop Municipal Service Review and Sphere of Influence Plan* (February 2016), and *2015 Urban Water Management Plan for the City of Lathrop* (2017).

Comments received during the Notice of Preparation (NOP) comment period regarding utilities include: Central Valley Regional Water Quality Control Board (RWQCB) (March 14, 2019), Pacific Gas and Electric (February 20, 2019), River Islands (March 21, 2019), and Terra Land Group (March 18, 2019). Full comments received are included in Appendix A.

3.6.1 WASTEWATER SERVICES

ENVIRONMENTAL SETTING

The City of Lathrop provides sewer (wastewater) services throughout the City of Lathrop. Wastewater from the City of Lathrop is currently treated at the Manteca Water Quality Control Facility (MWQCF) and the Lathrop Consolidated Treatment Facility (LCTF). The MWQCF treats most of the City's wastewater generated in areas east of Interstate Highway 5 (I-5), excluding the Crossroads development area. The LCTF treats the wastewater generated west of I-5 and in the Crossroads development area. In 2016, the City generated a total average annual flow of 1.46 million gallons per day (mgd) with 0.92 mgd treated at the MWQCF and 0.54 mgd treated at the LCTF as documented in the draft Integrated Water Resources Master Plan (IWRMP).

Wastewater Collection System

The City's wastewater collection system consists of approximately 72 miles of gravity mains ranging from 6 to 36 inches, 21 miles of force mains ranging from 4 to 18 inches, and 12 pump stations. Approximately 63 percent of gravity mains are polyvinyl chloride pipes, which is the City's current standard pipe material. The remaining 37 percent of pipes are vitrified clay pipes that are in Historic Lathrop and Crossroad Business Park areas. The City has a Supervisory Control and Data Acquisition (SCADA) system for control and monitoring of facilities. The City's wastewater collection system service area is generally contiguous with the city limits.

The City currently provides wastewater service to approximately 6,100 residential, commercial, industrial and institutional/governmental properties. However, there are areas within the city limits that are not served by the wastewater system. Many large facilities (e.g., Simplot, the former Pilkington Glass facility, the former Sharpe Army Depot, and former Carpenter Company facility) and the Next Generation STEAM Academy in River Island have historically self-managed their wastewater (West Yost Associates, 2018). Some of these areas have been planned to move to City

service, as they are re-developed. Some residential homes and businesses in the central portion of Lathrop (e.g. Lathrop Industrial and South Lathrop) are served by a septic system.

LCTF and MWQCF have independent sewer sheds except at the 8-inch Mossdale Intertie. The Mossdale Intertie crosses beneath I-5 on River Islands Parkway and Louise Avenue. The Mossdale intertie is not routinely operated, but could potentially be utilized in the future to reroute a portion of flows from the Mossdale Pump Station to the MWQCF collection system.

Wastewater Treatment Facilities

Wastewater treatment facilities that serve the City include the MWQCF and the LCTF. These facilities are described below.

MANTECA WATER QUALITY CONTROL FACILITY

The City owns 14.7 percent of the MWQCF capacity by contract with the City of Manteca. The City does not participate in the operation of the facility, nor does it receive recycled water from the facility. As discussed in the City's *Municipal Service Review and Sphere of Influence Plan*, and as listed in Table 3.6-1, the City is allocated 1.45 mgd of the total 9.87 mgd facility capacity. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated a maximum of 14.7 percent capacity or 3.97 mgd. Treatment at the MWQCF consists of primary sedimentation followed by roughing biotowers, conventional activated sludge, secondary clarification, tertiary filtration, and ultraviolet disinfection. Disinfected tertiary effluent is discharged to the San Joaquin River. A portion of the secondary effluent is not disinfected and is used to irrigate medians and agricultural fields.

TABLE 3.6-1: FUTURE SEWER CAPACITY, MGD

YEAR	*2016*	*2020*	*2025*	*2030*	*2035*	*2040*	*BUILD-OUT 2050*
DEMAND							
MWQCF Projected ADWF	1.08	1.24	1.36	1.38	1.39	1.40	1.47
LCTF Projected ADWF	0.58	1.28	2.20	2.90	3.45	3.94	5.01
ADWF Total	**1.66**	**2.52**	**3.56**	**4.28**	**4.84**	**5.3.4**	**6.48**
TREATMENT CAPACITY							
MWQCF	1.45	1.45	1.45	1.45	1.45	1.45	1.45
MWCQF Improvements	2.52	2.52	2.52	2.52	2.52	2.52	2.52
LCTF	0.75	0.75	0.75	0.75	0.75	0.75	0.75
LCTF Phase I	0.25[a]	0.25	0.25	0.25	0.25	0.25	0.25
LCTF Phase II	-	1.50	1.50	1.50	1.50	1.50	1.50
Treatment Total	**4.97**	**6.47**	**6.47**	**6.47**	**6.47**	**6.47**	**6.47**

NOTES: (A) CURRENTLY THE DISPOSAL CAPACITY IS PERMITTED FOR 1.545 MGD. THE RECYCLED WATER DISPOSAL FACILITIES WERE ACCEPTED IN MAY 2019.
(B) FACILITY IS COMPLETED AS OF MAY 2019
SOURCE: WEST YOST ASSOCIATES, 2018.

LATHROP CONSOLIDATED TREATMENT FACILITY

The LCTF is City-owned but operated by a private contractor, Veolia Water NA. The LCTF's treatment capacity was expanded to 2.5 mgd, with the completion of recent recycled water disposal facilities. However, capacity is currently limited to 1.55 mgd by off-site recycled water storage and disposal capacity. The LCTF is planned to be expanded to a future permitted capacity of 6.0 mgd.

Wastewater treatment and disposal at the LCTF is regulated under the California Regional Quality Control Board Central Valley Region Waste Discharge Requirements. LCTF applies the effluent to land rather than discharging to a water body, and is therefore not subject to the NPDES requirements. The wastewater treatment processes at the LCTF includes secondary treatment, tertiary infiltration, and disinfection prior to storage and disposal. The LCTF produces disinfected tertiary recycled water suitable for irrigation at parks, landscape strips, median islands, pond berms, and agricultural fields.

Wastewater treatment processes at the LCTF include secondary treatment, tertiary filtration, disinfection, and reuse for irrigation of agricultural and landscape use areas. The following major components make up the LCTF:

- Raw wastewater undergoes screening and grit removal prior to entering the influent pump station. A 0.95 MG steel tank provides diurnal flow equalization and short-term emergency storage. Wastewater in the tank is automatically returned to the influent pump station as treatment capacity becomes available.
- From the influent pump station, wastewater is distributed evenly to two Membrane Bioreactor treatment trains for a combined treatment capacity of 2.5 mgd. Each Membrane Bioreactor train includes an anoxic basin, recirculation mixers, an aeration basin, anoxic pumps, aeration and membrane blowers, membrane modules, a membrane tank, mixed liquor recycle pumps, and filtrate pumps.
- Disinfection is accomplished using sodium hypochlorite solution in a chlorine contact tank that provides more than 32 minutes of modal contact time. If disinfection fails, the effluent is rerouted back to the emergency storage basin and retreated.
- Tertiary treated effluent is discharged into Pond S5 for immediate storage, and is then transferred to off-site storage in Ponds S1, S2, S3, S6, S16, S28 and the Crossroads Wastewater Treatment Effluent Storage Ponds A, B, and C.
- Waste activated sludge generated from LCTF is pumped to the solids handling facility located at the facility. The solids handling facility includes a 0.19 MG aerobic sludge storage tank, two belt filter presses, and a concrete drying bed used for supplemental air drying of dewatered sludge when conditions permit. Air-dried sludge is temporarily stored on the drying bed until transportation to the City of Merced for land application.
- The City's existing recycled water system is governed by State Wastewater Discharge Requirements outlined in Order R5-2018-0023 and supports the disposal of the effluent produced by the LCTF at eight agricultural land application areas (LAAs): A23, A28, A30, A31, A35, A35b, A35c, and A36. The distribution system consists of nine storage ponds; S1,

S2, S3, S5, S6, S16, S-28, A, B, and C, their associated pump stations PMP1, PMP2, PMP3, PMP10, PMP12, and the Crossroads PMP. The City has approximately 30.3 miles of recycled water pipeline, as of 2018

Demands

The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. From 2009 to 2016, total per capita average dry weather flow (ADWF) varied between 60 and 69 gallons of wastewater per capita per day. It is anticipated that the City's total ADWF in 2040 will be 5.69 mgd, and increase to 7.07 mgd at buildout in 2050. Of this total, the MWQCF is projected to treat ADWFs of 1.39 mgd from Central Lathrop in 2040 and 1.47 mgd at buildout. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

Major Wastewater System Issues and Opportunities

The City's collection system is primarily assessed against the capacity criteria, including depth to diameter (d/D) ratio in gravity mains and maximum velocity in force mains. Approximately seven percent of City's existing gravity mains will not meet the capacity criteria by 2040. Approximately 43 percent of the City's existing gravity mains do not meet the minimum velocity and slope criteria which does not trigger an improvement unless capacity criteria are not met beyond 2040 (West Yost Associates, 2018).

The LCTF with Phase II expansion is projected to have sufficient treatment capacity for existing and new development through 2026. The City's current capacity allocation at MWQCF is projected to be sufficient to meet projected flows from Historic Lathrop through 2040 with additional capacity needed by buildout. The gravity collection system in the Mossdale Landing will not be able to accommodate the anticipated peak waste water flow from River Islands and Central Lathrop areas by 2025. Correspondingly, an upgrade to the Central Lathrop Pump Station as well as the River Islands Permanent Pump Station will be required before 2025. Deficiencies at the Stonebridge Lift Station and Woodfield Lift Station are noted in multiple buildout scenarios (West Yost Associates, 2018).

REGULATORY SETTING

Clean Water Act (CWA) / National Pollutant Discharge Elimination System (NPDES) Permits

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from “non-point source” and traditional “point source” facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California’s statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State’s waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (SWRCB) has the authority and responsibility for establishing policy related to the State’s water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley RWQCB NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility’s discharge.

City of Lathrop General Plan

The existing Lathrop General Plan includes the following goal related to wastewater:

GOALS OF THE GENERAL PLAN

Goal No. 10: Water Supply, Wastewater and Surface Water Management: It is the goal of the General Plan to provide for a secure source of fresh water for existing and future residents, and for the reuse of wastewater and surface water so that there is not net increase in water pollution, including point and non-point sources.

City of Lathrop Municipal Code

The Lathrop Municipal Code contains ordinances regulating wastewater within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 13.16 provides restrictions on the location of the City's sewer and water pipes. Chapter 13.26 provides the City's sewer and industrial wastewater regulations. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with utilities if it will:

1. Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
2. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The proposed project would require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant)

The project will expand utility systems to accommodate existing and future needs within the City. The proposed project includes wastewater improvements consistent with the Wastewater System Master Plan. The impacts of the development of the proposed wastewater facilities are discussed throughout this Draft EIR and the Initial Study prepared for the project.

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The Wastewater System CIPs were developed to remove and replace the existing pipe with a larger diameter pipe for each gravity sewer capacity deficiency. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Improvements were also identified to address the potential deficiency at

the City's pump stations, including construction of parallel force mains and/or pump upgrades. The Plan considers the installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas.

The project does not propose any housing that would generate wastewater. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. No substantial population increases would result from implementation of the proposed project. As such, operation of the project would not generate wastewater which would require or result in the relocation or construction of new or expanded wastewater facilities. Construction of the project would also not generate substantial amounts of wastewater. Construction workers would likely use port-o-potties which would be temporarily available on-site for some of the proposed improvements. The amount of waste generated by the construction workers would be negligible.

The installation of the proposed wastewater collection and conveyance system infrastructure would have a ***less than significant*** impact relative to this topic. The wastewater treatment plant would not require upgrades or improvements in order to serve the proposed project. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Impact 3.6-2: The proposed project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments. (Less than Significant)

Wastewater treatment facilities that serve the City include the MWQCF and the LCTF. The City owns 14.7 percent of the MWQCF capacity by contract with the City of Manteca. The City does not participate in the operation of the facility, nor does it receive recycled water from the facility. As discussed in the City's *Municipal Service Review and Sphere of Influence Plan*, and as listed in Table 3.6-1, the City is allocated 1.45 mgd of the total 9.87 mgd facility capacity. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated a maximum of 14.7 percent capacity or 3.97 mgd. The LCTF is City-owned but operated by a private contractor, Veolia Water NA. The LCTF's treatment capacity was expanded to 2.5 mgd, with the completion of recent recycled water disposal facilities. However, capacity is currently limited to 1.55 mgd by off-site recycled water storage and disposal capacity. The LCTF is planned to be expanded to a future permitted capacity of 6.0 mgd.

The project will expand utility systems to accommodate existing and future needs within the City. The proposed project includes wastewater improvements consistent with the Wastewater System Master Plan. As noted above, the Wastewater System CIPs were developed to remove and replace the existing pipe with a larger diameter pipe for each gravity sewer capacity deficiency. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of

parallel force mains and/or pump upgrades. The Plan considers the installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas.

As noted above, the project does not propose any housing, or other development that would generate wastewater. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems to accommodate existing and planned development. No substantial population increases would result from implementation of the proposed project. As such, operation of the project would not generate wastewater which would require or result in the relocation or construction of new or expanded wastewater facilities. The project also would not increase the capacity of the MWQCF or the LCTF beyond the permitted capacities.

Because the project would not generate wastewater, the project could not increase wastewater flows that could exceed the City's wastewater treatment capacity. Implementation of the proposed project would have a **less than significant** impact relative to this topic.

3.6.2 WATER SUPPLIES

ENVIRONMENTAL SETTING

According to the City's 2015 Urban Water Management Plan (UWMP), as of 2016, the City of Lathrop provides water service to 6,308 residential, commercial, agricultural and industrial service connections from surface and groundwater supplies. In addition, private wells are utilized by two major industrial facilities within the City. The City's surface water supply is delivered fully treated from the Stanislaus River by the South County Water Supply Project (SCWSP). The SCWSP is owned and operated by the South San Joaquin Irrigation District (SSJID).

In addition to surface water, five groundwater wells supply water to City residents, with a sixth that is currently not in operation. Groundwater from Wells 6, 7, 8, 9 and 10 are treated to state and federal drinking water standards at the Louise Avenue Water Treatment Facility (LAWTF).

Groundwater Facilities

The City overlies the Tracy Groundwater Subbasin (DWR 5-22.15), which is a subbasin of the San Joaquin Valley Groundwater Basin (DWR 5-22). The Tracy Subbasin is a 539-square mile subbasin that includes the northwestern most portion of the San Joaquin Valley Groundwater Basin around the Sacramento-San Joaquin Delta and extends south into the central portion of the San Joaquin Valley. The Department of Water Resources (DWR) approved a basin boundary modification in February 2019, which consolidated the entire City of Tracy into the Tracy Subbasin. The City of Lathrup was formerly within two groundwater basins: the Tracy Groundwater Subbasin and the Eastern San Joaquin (ESJ) Subbasin.

The City owns and operates groundwater wells that pump from the Tracy Subbasin of the San Joaquin Valley Groundwater Basin.

Currently, five groundwater wells supply potable water to City connections including Wells 6, 7, 8, 9 and 10. Well 21 and the Well 21 water treatment facility have remained inactive from elevated uranium and arsenic since November 2003. The City plans to both upgrade the Well 21 treatment facility and dilute the well water to meet state and federal drinking water standards (West Yost Associates, 2018). The Well 21 water treatment facility Phase I pipeline is scheduled to be completed as early as 2020 and the Phase II tank by 2025. Groundwater from Wells 6, 7, 8, 9, and 10 is conveyed via 12-inch and 16-inch diameter water mains along the eastern border of the City along the railroad tracks to the LAWTF, where the groundwater is treated to remove arsenic.

Brought online in 2012, the LAWTF treats all groundwater for arsenic through a ferric chloride coagulation and filtration process. Removed compounds are disposed of in an approved landfill.

Surface Water Facilities

In 2005, SSJID began providing treated surface water from the Stanislaus River to the Cities of Lathrop, Manteca, and Tracy, as part of the SCWSP. SSJID's supply is the Stanislaus River and is based on pre-1914 water rights and post-1914 appropriative water rights for direct diversion to storage. SSJID's surface water rights are subject to a 1988 Agreement and Stipulation with the

United States Bureau of Reclamation regarding the New Melones Reservoir operation. Phase I of the SCWSP construction was completed in July 2005. Phase II, including delivery to the City of Escalon, will be initiated when the participants notify SSJID of an impending need.

The SCWSP provides treated surface water from the Stanislaus River via Woodward Reservoir under a 300,000 acre-foot per year (AFY) entitlement. The supply is treated at SSJID's Nick C. DeGroot Water Treatment Plant which includes air floatation clarification and a submerged membrane filtration system. There are three large storage tanks and four pump stations that deliver the water over 20 miles to the City via SSJID's Drinking Water Pipeline.

Recycled Non-Potable Water Facilities

The Central Valley RWQCB regulates the LCTF and the use of recycled water. The City currently uses recycled water for irrigation of agricultural lands, irrigation of public landscape areas, and percolation basins. The City plans to expand its use of recycled water in the future to offset potable water demands, although it is not yet doing so. The City is currently expanding its recycled water distribution system to meet disposal requirements for the Phase II expansion of the LCTF. Phase II will increase the treatment capacity of the LCTF to 2.5 million gallons per day (mgd), which equates to 2,800 AFY and is scheduled to be operational in 2018. New developments such as Mossdale Landing, River Islands and Central Lathrop, are being constructed with purple pipes to encourage the future use of reclaimed water for urban landscapes.

Distribution System Facilities

The City's water distribution system consists of a single pressure zone and approximately 142 miles of distribution pipelines ranging from 2 inches to 30 inches in diameter. The following list describes the major components of the City's water distribution system facilities; these facilities include City-owned or City-operated infrastructure required to serve groundwater, surface water, and recycled water supplies:

- The City of Lathrop has an emergency intertie with the City of Stockton for potable supply.
- The City receives SSJID treated surface water at SSJID Turnout 1, which includes a 1.0 MG tank and 7.5 mgd peak capacity. Turnout 1 is not owned by the City, and is therefore not included in the City's water storage. A second SSJID turnout is planned in the River Islands area with a 1 million-gallon treated storage.

The City has 4.6 MG of storage divided between five ground-level storage tanks. Each tank has an associated booster pump station, and all but Booster Pump Station (BPS)-1 have variable frequency drive pumps. The City's tanks are used to help meet system demands during peak hours, provide emergency storage, and provide fire flow storage. In total, the City has approximately 37.4 mgd of domestic supply pump capacity, and an additional 13.8 mgd of fire pump capacity.

Water Demand and Supplies

According to the Water System Master Plan City of Lathrop Integrated Water Resources Master Plan Update Draft, total potable water use was 3,646 acre-feet (AF) in 2016, with a per capita

water use of 147 gallons per capita per day (GPCD). Given future water use projections provided in the WSMP, the City is expected to have a net surplus of 416 AFY of water in 2035, as shown in Table 3.6-2.

As part of the SCWSP, the City signed a Water Supply Development Agreement in 1995 with SSJID for potable water lasting through to December 2029. The Water Supply Development Agreement allots the City a maximum total of 8,007 AFY in Phase I and 11,791 AFY of treated potable water during Phase II of the project. In August of 2013, the City Council agreed to sell 1,120 AFY of SSJID Phase I allocation to the City of Tracy, reducing the maximum Phase I allocation for Lathrop to 6,887 AFY. After Phase II is implemented, the City's allocation after sale will be 10,671 AFY, as shown in Table 3.6-2. The SSJID has experienced increased demand in recent years and is exploring options to expand their distribution system, although the schedule for these expansions are uncertain.

Although the City is projected to experience a 5 percent shortfall in normal years after 2040, further additional supply from planned improvements to Well 21, LCTF and construction of the Phase II SCWSP, increased non-potable water supply generated from the LCTF, and future unaccounted-for conservation measures are expected to provide the City with adequate supplies through 2040 during normal water years (West Yost Associates, 2018).

LAWTF has a current treatment capacity of 9 mgd, equating to 5,040 AFY. Currently, the capacity of all groundwater wells totals 5,850 AFY, but the potable supply is limited by the LAWTF treatment capacity.

Reclaimed water usage has increase from 485 AFY in 2011 to 609 AFY in 2016 as shown in Table 3.6-2, and is projected to increase significantly with completion of new developments, including River Islands, where new infrastructure is already in place to utilize this future supply. It is important to note that the City's projection of future recycled water availability assumes increases to the treatment capacity of the LCTF that will keep pace with production.

The State of California's SBx7-7 Water Conservation Act of 2009 requires water retailers to establish and meet a water use reduction target of 20 percent by the year 2020 from a calculated baseline water use. The target is measured in total GPCD, rather than the residential water use divided by the population. The City adopted its 2020 SBx7-7 target of 188 GPCD in 2012, but exceeded the goal through voluntary water conservation measures and increases in non-potable water use.

TABLE 3.6-2: PAST AND FUTURE WATER SUPPLY CAPACITY AND DEMAND DURING NORMAL YEARS, AFY

ANNUAL WATER DEMAND	ACTUAL						PROJECTED					
	2011	2012	2013	2014	2015	2016	2020	2025	2030	2035	2040	BUILDOUT
Potable Water Demand	3,798	4,332	4,686	4,008	3,445	3,646	7,350	9,711	11,965	13,531	15,185	18,616
Recycled Non-Potable Demand	485	437	465	519	546	609	1,495	2,439	3,398	4,112	4,815	6,284
Total Demand	4,283	4,769	5,151	4,527	3,991	4,255	8,845	12,150	15,363	17,643	20,000	24,900
Available Surface Water Capacity	8,007	8,007	8,007	6,887	6,887	6,887	6,887	6,887	6,887	6,887	10,671	10,671
Groundwater Pumping Capacity	5,850	5,850	5,850	5,850	5,850	5,850	6,253	7,060	7,060	7,060	7,060	7,060
Total Potable Capacity	13,857	13,857	13,857	12,737	12,737	12,737	13,140	13,947	13,947	13,947	17,731	17,731
Recycled Non-Potable Supply	485	437	465	519	546	609	1,495	2,439	3,398	4,112	4,815	6,284
Total Water Supply	14,342	14,294	14,322	13,256	13,283	13,346	14,635	16,386	17,345	18,059	22,546	24,015
Surplus or Deficit	10,059	9,525	9,171	8,729	9,292	9,091	5,790	4,236	1,982	416	2,546	(885)

SOURCE: WEST YOST ASSOCIATES, 2018.

NOTES:

1. POTABLE WATER DEMANDS FROM 2011-2016 FROM WSMP, 2018, TABLE 4-1.

2. POTABLE WATER DEMANDS FROM 2020-BUILDOUT FROM WSMP, 2018, TABLE 5-11.

3. RECYCLED WATER DEMAND ASSUMES ALL WASTEWATER GENERATED WILL CONTINUE TO BE USED.

4. AVAILABLE SURFACE WATER CAPACITY FROM WSMP, 2018, TABLE 5-4.

5. THE CITY'S TOTAL PHASE I ALLOTMENT OF SCWSP WATER, FOLLOWING THE 2013 SALE TO THE CITY OF TRACY OF 1,120 AFY, IS 6,887 AFY.

6. GROUNDWATER CAPACITY FROM 2011-2016 IS BASED ON ANNUAL YIELD OF WELLS 6-10 NOT LIMITED BY LAWTF CAPACITY (WSMP, TABLE 5-3).

7. GROUNDWATER CAPACITY FROM 2020-2040 IS FROM WSMP, 2018, TABLE 5-7.

8. RECYCLED NON-POTABLE PRODUCTION FROM 2011-2015 IS BASED ON THE HISTORICAL LCTF AVERAGE ANNUAL FLOW (DRAFT 2018 WWMP), TABLE 4-1.

9. RECYCLED NON-POTABLE PRODUCTION FROM 2016-BUILDOUT IS BASED ON RWMP, 2018, TABLE 4-1, CONVERTED TO AFY AND ASSUMES FUTURE TREATMENT CAPACITY AT LCTF

Major Water System Issues and Opportunities

The City currently has adequate supply, storage, and peaking pumping capacity to meet supply needs. As shown in Table 3.6-2, the City is projected to have sufficient supplies to meet projected demands in normal years until 2040 (West Yost Associates, 2018). The City is only projected to experience a supply shortfall in normal years after 2040, with a projected supply shortfall at buildout of 888 AFY (5 percent of demands). Additional supply, storage, and peak pumping capacity will be required to support future development through 2040.

Average groundwater use within the City over the past five years has been approximately 0.44 AFY per acre, and West Yost Associates has projected that this factor will increase to 0.90 AFY per acre by 2030. Private groundwater well supply for use in agricultural, residential, and industrial operations are unaccounted for in the City's records, but future groundwater basin planning requirements driven by SGMA may require this amount to be included in the total withdrawal budget by 2040.

The City has met the first major SGMA milestone by forming a Groundwater Sustainability Agency (GSA). GSAs can develop and implement a Groundwater Sustainability Plan (GSP) for a basin under DWR review. The GSP is the fundamental tool for managing groundwater under SGMA. The City will actively participate in SGMA implementation through GSA formation to ensure that future water demands are properly accounted for. The City submitted a Jurisdictional Request to Align the Eastern San Joaquin and Tracy Subbasins with the City of Lathrop's City Limit (DWR, 2018) to re-align the boundary between subbasins, consolidating Lathrop's supply within the Tracy basin. The basin boundary modification was approved by DWR in February 2019.

The City of Lathrop anticipates that it will have access to more than 98 percent of its SCWSP supply in normal years. Normal water deliveries are provided when the New Melones Reservoir inflows exceed 600,000 AFY. The SSJID's SCWSP entitlement is dependent on New Melones Reservoir inflow and is subject to curtailment in dry years. When inflows are less than 600,000 AFY, the supply is shared equally between SSJID and Oakdale Irrigation District, which also holds a 300,000 AFY entitlement. The SCWSP participants' agreement with SSJID indicates the municipal and agricultural users would share surface water reductions equally. In single dry years, the City projects that it will receive between 74 percent and 75 percent of its SCWSP supply. In a three-year, multiple dry year scenario, the City projects its SCWSP allocation to range from 85 to 87 percent in the first year, 88 to 90 percent in the second year (due in part to decreased agricultural demand projections), and 83 to 85 percent in the third year. In response to anticipated future dry-year shortfalls, the City has developed a robust Water Shortage Contingency Plan in its 2015 UWMP that systematically identifies ways in which the City can reduce water demands and augment supplies during dry years (West Yost Associates, 2018).

REGULATORY SETTING

Safe Drinking Water Act

The federal Safe Drinking Water Act as passed in 1947 and amended in 1986 and 1996. It is the Country's primary law regulating drinking water quality and is implemented by the United States Environmental Protection Agency (US EPA). The Safe Drinking Water Act authorizes the US EPA to set national health-based standards for drinking water and requires actions to protect drinking water and its sources. Additionally, it provides for treatment, monitoring, sampling, analytical methods, reporting, and public information requirements. Implementation of the Act, in California, is under the jurisdiction of the State Water Resources Control Board, Division of Drinking Water. Drinking Water regulations are set forth in the California Code of Regulations (CCR), Titles 17 and 22.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (Water Code Sections 11950 – 11954).

Consistent with California Water Code Sections 11950 – 11954, the City has implemented various water conservation efforts, as well as Water Shortage Contingency Plan that identifies actions that can be taken to respond to catastrophic interruption of water supply.

California Water Code

Water Code section 10910 states:

> *10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).*
>
> *10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts.*
>
> *10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:*

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

Additionally, Water Code section 10910 states:

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.

10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed

description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long term overdraft condition.

10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

Senate Bill (SB) 610

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the UWMP, which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a Water Supply Assessment required under SB 610.

Water Code Section 10910 (c)(4) states "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project.

In addition, SB 610 requires the preparation of a Water Supply Assessment if a project meets the definition of a "Project" under Water Code Section 10912 (a). The code defines a "Project" as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Alternately, if a public water system has less than 5,000 service connections, the definition of a "Project" includes any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of service connections for the public water system.

The proposed project does not meet the definition of a "Project" as specified in Water Code section 10912(a). Therefore, SB 610 does not apply to the project.

City of Lathrop General Plan

The existing Lathrop General Plan includes the following goals and policies related to water services and/or supplies:

GOALS OF THE GENERAL PLAN

Goal No. 7: Seismic Hazards: Goals for achieving and maintaining safety from seismic events include preventing serious injury, loss of life, serious damage to critical facilities involving large assemblies of people, and loss of continuity in providing services.

Goal No. 10: Water Supply, Wastewater and Surface Water Management: It is the goal of the General Plan to provide for a secure source of fresh water for existing and future residents, and for

the reuse of wastewater and surface water so that there is not net increase in water pollution, including point and non-point sources.

PART VI: HAZARD MANAGEMENT ELEMENT

Policies related to Safety:

POLICY 12: All lines which are part of the domestic water distribution system should be looped to assure adequate pressure in the event of a major fire, earthquake, or explosion. Adequate emergency standby power generation capability should be available at water wells to assure water availability in the event of a major power failure.

City of Lathrop Municipal Code

The Lathrop Municipal Code contains ordinances regulating potable and non-potable water within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 12.22 provides for rules and restrictions on water play areas in city parks. Chapter 13.08 describes the City's water conservation and rationing provisions. Chapter 13.09 describes the City's water recycling policy. Chapter 13.12 describes the cross-connection controls of the City's water system. Chapter 13.16 provides restrictions on the location of the City's sewer and water pipes. Chapter 16.28 provides that developers of subdivisions shall provide adequate water supply and fire suppression improvements to the City's water system. Chapter 17.92 provides the City's Water Efficient Landscape Ordinance.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project may have a significant impact on the environment associated with utilities if it would:

1. Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or
2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-3: The proposed would require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant)

The City's water distribution system consists of a single pressure zone and approximately 142 miles of distribution pipelines ranging from 2 inches to 30 inches in diameter. The City has 4.6 MG of storage divided between five ground-level storage tanks. Each tank has an associated booster pump station, and all but BPS-1 have variable frequency drive pumps. The City's tanks are used to help meet system demands during peak hours, provide emergency storage, and provide fire flow

storage. In total, the City has approximately 37.4 mgd of domestic supply pump capacity, and an additional 13.8 mgd of fire pump capacity.

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The Water System CIPs address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of water supply sources within the City's distribution system. The impacts of the development of the proposed water facilities are discussed throughout this Draft EIR and the Initial Study prepared for the project. These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands.

The project does not propose any housing that would increase water demand. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems. No substantial population increases would result from implementation of the proposed project. As such, operation of the project would not increase water demand which would require or result in the relocation or construction of new or expanded water facilities.

The installation of the proposed water collection and conveyance system infrastructure would have a ***less than significant*** impact relative to this topic.

Impact 3.6-4: The proposed project would not result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. (Less than Significant)

The City of Lathrop provides water service from surface and groundwater supplies. Currently, five groundwater wells supply potable water to City connections including Wells 6, 7, 8, 9 and 10. The SCWSP provides treated surface water from the Stanislaus River via Woodward Reservoir.

The proposed project includes development of water, wastewater, and recycled water infrastructure throughout the City. As identified above, the proposed project would not result in expansion of land uses or increased population in the City. Thus, no additional demand for water supplies will be created by the project operation. Limited amounts of water would be necessary during the construction phase of the project, but this would be a temporary use of water for construction related activities, and would not be in substantial amounts. The project would not result in insufficient water supplies available to serve the project from existing entitlements and resources. Therefore, the proposed project would result in a ***less than significant*** impact to water supplies.

3.6.3 STORM WATER

ENVIRONMENTAL SETTING

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain.

The City references three documents to address water quality: the General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems Order No. 2013-0001-DWQ, the Multi-Agency Post-Construction Stormwater Standards Manual, and the City of Lathrop Department of Public Works Design and Construction Standards. The Best Management Practices required by these documents are intended to assure that outfall discharges meet Clean Water Act National Pollutant Discharge Elimination System (NPDES) requirements. New developments within the City are also required to mitigate stormwater discharge rate increases caused by development, as noted in the City of Lathrop Design and Construction Standards.

Area-Specific Drainage Master Plans

The last comprehensive City storm drain master plan was published in 1992 and covers facilities in and adjacent to historic Lathrop. As development has occurred, specific plans have become the most current source of information on drainage facilities in each new development. These specific plans include Central Lathrop, Crossroads Business Park, Historic Lathrop, Mossdale Landing, North Lathrop, River Islands and South Lathrop areas. The specific plan areas are described below and are discussed in further detail in the City's Municipal Service Review and Sphere of Influence Plan. Some planning areas have changed since the original area-specific plans were developed. The areas covered by each area-specific plan described below correspond to the most recent available information on drainage zones.

CENTRAL LATHROP

The Central Lathrop Specific Plan proposes future development of 1,520 acres located west of I-5. The Specific Plan proposes low, medium, and high density residential units, commercial land uses, two schools and 200 acres of recreational land use and open space. The Central Lathrop Specific Plan identifies pre-development drainage as a system of shallow agricultural ditches that discharge into the San Joaquin River by small, privately-owned pumps. The planned drainage system has been constructed for this area, including inlets, storm drains, detention, a pump station and outfall, with full development expected by 2050, although no mapping of utility completion is available. The system will mitigate increased runoff volume and peak flow rates produced by the development. Infiltration from high groundwater into the collection system will be a concern.

CROSSROADS BUSINESS PARK

The Crossroads Business Park area is a commercial and industrial development area. The area historically included a large amount of impervious pavement with a single stormwater detention facility. A new drainage system comprised of gravity mains, detention, pump stations and outfalls has been required to mitigate increased runoff volume and peak flow rates produced by development. On-lot detention is also required as noted in the Crossroads Storm Drainage Master Plan. As of June 2018, the Crossroads Business Park is nearly fully developed as envisioned by the Crossroads Storm Drainage Master Plan. However, mapping of drainage infrastructure is not yet available.

HISTORIC LATHROP

The 1,500-acre portion of the City east of I-5 is anticipated to continue increasing in density, as it has historically. The primary storm drainage system within the study area consists of pipe networks draining to detention basins and pump stations. Detention basins are used to increase the capacity of the system through peak flow reduction, as peak flow rates are greater than the current pumping capacity. Drainage facilities vary widely in adequacy with newer areas having improved effectiveness. Densification and redevelopment are ongoing in the area.

LATHROP INDUSTRIAL AREA

The Lathrop Industrial Area is a large commercial and industrial area that includes the Stonebridge area, formerly known as the Country Squires Project, Sharpe Army Depot, and McKinley Corridor. The Stonebridge development has been fully completed. The Sharpe Army Depot was included within the city limits in 1989 and has water, sewer, and storm drainage services solely provided by the U.S. Army. The City plans to connect portions of the Sharpe Army Depot to its water and sewer systems in 2019. Currently, only an emergency intertie exists. With the exception of a forcemain to pass through Gateway and South Lathrop, servicing McKinley Corridor, the City is not planning additional drainage facilities. Many of the existing Lathrop Industrial Area developments are required to maintain on-site detention facilities.

MOSSDALE LANDING

Mossdale Landing is a mixed-use master planned community that largely built out and is anticipated to be completed by 2030. The Mossdale Village planning area is relatively flat, with runoff directed through a series of ditches and basins that are ultimately pumped into the San Joaquin River. Currently, runoff in the developed areas is conveyed to the Mossdale Village storm drainage system via a series of storm drains, storm lines, and pump stations. The runoff is then collected and distributed to an outfall for discharge into the San Joaqui9n River. Runoff in the undeveloped areas is conveyed mostly in agricultural ditches that have very limited capacity. Because high water elevations in the San Joaquin River during storm events are higher than anticipated grades within the development area, pump stations have been included to remove runoff. Detention basins also mitigate potential increases in peak runoff during large events and to provide water quality treatment.

NORTHERN LATHROP

The majority of the north area specific plan (2,101 acres) is located north of the Central Lathrop area and west of I-5. The Northern Area Portion Master Plan of Drainage was developed to identify the facilities required to provide 100-year flood protection for the Stonebridge development. The Stonebridge development was fully constructed in 2006, meets current City criteria, and has a constructed stormwater outfall to the San Joaquin River.

RIVER ISLANDS

The 4,995-acre River Islands development is located west of the San Joaquin River and east of Paradise Cut on the Stewart Tract. The development proposes a mixture of low, medium, and high density residential units, which are currently under construction in phases. The project's estimated completion date is 2040. The original plan to develop this area was approved in 1996 and noted that the predominate drainage mechanisms were historically roadside ditches pumped to Paradise Cut. The report noted that Paradise Cut water surface elevations are influenced by other agricultural discharges, the San Joaquin River, and Old River. Under the guidance of the updated 2003 West Lathrop Specific Plan, public storm drain facilities are currently under construction to serve the proposed development, as it is constructed. The new collection system is comprised of gravity mains, detention, pump stations and outfalls that will manage drainage and mitigate runoff volume, peak flow rates, and water quality impacts of the development.

SOUTH LATHROP

The area described as South Lathrop in the City of Lathrop Storm Drain Master Plan has since been broken into two planning areas: the Lathrop Gateway Business Park Specific Plan proposes commercial and industrial development of 384 acres north of Highway 120 and the South Lathrop Specific Plan that includes approximately 300 acres south of Highway 120 are both slated to be built out by 2025. The plans outline existing drainage facilities as a series of agricultural ditches, roadside ditches and retention basins. Public storm drain facilities are planned for construction starting in July 2019 for the Lathrop Gateway Business Park to serve the proposed developments.[1] The new drainage systems will be comprised of gravity mains, detention facilities, pump stations with adjoining force mains, and outfalls. Infiltration from high groundwater into the collection system is a concern. In the near-term, all stormwater will be captured and retained on-site. The Business Park will eventually connect to the stormwater outfall included in the South Lathrop Specific Plan; however, the estimated date of completion is unknown as of June 2019.

Regional Flood Control

Due to its central location in the Sacramento-San Joaquin Delta, the City is threatened by seasonal flooding from surrounding waterways, including the San Joaquin River, Old River, and Paradise Cut. High flows in the San Joaquin River system can occur during intense precipitation events occurring between November and April. High river flows may also be sustained during upstream reservoir

[1] Personal communication with Greg Gibson, Senior Civil Engineer at the City of Lathrop. June 13, 2019.

release periods during snowmelt from April through June. The most significant mapped flood hazard is the San Joaquin River, which flows from south to north, bisecting the City. The rivers surrounding the City are leveed, and although the City of Lathrop is outside of the Federal Emergency Management Agency (FEMA) 100-year Special Flood Hazard Area, as shown on Flood Insurance Rate Maps (FIRMs) 06077C0585-0620, it may be subject to flooding in the event of a levee failure. Protection from regional flooding is a collaborative effort between Federal, State, and local entities.

The City's primary flood protection facilities are levees constructed by the US Army Corps of Engineers (USACE) and local interests, and maintained and improved by Reclamation Districts (RD) 17, RD 2107, and RD 2062. The USACE operates upstream reservoirs, which control river flows and they own the Lower San Joaquin River and Tributaries "Project levees", which were constructed before 1966. In addition to the USACE "Project levees", there are two segments of "non-project levees" located in RDs 17 and 2062 that protect the City.

In partnership with the regional San Joaquin Area Flood Control Agency (SJAFCA), the Reclamation Districts have primary responsibility for operating, inspecting and correcting problems with levees and other structures. Operation and maintenance costs are covered by property taxes, but the costs of major improvements must be met with State and federal funding managed through cooperative agreements. RD 2107 includes Dell'Osso Farms and other areas south of the Union Pacific Railroad and southeast of I-5. RD 2062 includes the River Islands master planned community located on the Stewart Tract. RD 17 includes land east of the San Joaquin River in the Cities of Lathrop, Manteca, Stockton, and San Joaquin County.

REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);

- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The California State Water Resources Control Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the San Joaquin River, and other waters in the Lathrop Planning Area. In the Lathrop Planning Area the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the Lathrop Planning Area were established by the RWQCB and are listed in its Basin Plan.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for

stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

A new Phase II Small Municipal Separate Storm Sewer (MS4) General Permit was adopted by the State Water Resources Control Board on February 5, 2013 became effective July 1, 2013. The Permit has numerous new components and the City is required to implement these components in stages over the five-year period of the Permit.

Federal Emergency Management Agency

San Joaquin County is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Department of Water Resources

The DWR's major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

(1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.

(2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the

levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

200-Year Flood Protection in Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2015 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2025.

The levee system is designed to a 100-year protection standard; however, RD-17 has been working with the Department of Water Resources (DWR) and the Central Valley Flood Protection Board (CVFPB) to analyze 200-year protection. RD-17 acquired land along the levee system to construct the 100-year improvements, and that land is anticipated to provide sufficient space for any additional incremental improvements to provide 200-year protection in the future.

On March 25, 2015, the City of Lathrop drafted a General Plan Amendment to adhere to State of California Senate Bill 5, which were designed to set new flood protection standards for urban areas. SB 5 established the State standard for flood protection in urban areas as protection from the 200-year frequency flood. Under SB 5, urban and urbanizing areas must be provided with the 200-year flood protection no later than 2025. This General Plan Amendment amends the Safety Element of the City of Lathrop General Plan to comply with the provisions established under SB 5.

Multi-Agency Post-Construction Standards

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ). The guidance provides tools to address the following objectives:

- Establish the methodology to consider the effects of stormwater runoff from a new development or redevelopment project during the project planning phase;
- Minimize contiguously-connected impervious surfaces in areas of new development and redevelopment, and where feasible, to maximize on-site infiltration of stormwater runoff;
- Implement site design measures to preserve, create, or restore areas that provide important water quality benefits such as riparian corridors, wetlands, stream and buffers, and maintain, protect, and improve underlying soil quality;

- Provide source control measures to minimize the transport of and/or eliminate potential sources of pollution to stormwater runoff or run-on into the MS4 and receiving waters;
- Implement Low Impact Development (LID) control measures to reduce and/or eliminate the volume of stormwater runoff and pollutants leaving the project site;
- Control post-construction peak stormwater runoff discharge volumes and velocities (hydromodification) to mitigate impacts from downstream erosion and to protect downstream habitat; and
- Develop tools for effectively operating, managing, and maintaining stormwater control measures.

City of Lathrop General Plan

The existing City of Lathrop General Plan identifies the following policies related to stormwater.

GOALS OF THE GENERAL PLAN

Goal No. 8: Public Safety Hazards: Goals for public safety seek to accomplish the following:

1. The reduction of loss of life or property due to crime, fire, earthquake, flooding or other disasters or hazards.

PART VI: HAZARD MANAGEMENT ELEMENT

Safety Policy:

5. The City will continue to cooperate with the County of San Joaquin and other agencies in pre-disaster planning activities such as evacuation required in the event of a serious breach of an upstream dam capable of flooding the community.

Lathrop Municipal Code

The Lathrop Municipal Code contains ordinances regulating stormwater/drainage and flood control within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 3.23 provides the City's interim urban level of flood protection levee impact fee. Chapter 13.28 provides the City's Stormwater Management and Discharge Control Ordinance. Chapter 15.56 describes methods of reducing flood losses. Chapter 16.10 provides that subdivisions in flood hazard zones shall not be approved until applicable findings required in Chapter 17.17 of Lathrop Municipal Code are made. Chapter 17.17 describes the 200-year flood protection requirements for new development.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project may have a significant impact on the environment associated with utilities if it would:

1. Require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-5: The proposed project would not require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant)

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain.

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The Water System CIPs address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of water supply sources within the City's distribution system. The Wastewater System CIPs were developed to remove and replace the existing pipe with a larger diameter pipe for each gravity sewer capacity deficiency. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. The Plan considers the installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas. The Recycled Water System Master Plan includes the City's current expansion of its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF. Most Phase 2A improvements have been completed, with the exception of the following: conversion of the low-pressure PMP-10 to a high-pressure pump station, installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs, and establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Phase 2B will include the following improvements: increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5), and install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B.

These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would result in minimal, if any, impervious surfaces which could alter the existing drainage pattern of the project site. The CIP projects that would be constructed in the agricultural areas would also be considered to have a low impact to storm drainage facilities for several reasons.

First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field, but the irrigation system would change from surface water or well water to recycled water, in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The Recycled Water Master Plan includes development of new storage ponds during Phase 2A and 2B. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas.

Construction of the proposed water, wastewater, and recycled water improvements would be subject to the applicable BMP and LID standards. For example, Measure 3.3-1 contained in Section 3.3 Geology and Soils, ensures compliance with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities.

The long-term operations of the proposed project would not result in long-term impacts related to urban stormwater runoff. The proposed project would not include urban uses which would create new impervious surfaces or generate polluted runoff. The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. Some of the proposed improvements, particularly those related to recycled water, would be located on agricultural areas. The undergrounding of the utilities within the agricultural or undeveloped areas will be restored to the existing agricultural/undeveloped condition at the completion of the proposed project.

Development of the proposed improvements would not increase runoff significantly, or create downstream drainage problems. Impacts associated with storm water drainage would be ***less than significant***.

3.6.4 SOLID WASTE

ENVIRONMENTAL SETTING

Waste Collection Services

The City of Lathrop has an exclusive contract with Republic Services to collect solid waste, recycling, and green waste from the residential and commercial sector. Republic Services is a private garbage collection company, provides residential (single family and multi-family) and commercial garbage, recycling, and green waste collection services within the city limits. Republic Services is the second largest provider of non-hazardous solid waste collection, transfer, disposal, recycling, and energy services in the United States, as measured by revenue. Republic Services operates in 41 states and Puerto Rico through 340 collection operations, 201 transfer stations, 193 active landfills, 67 recycling centers, 8 treatment, recovery and disposal facilities, and 12 salt water disposal wells. Republic also operated 69 landfill gas and renewable energy projects and had post-closure responsibility for 126 closed landfills. Republic Services serves 14 million customers in total (throughout the United States). Refuse, recycling, and green waste bins are picked up once per week in the City of Lathrop.

The City of Lathrop has a three (3) cart system for the collection of garbage, recycling and green waste. The three-cart system was established to enable residents to assist in reducing the amount of waste that is dumped in landfills. Garbage service is mandatory within the City of Lathrop and Republic Industries provides residential garbage service to City of Lathrop residents. Recycling service is provided for newspapers, cardboard (including cereal boxes, soda boxes, etc.), glass bottles and jars, aluminum, tin, steel, plastic containers, and all junk mail and phone books.

Waste Disposal Facilities

The vast majority (77%) of landfill disposal from the City of Lathrop in 2016 (the latest year of information available) went to Forward Landfill. Other landfills that received relatively small amounts of waste from the City of Lathrop in 2016 included:

- Altamont Landfill & Resource Recovery;
- Azusa Land Reclamation Company Landfill;
- Fink Road Landfill;
- Foothill Sanitary Landfill;
- L and D Landfill;
- North County Landfill & Recycling Center;
- Potrero Hills Landfill;
- Recology Hay Road;
- Sacramento County Landfill (Kiefer).

FORWARD LANDFILL

The Forward Landfill is a solid waste disposal site, located at 9999 South Austin Road in Manteca. The landfill operates under Permit 39-AA-0015 (issued on January 3, 2012). The Forward Landfill is owned and operated by Forward, Inc. (an Allied Waste North America subsidiary), and contains a total of 354.5 acres of disposal acreage. The landfill has a permitted traffic volume of 620 vehicles per day. Forward Landfill has a remaining landfill capacity of 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. It has a total maximum capacity of 51,040,000 cubic yards. The landfill has a cease operation date of January 1, 2020; however, the Forward Landfill is currently undergoing an expansion that would allow disposal at the landfill to continue until approximately 2036. This expansion would increase the remaining landfill capacity by an addition 8,120,000 cubic yards beyond currently permitted levels.[2]

OTHER LANDFILLS

The nine other landfills that received solid waste from the City of Lathrop in 2016 are shown in Table 3.6-3. Three landfills received Alternative Daily Cover (ADC) from Lathrop (Fink Road Landfill, L & D Landfill, and Vasco Road Sanitary Landfill). Alternative daily cover (ADC) means cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging.

TABLE 3.6-3: LANDFILLS EXISTING DAILY CAPACITY AND ESTIMATES CLOSURE DATE

LANDFILL	*DAILY CAPACITY (TONS/DAY)*	*ANNUAL TONNAGE DISPOSED BY LATHROP (2016)*	*ESTIMATED CLOSURE DATE*
Altamont Landfill & Resource Recovery	11,150	227	1/01/2025
Azusa Land Reclamation Co. Landfill	8,000	1	1/01/2045
Fink Road Landfill	2,400	436	12/01/2023
Foothill Sanitary Landfill	1,500	6,456	12/31/2082
Forward Landfill, Inc.	8,668	26,228	01/01/2020
L and D Landfill	4,125	125	01/01/2023
North County Landfill & Recycling Center	825	9	12/31/2048
Potrero Hills Landfill	4,330	451	02/14/2048
Recology Hay Road	2,400	20	01/01/2077
Sacramento County Landfill (Kiefer)	No data	156	No data

SOURCE: HTTP://WWW.CALRECYCLE.CA.GOV/SWFACILITIES/DIRECTORY/SEARCH.ASPX. ACCESSED APRIL 2019.

Solid Waste Generation Rates and Volumes

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total

[2] Draft Supplemental Environmental Impact Report Forward Inc. Landfill 2018 Expansion Project

annual solid waste disposal volumes for the City of Lathrop between 2011 and 2016 are shown in Table 3.6-4 below.

TABLE 3.6-4: SOLID WASTE GENERATION RATES IN THE CITY OF LATHROP

YEAR	WASTE GENERATION RATES (POUNDS/PERSON/DAY)		TOTAL DISPOSAL TONNAGE (TONS/YEAR)
	PER RESIDENT	PER EMPLOYEE	
2011	9.8	29.8	2011
2012	7.8	23.2	2012
2013	9.8	30.9	2013
2014	8.7	23.9	2014
2015	8.0	19.8	2015
2016	8.5	22.4	2016

SOURCE: HTTP://WWW.CALRECYCLE.CA.GOV/LGCENTRAL/REPORTS/JURISDICTION/REVIEWREPORTS.ASPX. ACCESSED APRIL 2019.

REGULATORY SETTING

AB 939: California's Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling and composting. In order to achieve this goal, AB 939 requires that each City and County prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 939 also established requirements for cities and counties to develop and implement plans for the safe management of household hazardous wastes. In order to achieve this goal, AB 939 requires that each city and county prepare and submit a Household Hazardous Waste Element.

AB 341 (75 Percent Solid Waste Diversion)

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the state to divert 75 percent of the solid waste generated in the state from disposal by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by January 1, 2012, and also streamlines various regulatory processes.

SB 1374 (Construction and Demolition Waste Materials Diversion)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

AB 2176 (Montanez, Chapter 879, Statues of 2004)

This law requires the largest venue facilities and events (as defined) in each city and county to plan and implement solid waste diversion programs, and annually report the progress of those upon the request of their local government. In turn, local jurisdictions must report to the CIWMB waste diversion information for the top 10 percent of venues and events by waste generation.

A large event is defined as:

1. Serves an average of more than 2,000 individuals per day of operation (both people attending the event and those working at it—including volunteers—are included in this number); and

2. Charges an admission price or is run by a local agency.

The bill specifically includes public, nonprofit, or privately-owned parks, parking lots, golf courses, street systems, or other open space when being used for an event, including, but not limited to, a sporting event or a flea market in addition to events that meet both of the above.

A large venue is defined as:

- A permanent facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation (both people attending the event and those working at it—including volunteers too—are included in this number).

Venues include, but are not limited to airports, amphitheaters, amusement parks, aquariums, arenas, conference or civic centers, fairgrounds, museums, halls, horse tracks, performing arts centers, racetracks, stadiums, theaters, zoos, and other public attraction facilities.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

Lathrop Municipal Code, Chapter 8.16: Garbage Collection and Disposal

Section 8.16 of the Lathrop Municipal Code provides rules and regulations regarding garbage collection and disposal. It includes a list of hazardous materials (8.16.050), prohibitions on the burning and burial of solid waste (8.16.060), rights of the City related to solid waste collection and transportation (8.16.090), a list of requirements for the contractor for solid waste collection and transportation (8.16.100), restrictions on solid waste collection and transportation (8.16.110), a description of billing and collection fees (8.16. 160), the garbage collection rate schedule (8.16.170), permit requirements (8.16.190), and a description of fees and other requirements.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with utilities if it will:

1. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and/or
2. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-6: The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Less than Significant)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The project does not propose any housing that would generate solid waste. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems. No substantial population increases would result from implementation of the proposed project. As such, operation of the project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Construction of the project would result in construction debris and solid waste. Construction of the project would be subject to the applicable regulations for construction debris. As noted above, CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects. The City does not regulate construction debris.

The addition of the construction-related solid waste associated with the proposed project to the Forward Landfill would not exceed the landfill's remaining capacity through 2020. After the projected closure of the Foothill Landfill in 2020, solid waste generated in Lathrop would be sent to the Foothill Landfill. The Foothill Landfill has a capacity of 97,900,000 cubic yards and a projected closure date of 2054, which is adequate to serve the City and the project site under cumulative conditions.

Due to the nature of the proposed project, this impact would be ***less than significant***.

Impact 3.6-7: The proposed project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (Less than Significant)

As noted above, operation of the project would not generate substantial solid waste. Construction of the project would result in construction debris. The proposed project construction would be subject to the applicable federal, state, and local management and reduction statutes and regulations related to solid waste. As noted above, CALGreen requires the diversion of at least 50

percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects. Due to the nature of the proposed project, this impact would be ***less than significant***.

3.6.5 ELECTRIC POWER, NATURAL GAS, AND TELECOMMUNICATION ENVIRONMENTAL SETTING

Electric Power and Natural Gas

Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to residences and businesses throughout the City of Lathrop. PG&E's service area is over 70,000 square miles, located throughout northern and central California. PG&E maintains approximately 42,000 miles of natural gas distribution pipelines, 6,700 miles of gas transmission pipelines, and provides approximately 970 billion cubic feet of natural gas to its customers per year.

PG&E generates electric power from many sources, including renewable, coal, hydroelectric powerhouses, natural gas, and nuclear energy sources. The electricity power mix for PG&E in 2016 is shown in the second column of Table 3.6-5. In 2016, approximately 69 percent of the electricity PG&E delivered to its customers came from greenhouse gas-free energy sources, which includes eligible renewable, large hydroelectric, and nuclear energy sources. The third column of Table 3.6-5 shows the electricity power mix for the State of California as a whole. Approximately 44 percent of the electricity power mix for the State of California as a whole in 2016 was represented by eligible renewable energy sources and/or energy sources that do not directly generate greenhouse gases. As shown, PG&E generates a larger proportion of eligible renewable and greenhouse gas-free energy sources than the State of California as a whole.

TABLE 3.6-5: PACIFIC GAS AND ELECTRIC – 2016 POWER CONTENT LABEL

ENERGY SOURCES	*PG&E POWER MIX*	*TOTAL CALIFORNIA POWER MIX***
Eligible Renewable	**33%**	**25%**
Biomass & biowaste	4%	2%
Geothermal	5%	4%
Eligible hydroelectric	3%	2%
Solar	13%	8%
Wind	8%	9%
Coal	**0%**	**4%**
Large Hydroelectric	**12%**	**10%**
Natural Gas	**17%**	**37%**
Nuclear	**24%**	**9%**
Other	**0%**	**0%**
Unspecified sources*	**14%**	**15%**
TOTAL	**100%**	**100%**

SOURCE: HTTP://WWW.ENERGY.CA.GOV/PCL/LABELS/2016_LABELS/PACIFIC_GAS__AND__ELECTRIC.PDF

** "UNSPECIFIED SOURCES OF POWER" MEANS ELECTRICITY FROM TRANSACTIONS THAT ARE NOT TRACEABLE TO SPECIFIC GENERATION SOURCES.*

*** PERCENTAGES ARE ESTIMATED ANNUALLY BY THE CALIFORNIA ENERGY COMMISSION BASED ON THE ELECTRICITY SOLD TO CALIFORNIA CONSUMERS DURING THE IDENTIFIED YEAR.*

Telecommunications

Telecommunications in the City of Lathrop are generally provided by the following companies: Direct TV, AT&T, Dish, Xfinity, Frontier, and ViaSat. These companies are private and are not associated with the with the City of Lathrop.

REGULATORY SETTING

Public Utilities Commission

The California Public Utilities Commission (PUC) is the primary State agency that regulates privately owned public utilities in California. These utilities include telecommunications, electricity, natural gas, water, railroad, rail transit, and passenger transportation companies. A primary role of the PUC is to authorize utility rate changes. It also establishes service standards and safety rules, monitors the safety of utility and transportation operations, prosecutes unlawful marketing and billing activities, and oversees the merger and restructure of utility corporations.

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20% of its biofuels within California by 2010, 40% by 2020, and 75% by 2050. The executive order also calls for the State to meet a target for use of biomass electricity, including biomass cogeneration facilities.

Senate Bill 14 and Assembly Bill 64

Prior to the passage of SB 14 and AB 64 in 2009, California law required investor-owned utilities (IOUs) and energy service providers (ESPs) to increase their existing purchases of renewable energy by 1% of sales per year such that 20% of their retail sales, as measured by usage, are procured from eligible renewable resources (including biomass cogeneration) by December 31, 2010. This is known as the Renewable Portfolio Standard (RPS).

SB 14 and AB 64 require IOUs, POUs, and ESPs to increase their purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. For IOUs and ESPs, this is required only if the PUC determines that achieving these targets will result in just and reasonable rates.

Title 24

Title 24, Part 6, of the California Code of Regulations is also known as California's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2016 Energy Efficiency Standards went into effect on January 1,

2017. Title 24, Part 11, of the California Code of Regulations establishes the California Green Building Standards Code (CalGreen). Initially, the code requirements were voluntary; however, CalGreen became mandatory in 2011. CalGreen addresses five areas of green building: 1) planning and design, 2) energy efficiency, 3) water efficiency and conservation, 4) material conservation and resources efficiency, and 5) environmental quality. The mandatory requirements are separated into non-residential and residential projects. CalGreen also includes two optional tiers: Tier 1 and Tier 2. The tiers employ higher thresholds that jurisdictions may adopt or that projects may meet voluntarily.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with utilities if it will:

1. Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-8: The proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. Construction and operation of the proposed project would not require the use of telecommunication facilities. The proposed project would require a minimal amount of natural gas and electric power.

Diesel-fired Emergency generators would be provided in conjunction with the proposed water pump station improvements. The emergency generators will be added as the new essential facilities are constructed and brought on-line, such as the Central Lathrop Specific Plan water tank, River Islands water tank/SSJID turnout, and sewer pump stations. The emergency generators would all be for emergency operations in the event of a power outage, and would otherwise only be run for maintenance and air quality permit testing requirements.

The exact amount of diesel fuel used by these generators would depend on the temporal extent of electrical power outages experienced during the lifetime of the proposed project, on the number of hours the generators are used for maintenance, testing, and the required regulatory purposes (i.e., up to 50 hours per calendar year). A typical 1502 brake-horsepower (BHP) Caterpillar Model C32 diesel-fired emergency engine (Tier 2 certified) would consume a maximum of approximately 71.9 gallons of diesel fuel per hour. This is based on an assumption of 100% load (Caterpillar, 2014). Minimal amount of diesel fuel used by the emergency generators is proposed by the proposed project.

3.6 UTILITIES

The proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities. Therefore, impacts related to electric power, natural gas, or telecommunications facilities would be ***less than significant***.

CEQA requires an EIR to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a discussion of CEQA-mandated analysis for cumulative impacts, significant irreversible effects, and significant and unavoidable impacts associated with the proposed Project.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> *…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

The cumulative setting uses growth projections listed in the City of Lathrop General Plan Update Existing Conditions Report, Department of Finance statistics, and other planning documents. Table 4.0-1 shows growth projections.

TABLE 4.0-1: GROWTH PROJECTIONS

CALENDAR YEAR	*ESTIMATED POPULATION (LATHROP)*	*ESTIMATED POPULATION (SAN JOAQUIN COUNTY)*	*ESTIMATED POPULATION (CALIFORNIA)*
2015	23,107	728,644	38,896,969
2020	28,896	775,819	40,619,346
2025	35,475	829,426	42,373,301
2030	42,109	883,484	44,085,600
2035	50,007	947,835	45,747,645
2040	58,969	1,020,862	47,233,240

SOURCES: CITY OF LATHROP GENERAL PLAN UPDATE EXISTING CONDITIONS REPORT (2018), DEPARTMENT OF FINANCE (2016).

CUMULATIVE EFFECTS OF THE PROJECT

Cumulative settings are identified under each cumulative impact analysis. Cumulative Project impacts are addressed and summarized below.

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential

cumulative impacts. This EIR uses the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the various General Plans in the area in addition to the pending and proposed projects in the area.

Project Assumptions

The proposed project's contribution to environmental impacts under cumulative conditions is based on full buildout of the project. See Chapter 2.0, Project Description, for a complete description of the proposed project.

Cumulative Impacts

In consideration of the cumulative scenario described above, the proposed project may result in the following cumulative impacts.

BIOLOGICAL RESOURCES

The cumulative setting for biological resources includes the project site and the greater San Joaquin County region. Development associated with implementation of the local General Plan(s) would contribute to the ongoing loss of natural and agricultural lands in San Joaquin County, including the project site. Cumulative development would result in the conversion of existing habitat to urban uses. The local General Plan(s), in addition to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout. Additionally, local land use authorities in San Joaquin County require development to participate in the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which is a habitat conservation plan and natural community conservation plan for San Joaquin County that provides a mechanism for compensatory mitigation for habitat and species loss in accordance with federal and State laws.

Impact 4.1: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (Less than Significant and Less than Cumulatively Considerable)

Under cumulative conditions, buildout of the General Plan(s) within San Joaquin County will result in impacts to biological resources in the cumulative area through new and existing development. The General Plan(s) includes policies that are designed to minimize impacts to the extent feasible and the SJMSCP has been established to provide a mechanism for compensatory mitigation and standardized avoidance and minimization measures as needed.

As described in Section 3.1, Biological Resources, the improvement projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any Capital Improvement Projects (CIP) constructed in the road right-of-way or urban areas would have minimal, if any, disturbance to special status species and/or their habitats given that this area is already disturbed and provides little to no habitat value. The CIP projects that would be constructed in the agricultural areas would also be considered low impact on special status species for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA

would remain as an agricultural field or vacant field, but the irrigation system would change from surface water or well water to recycled water in some cases. The net impact from a new LAA would be negligible because the agricultural field or vacant field would remain as foraging habitat for a variety of species that use the fields. The Recycled Water Master Plan includes development of new storage ponds during Phase 2A and 2B. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas. The new and existing ponds provide some habitat value for water fowl and other wildlife.

Mitigation Measure 3.1-1 requires participation with the SJMSCP, which includes fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the project and cumulative impacts to biological resources, including special status species. The proposed project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the SJCOG through the authorization of SJMSCP coverage.

Implementation of Mitigation Measures 3.4-1 in Section 3.4 would reduce potentially cumulative impacts to a **less than significant** level. As such, impacts to biological resources would be a **less than cumulatively considerable contribution**.

CULTURAL AND TRIBAL RESOURCES

The geography of cultural resources impact can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. The cumulative setting for cultural resources includes all of the San Joaquin County. There are extensive cultural sites located in the region.

Impact 4.2: Cumulative Impacts on Known and Undiscovered Cultural Resources (Less than Significant and Less than Cumulatively Considerable)

Cumulative development anticipated in the City of Lathrop, including growth projected by adopted future projects, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.2, Cultural Resources, the project site is located in an area known to have cultural resources. As with most projects in the region that involve ground-disturbing activities, there is the potential for discovery of previously unknown cultural, tribal, archeological, and/or paleontological resources.

Any previously unknown cultural resources which may be discovered during development of the proposed project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.2, the proposed project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

All future projects in the regional vicinity would be subject to their respective General Plans (i.e. City of Lathrop, City of Lathrop, and San Joaquin County), each of which have policies and measures that are designed to ensure protection of undiscovered cultural resources. In addition,

all discretionary projects in these jurisdictions would require environmental review per regulations established in CEQA.

Implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to cultural resources would result in a **less than cumulatively considerable contribution**.

GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For these reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Lathrop and vicinity.

Impact 4.3: Cumulative Impact on Geologic and Soils Resources (Less than Significant and Less than Cumulatively Considerable)

As discussed in Section 3.3, Geology and Soils, implementation of the proposed project has limited potential for liquefaction, liquefaction induced settlement, and lateral spreading. However, Mitigation Measure 3.3-2 provided in Section 3.2 ensures this impact will be less than significant. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the project site. Seismic activity could come from a known active fault such as the Greenville fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, the City of Lathrop has incorporated numerous policies relative to seismicity to ensure the health and safety of all people. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

Geologic and soils impacts tend to be site-specific and project-specific. With the mitigation measures presented in Section 3.3, implementation of the proposed project would not result in increased risks or hazards related to geologic conditions in the cumulative setting area, nor would it result in any off-site or indirect impacts. Implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to geologic and soil resources would result in a l**ess than cumulatively considerable contribution**.

HAZARDS AND HAZARDOUS MATERIALS

The cumulative context for the analysis of cumulative hazards and human health impacts is San Joaquin County, including all cumulative growth therein, as represented by full implementation of each respective General Plan (i.e. Lathrop, and San Joaquin County). As discussed in Section 3.4, Hazards and Hazardous Materials, implementation of the proposed project would not result in any

significant impacts related to this environmental topic with the implementation of the mitigation measures provided in Section 3.4.

Impact 4.4: Cumulative Impact Related to Hazards and Hazardous Materials (Less than Significant and Less than Cumulatively Considerable)

Cumulative development in the region would include areas designated for a variety of urban, agricultural, and open space uses as defined by the applicable General Plan. Cumulative development would include continued operation of, or development of, new facilities as allowed under each land use designation. New development would inevitably increase the use of hazardous materials within the region, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers). Hazard-related impacts tend to be site-specific and project-specific. The project site is not associated with any existing hazardous materials spills; however, there are numerous areas throughout the County where hazardous conditions are present.

Implementation of the proposed project would not result in significant increased risks of hazards in the cumulative setting area, nor would it result in any significant off-site or indirect impacts. Mitigation measures have been included to reduce the risk of on-site hazards associated with the use of on-site hazardous materials. Implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to hazards and hazardous materials would result in a l**ess than cumulatively considerable contribution**.

HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater, in the context of a groundwater basin. Because water resources are highly interconnected, the cumulative setting is based on San Joaquin County which is located in the San Joaquin River Hydrological Region. Cumulative development in this region, including the proposed Project, would impact the water quality and hydrological features of the San Joaquin River Hydrologic Region. The City of Lathrop and much of the surrounding area is located in the Eastern San Joaquin River Groundwater Basin. This groundwater basin covers approximately 1,105 square miles. The project site is located in the San Joaquin River watershed. Any matter that may affect water quality draining from the project site will eventually end up in the Delta or within the groundwater basin.

Impact 4.5: Cumulative Increases in Peak Stormwater Runoff from the Project Site (Less than Significant and Less than Cumulatively Considerable)

Implementation of the proposed project would not result in many new impervious surfaces which would alter the existing drainage pattern of the site. The majority of the proposed improvements would be developed in previously-disturbed areas, such as within roadway rights-of-way. Some of the proposed improvements, particularly those related to recycled water, would be located on agricultural areas. The undergrounding of the utilities within the agricultural or undeveloped areas will be restored to the existing agricultural/undeveloped condition at the completion of the proposed project. The undergrounding of the utilities within the roadway rights-of-way will also be restored to the existing condition.

The CIP projects that would be constructed in the agricultural areas would also be considered to have a low impact related to storm drainage for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field or vacant field, but the irrigation system would change from surface water or well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas.

The proposed project would not increase peak stormwater runoff. Implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to stormwater runoff would result in a l**ess than cumulatively considerable contribution**.

Impact 4.6: Cumulative Impacts Related to Degradation of Water Quality (Less than Significant and Less than Cumulatively Considerable)

The proposed project, along with several of the related projects within the City of Lathrop, would ultimately discharge stormwater runoff to the nearby Delta waterways. This would potentially degrade the water quality of the system.

Construction of the proposed project would contribute to a cumulative increase in urban pollutant loading, which could adversely affect water quality. Cumulative development in the Lathrop area would also result in increased impervious surfaces that could increase the rate and amount of runoff, thereby potentially adversely affecting existing surface water quality through increased erosion and sedimentation. The primary sources of water pollution include: runoff from roadways and parking lots; runoff from landscaping areas; non-stormwater connections to the drainage system; accidental spills; and illegal dumping. Runoff from roadway and parking lots could contain oil, grease, and heavy metals; additionally, runoff from landscaped areas could contain elevated concentrations of nutrients, fertilizers, and pesticides. However, the proposed project would result in minimal, if any, impervious surfaces which could increase runoff as a result of operation.

The proposed project will be required to comply with Mitigation Measure 3.3-1 which requires the development and approval of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include Best Management Practices (BMPs) to regulate stormwater quality for the project site which will be designed in accordance with the City of Lathrop's National Pollutant Discharge Elimination System Permit (NPDES) issued by the RWQCB. All future projects that would discharge stormwater runoff would be required to comply with NPDES discharge permits from the RWQCB, which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality.

Compliance with City and County water quality protection regulations, approval from the RWQCB, and Mitigation Measure 3.3-1 would ensure that the proposed project minimizes impacts to surface water quality. Implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. As such, impacts related to water quality would result in a l**ess than cumulatively considerable contribution**.

Impact 4.7: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge (Less than Significant and Less than Cumulatively Considerable)

The proposed project improvements are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would result in minimal, if any, impervious surfaces which could decrease groundwater recharge. The CIP projects that would be constructed in the agricultural areas would also be considered to have a low impact to groundwater supplies for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field or vacant field, but the irrigation system would change from surface water or well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas. The new and existing ponds provide limited opportunities for groundwater recharge.

The City overlies the Tracy Groundwater Subbasin (DWR 5-22.15), which is a subbasin of the San Joaquin Valley Groundwater Basin (DWR 5-22). The Tracy Subbasin is not adjudicated, and a basin management plan has not been created. The Department of Water Resources (DWR) approved a basin boundary modification in February 2019, which consolidated the entire City of Lathrop into the Tracy Subbasin. The City of Lathrop was formerly within two groundwater basins: the Tracy Groundwater Subbasin and the Eastern San Joaquin (ESJ) Subbasin. The City of Lathrop is working with the other GSAs in the Tracy subbasin to develop a Memorandum of Understanding (MOA) and a Groundwater Sustainability Plan for compliance with the Sustainable Groundwater Management Act (SGMA).

The 2014 Eastern San Joaquin Integrated Regional Water Management Plan (IRWMP) is an update and expansion of the 2007 IRWMP prepared for the Eastern San Joaquin Region by the

Northeastern San Joaquin County Groundwater Banking Authority (GBA). The mission of the GBA is to employ a consensus-based approach to collaboratively develop stakeholder-supported projects and programs that mitigate and prevent the impacts of long-term groundwater overdraft. Managing the underlying groundwater basin is critical in providing reliable water supplies, which are essential for the economic, social, and environmental viability of the San Joaquin Region. The 2014 Eastern San Joaquin IRWMP complies with the most recent DWR guidelines and adds additional considerations including examination of climate change impacts, inter-regional cooperation, and expanded analysis of stormwater and floodwater management. The 2014 Eastern San Joaquin IRWMP describes groundwater features and conditions and provides objectives, evaluation criteria, and prioritization criteria.

Additionally, pursuant to the Sustainable Groundwater Management Act, the City of Lathrop formed an exclusive Groundwater Sustainability Agency (GSA) for its jurisdiction within the Tracy Groundwater Subbasin (formerly the Eastern San Joaquin Subbasin).

Groundwater pumping in Lathrop increased from 2,277 AFY in 1960 to a maximum of 14,933 AFY in 2004 prior to the SCWSP delivering treated surface water to the City. According to the City's 2005 UWMP, the sustainable yield of the groundwater basin was estimated in a 1985 study to be approximately 1 acre-foot per acre per year. Although groundwater pumping in some years has exceeded that rate, as part of the SCWSP, the City intends to limit groundwater pumping to that rate or less. At this time, the area of the City's PUSA is 13,790 acres. Therefore, the City intends to limit groundwater pumping to a long-term average of no greater than 13,790 afy.

Much of the groundwater recharge in the basin occurs in the sand and gravels along the San Joaquin River from Sierra snowmelt flowing downstream. Precipitation in the region is 13.81 inches, most of which falls between November through April. A portion of this annual rainfall infiltrates the soil and groundwater basin, while a portion is discharged downstream into the Delta. Development of the proposed project would retain the vast majority of the improvement areas as pervious surfaces.

For the reasons mentioned above, the proposed project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. Implementation of the proposed project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.8: Cumulative Impacts Related to Inundation by a Flood, Tsunami, or Seiche (Less than Significant and Less than Cumulatively Considerable)

The proposed project would not be subject to inundation by tsunami or seiche. As shown on Figure 3.5-2, the project site is within the 100-year and 500-year flood zones as delineated by FEMA. Portions of the project site are also located within the 200-year floodplain as delineated on the most recent 200-year flood plain maps for Lathrop. The project site, however, would not place structures or homes within a flood plain as the project does not include residential or other urban uses. The proposed water, wastewater, and recycled water improvements are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands.

The project site is also subject to flood inundation as a result of levee failure (200-year flood). Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event. As discussed in the previous impact discussions, the proposed project would not result in the release of pollutants as a result of long-term operation.

Implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. Implementation of the proposed project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

UTILITIES

The cumulative setting includes all areas covered in the service areas of the City's wastewater system, water system, stormwater system, and the solid waste collection and disposal services. Under General Plan buildout conditions, the City would see an increased demand for water service, sewer service, solid waste disposal services, and stormwater infrastructure needs.

Impact 4.9: Cumulative Impact on Wastewater Utilities (Less than Significant and Less than Cumulatively Considerable)

The project will expand utility systems to accommodate existing and future needs within the City. The proposed project includes wastewater improvements consistent with the Wastewater System Master Plan. These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. The impacts of the development of the proposed wastewater facilities are discussed throughout this Draft EIR and the Initial Study prepared for the project.

The project does not propose any housing that would generate wastewater. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. No substantial population increases would result from implementation of the proposed project. As such, operation of the project would not generate wastewater which would require or result in the relocation or construction of new or expanded wastewater facilities. The project also would not increase the capacity of the MWQCF or the LCTF beyond the permitted capacities. Additionally, operation of the project would not generate wastewater which would require or result in the relocation or construction of new or expanded wastewater facilities.

The development of the proposed project would not exceed the wastewater discharge requirements in this Order as described under Impact 3.6-2 in Section 3.6. Implementation of the proposed project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.10: Cumulative Impact on Water Utilities (Less than Significant and Less than Cumulatively Considerable)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The Water System CIPs address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of water supply sources within the City's distribution system. The impacts of the development of the proposed water facilities are discussed throughout this Draft EIR and the Initial Study prepared for the project. These projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands.

As identified above, the proposed project would not result in expansion of land uses or increased population in the City. Thus, no additional demand for water supplies will be created by the project operation. Limited amounts of water would be necessary during the construction phase of the project, but this would be a temporary use of water for construction related activities, and would not be in substantial amounts. The project would not result in insufficient water supplies available to serve the project from existing entitlements and resources. Implementation of the proposed project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.11: Cumulative Impact on Stormwater Facilities (Less than Significant and Less than Cumulatively Considerable)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The proposed projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Any CIP projects constructed in the road right-of-way or urban areas would result in minimal, if any, impervious surfaces which could alter the existing drainage pattern of the project site. The CIP projects that would be constructed in the agricultural areas would also be considered to have a low impact to storm drainage facilities for several reasons. First, any pipe installation would be underground such that the impact would be temporary and the surface would be restored after construction. The installation of pump stations, meters, control valves, and a SCADA system would have minimal footprint. Any new LAA would remain as an agricultural field, but the irrigation system would change from surface water or well water to recycled water in some cases. The proposed LAAs near the River Islands development have surface water available as a supplemental water source, and the surrounding fields currently use surface water instead of well water. The construction of proposed storage ponds would be located near existing and proposed LAAs in vacant fields or agricultural areas.

Construction of the proposed water, wastewater, and recycled water improvements would be subject to the applicable BMP and LID standards. For example, Measure 3.3-1 contained in Section 3.3 Geology and Soils, ensures compliance with existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities.

The long-term operations of the proposed project would not result in long-term impacts related to urban stormwater runoff. The proposed project would not include urban uses which would create new impervious surfaces or generate polluted runoff.

Implementation of the proposed project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.12: Cumulative Impact on Solid Waste Facilities (Less than Significant and Less than Cumulatively Considerable)

As noted above, the proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. The project does not propose any housing that would generate solid waste. No substantial population increases would result from implementation of the proposed project. As such, operation of the project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Construction of the project would result in construction debris and solid waste. Construction of the project would be subject to the applicable regulations for construction debris. As noted above, CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects. The City does not regulate construction debris.

The addition of the construction-related solid waste associated with the proposed project to the Forward Landfill would not exceed the landfill's remaining capacity through 2020. After the projected closure of the Foothill Landfill in 2020, solid waste generated in Lathrop would be sent to the Foothill Landfill. The Foothill Landfill has a capacity of 97,900,000 cubic yards and a projected closure date of 2054, which is adequate to serve the City and the project site under cumulative conditions. As such, implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. Thus, impacts related to solid waste facilities would be a l**ess than cumulatively considerable contribution**.

Impact 4.13: Cumulative Impact on Electric Power, Natural Gas, and Telecommunication Facilities (Less than Significant and Less than Cumulatively Considerable)

The proposed project includes a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan that includes a variety of CIP projects. Construction and operation of the proposed project would not require the use of telecommunication facilities. The proposed project would require a minimal amount of natural gas and electric power. Diesel-fired Emergency generators would be provided in conjunction with the proposed water pump station improvements. The emergency generators would all be for emergency operations in the event of a power outage, and would otherwise only be run for maintenance and air quality permit testing requirements.

As such, implementation of the proposed project would have a **less than significant** cumulative impact relative to this environmental topic. Thus, impacts related to solid waste facilities would be a l**ess than cumulatively considerable contribution**.

4.2 SIGNIFICANT IRREVERSIBLE EFFECTS

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Analysis

Implementation of the proposed project would result in the development of water, wastewater, and recycled water infrastructure throughout the project site. As noted above, these projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands.

A variety of resources, including energy, water, construction materials, and human resources would be irretrievably committed for the initial construction, infrastructure installation and connection to existing utilities, and its continued maintenance. Construction of the proposed project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, some resources would be committed to the ongoing operation and life of the proposed project. Diesel-fired emergency generators would be provided in conjunction with the proposed water pump station improvements. The emergency generators would all be for

emergency operations in the event of a power outage, and would otherwise only be run for maintenance and air quality permit testing requirements. The proposed project will increase consumption of available supplies of diesel. Additionally, diesel and gasoline would be utilized during construction of the improvements These energy resource demands relate to initial project construction, operation of the generators and site maintenance, and the transport of people and goods to and from the project site during construction and maintenance.

4.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. No significant and unavoidable impacts would result from implementation of the proposed project.

5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

PROJECT OBJECTIVES

The principal objective of the proposed project is the approval and subsequent implementation of the Lathrop Integrated Water Resources Master Plan (IWRMP).

The proposed project identifies the following objectives:

- Construct improvements that are integrated with the City's infrastructure geographic information system (GIS) and allow for automatic synchronization between the model and infrastructure GIS to limit future maintenance efforts;
- Provide cost-effective and fiscally responsible water, wastewater, and recycled water services that meet the water quantity, water quality, system pressure, and reliability requirements of the City's customers;
- Improve or replace existing City water, wastewater, and recycled water system infrastructure;
- Provide future water, wastewater, and recycled water system infrastructure necessary to meet projected growth of the City's service area.

ALTERNATIVES NOT SELECTED FOR FURTHER ANALYSIS

A Notice of Preparation was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

The City of Lathrop considered alternative locations early in the public scoping process. The City's key considerations in identifying an alternative location were as follows:

- Is there an alternative location where significant effects of the project would be avoided or substantially lessened?
- Is there a site available within the City's Sphere of Influence with the appropriate size and characteristics such that it would meet the basic project objectives?

The City's consideration of alternative locations for the project included a review of the available land areas which could be developed with the required improvements while also providing the needed water, wastewater, and recycled water services. Because the improvements are intended to serve specific geographic areas of the City, the potential for alternative locations is extremely limited. During development of the type and location of the proposed improvements, alternative locations in the City were analyzed by the project engineers. The locations of the proposed improvements were determined to be the most feasible from a financial and engineering standpoint. Additionally, the improvement projects are all designed to be within areas that are either existing roadway, existing urban areas, or existing agricultural lands. Therefore, the proposed improvements also minimize environmental impacts to the extent feasible. For these reasons, the City of Lathrop determined that there are no feasible alternative locations.

In addition, as discussed in Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553 (Goleta II), where a project is consistent with an approved general plan, no off-site alternative need be analyzed in the EIR. The EIR "is not ordinarily an occasion for the reconsideration or overhaul of fundamental land-use policy." (Goleta II, supra, 52 Cal.3d at p. 573.) In approving a general plan, the local agency has already identified and analyzed suitable alternative sites for particular types of development and has selected a feasible land use plan. "Informed and enlightened regional planning does not demand a project EIR dedicated to defining alternative sites without regard to feasibility. Such ad hoc reconsideration of basic planning policy is not only unnecessary, but would be in contravention of the legislative goal of long-term, comprehensive planning." (Goleta II, supra, 52 Cal.3d at pp. 572-573.) Here, the proposed project was developed to address changes in land use and growth projections from the City's General Plan. The improvements are generally consistent with the locations of future urban uses considered in the Lathrop General Plan and associated EIR. Thus, in addition to the reasons discussed above, an off-site alternative need not be further discussed in this EIR.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Two alternatives to the proposed project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed project. The alternatives analyzed in this EIR include the following alternatives in addition to the proposed project:

- **No Project (No Build) Alternative**: Under this alternative, development of the project site would not occur, and the project site would remain in its current existing condition. The water, wastewater, and recycled water infrastructure improvements would not occur.
- **Near-Term Improvements Alternative**: Under this alternative, development of the proposed water, wastewater, and recycled water infrastructure improvements would occur. However, only the improvements proposed to be completed in the near-term would be constructed.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the project site would not occur, and the project site would remain in its current existing condition. The water, wastewater, and recycled water infrastructure improvements would not occur. It is noted that the No Project (No Build) Alternative would fail to meet the project objectives identified by the City of Lathrop.

NEAR-TERM IMPROVEMENTS ALTERNATIVE

Under the Near-Term Improvements Alternative, only the improvements proposed to be completed in the near-term would be constructed. The long-term water and recycled water improvements would not be constructed. The long-term water improvements include the South San Joaquin Irrigation District (SSJID) Turnout 2 Expansion, the Sadler Oak Transmission Improvement Project, and the SSJID Transmission Improvement Project. Table 5.0-1 summarizes all the water system improvement projects and their estimated planning level opinion of probable costs (OPCs) that would occur under this alternative.

TABLE 5.0-1: NEAR-TERM IMPROVEMENTS ALTERNATIVE WATER SYSTEM CAPITAL IMPROVEMENT PROJECTS

PROJECT #	*PROJECT*	*TIME FRAME*[1]	*ADDRESSES FIRE FLOW DEFICIENCY*	*TOTAL PROJECT OPC*[2,3]
	WATER SUPPLY IMPROVEMENTS			
WS-1	SGMA Compliance[4]	Existing	--	$300,000
WS-2	SSJID Turnout Emergency Backup Power[5]	Near-Term	--	$770,000
WS-3	Well 21 WTF Phase 2 Improvements[6]	Near-Term	--	$1,300,000
WS-4	Well 21 WTF Tank, BPS, and Transmission Main[7]	Near-Term	--	$5,520,000
WS-5	SCWSP Phase 2	Near-Term	--	$23,200,000
			Total Water Supply Improvements OPC	*$31,090,000*
	WATER DISTRIBUTION SYSTEM IMPROVEMENTS			
WD-1	Booster Pump Station 1 Pipeline Replacement and Residential Fire Flow Improvement Project	Existing	Yes	$1,200,000
WD-2	Booster Pump Station 3 Pipeline Replacement and Harlan Rd. Fire Flow Improvement Project	Existing[8]	Yes	$1,510,000
WD-3	Northern McKinley Industrial Area Fire Flow Improvement Project	Existing	Yes	$1,290,000
WD-4	Old Harlan Fire Flow Improvement Project	Existing	Yes	$110,000
WD-5	Crossroads Fire Flow Improvement Project	Existing	Yes	$50,000
WD-6	McKinley Ave. and E. Louise Ave. Fire Flow Improvement Project	Existing	Yes	$80,000
WD-7	Booster Pump Station 2 Pipeline Replacement Project	Existing	No	$230,000
WD-8	LAWTF Transmission Improvement Project	Existing[9]	No	$2,890,000
WD-9	Sadler Oak Transmission Improvement Project	Near-Term[10]	No	$360,000
			Total Water Distribution System Improvements OPC	*$7,720,000*
			Total Water Distribution Supply and System Improvements OPC	***$38,810,000***

NOTES:

[1] TIME FRAME REFERS TO WHEN PROJECTS ARE IDENTIFIED TO BE REQUIRED.

[2] COSTS SHOWN ARE PRESENTED IN NOVEMBER 2018 DOLLARS BASED ON AN ENR CCI OF 11,183 (20-CITY AVERAGE), WITH TOTALS ROUNDED TO THE NEAREST $10,000.

[3] COSTS INCLUDE MARK-UPS EQUAL TO 60% FOR CONSTRUCTION CONTINGENCY (25%), DESIGN (10%), CONSTRUCTION MANAGEMENT (10%), PERMITTING (10%), AND PROJECT IMPLEMENTATION (5%).

[4] THE CITY'S CURRENT BUDGET FOR SGMA COMPLIANCE HAS BEEN RETAINED HEREIN, BUT WILL BE REEVALUATED IN THE FUTURE TO ADDRESS THE FINAL RESULT OF THE BASIN BOUNDARY MODIFICATION REQUEST AND THE LEVEL OF EFFORT IDENTIFIED IN THE GSP FOR IMPLEMENTATION.

[5] *Construction costs for improvements have been carried over from estimates in the 2013 Draft Water Master Plan, escalated to November 2018 dollars.*

[6] *Construction costs for Well 21 WTF Phase 2 Improvements reflect the current engineer's estimate prepared by H2O Urban Solutions in July 2017, escalated to November 2018 dollars. Note that the raw water line from McKinley to Well 21 may be constructed in Phase 1.*

[7] *Construction costs for Well 21 WTF Tank and BPS reflect the current engineer's estimate prepared by H2O Urban Solutions in July 2017, escalated to November 2018 dollars. Transmission line cost reflect the IWRMP unit pipeline costs for undeveloped areas.*

[8] *The BPS-3 Pipeline replacement is sized to address head loss deficiencies increased by Central Lathrop Specific Plan (CLSP) development.*

[9] *The LAWTF Transmission Improvement Project improves transmission capabilities and supply resiliency between the LAWTF and the Mossdale, River Islands, and CLSP development areas.*

Source: City of Lathrop Water System Master Plan, Table ES-2.

Because all of the wastewater improvements would be completed in the near-term, this alternative would include development of all of the proposed wastewater improvements. The long-term recycled water improvements include the Phase 2B improvements, which would expand the disposal capacity to the full 2.5 million-gallons-per day (MGD) Lathrop Consolidated Treatment Facility (CTF) Phase 2 treatment capacity. The Phase 2B improvements would not be constructed under this alternative, which include:

- Increase the capacity of the PMP-1 pump station in conjunction with the installation of Pond S-X (located directly north of S5).
- Install a new pond and pump station in the western portion of the City, potentially at locations S13 storage pond and PMP-6 pump station, to meet storage requirements and to meet system pressure criteria in Phase 2B.

The recycled water Phase 2A improvements were based on the planned initial infrastructure improvements as of October 2017, which were planned to provide a disposal capacity of 1.9 MGD. The Phase 2A improvements would be constructed under this alternative. The Supervisory Control and Data Acquisition (SCADA) towers and generators would also be constructed under this alternative.

It is noted that the Near-Term Improvements Alternative would fail to meet the project objectives identified by the City of Lathrop.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-2 summarizes the comparative effects of each alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Biological Resources

As described in Section 3.1, Biological Resources, there are a variety of special status species known to occur within the regional vicinity of the proposed Project. The CIP projects would be

located in areas that are generally very low-quality habitat given their urban/developed nature. The agricultural areas provide a higher quality habitat for some species known to occur in the area. Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Additionally, the agricultural land represents potentially suitable nesting habitat for the ground-nesting birds, as well as foraging habitat for many species. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the project site in any given year. Additionally, the proposed project would temporarily disturb some agricultural areas, which serve as potential foraging habitat for birds throughout the year.

Mitigation Measure 3.1-1 requires participation with the SJMSCP, which includes fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the project and cumulative impacts to biological resources, including special status species. The proposed project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the SJCOG through the authorization of SJMSCP coverage. Through the implementation of various mitigation measures found in Section 3.1, implementation of the proposed project will have a less than significant impact on biological resources.

Under the No Project (No Build) Alternative, the proposed project would not be constructed, no habitat would be disturbed, and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed project.

Cultural and Tribal Resources

As described in Section 3.2, Cultural and Tribal Resources, 172 cultural resources have been identified within the City of Lathrop General Plan Study Area, according to files maintained by the Central California Information Center (CCIC). The project site is not expected to contain subsurface paleontological resources, although it is possible. Implementation of mitigation measures in Section 3.2 would reduce unknown cultural resources impacts to a less than significant level.

The No Project (No Build) Alternative would result in no ground disturbing activities related to the proposed project and would not have the potential to disturb or destroy cultural, historic, and archaeological resources, as well as paleontological resources. While the proposed project is not anticipated to result in significant impacts to cultural resources with mitigation, the No Project (No Build) Alternative would result in less potential for impacts to cultural resources as the entire project site would continue to be used for agriculture or urban uses. As such, this impact would be reduced when compared to the proposed project.

Geology and Soils

As described in Section 3.3, Geology and Soils, the project site does not have a significant risk of becoming unstable as a result landslide, subsidence, or soil collapse. In order to minimize

potential damage to the site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, Mitigation Measure 3.3-1 requires an approved Storm Water Pollution Prevention Plan (SWPPP) designed to control erosion and the loss of topsoil to the extent practicable using Best Management Practices (BMPs) that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities.

The No Project (No Build) Alternative would result in the project site remaining in its existing condition. The No Project (No Build) Alternative would not involve new construction that could be subject to seismic, geologic or soils hazards, thus this alternative would have no potential for impact. As such, this impact would be reduced when compared to the proposed project.

Hazards and Hazardous Materials

As described in Section 3.4, Hazards and Hazardous Materials, construction equipment and materials would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The proposed emergency generators would use diesel fuel, although the generators would only be run for maintenance and air quality permit testing requirements. Diesel fuel may also be stored on-site, such as within a building. There will be a risk of release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by San Joaquin County Department of Environmental Health.

Under the No Project (No Build) Alternative, no construction would occur, no new infrastructure improvements would be introduced to the project site, and the potential for hazardous material release on the project site would be eliminated. As such, this impact would be reduced when compared to the proposed project.

Hydrology and Water Quality

As described in Section 3.5, Hydrology and Water Quality, implementation of the proposed project has the potential to result in the violation of water quality standards and the discharge of pollutants into surface waters during construction. Construction operations could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operations of the proposed project would not result in long-term impacts to surface water quality from urban stormwater runoff. Mitigation Measure 3.5-1 provided in Section 3.5 reduces potential water quality impacts to a less than significant level. The proposed project would not significantly impact groundwater recharge or release pollutants due to project inundation by a flood, tsunami, or seiche.

Under the No Project (No Build) Alternative, potential water quality impacts from construction of the proposed project would be eliminated. As such, potential impacts related to hydrology and water quality would be reduced under the No Project (No Build) Alternative when compared to the proposed project.

Utilities

As discussed in Section 3.6, Utilities, the project does not propose any housing that would generate wastewater. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems. As such, operation of the project would not increase wastewater demand, water demand, or generate solid waste which would require or result in the relocation or construction of new or expanded facilities.

The long-term operations of the proposed project would not result in long-term impacts related to urban stormwater runoff. The proposed project would not include urban uses which would create new impervious surfaces or generate polluted runoff. Additionally, the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities.

Similarly, under the No Project (No Build) Alternative, the project site would not increase the demand for any utilities, including wastewater services, potable water supplies, or solid waste disposal. There would be no need to construct stormwater drainage infrastructure. Overall, the demand for utilities would be equal under the No Project (No Build) Alternative when compared to the proposed project.

NEAR-TERM IMPROVEMENTS ALTERNATIVE

Biological Resources

Under the Near-Term Improvements Alternative, only the improvements proposed to be completed in the near-term would be constructed. The majority of the proposed project improvements would still be constructed under this alternative. As such, the majority of the project site would be developed with the same near-term infrastructure improvements as the proposed project. Because this alternative would still disturb agricultural areas and result in construction activities which could adversely affect nesters if they located adjacent to the project site in any given year, impacts to biological resources would require mitigation similar to the proposed project to be reduced to less than significant. However, this alternative would not install a new pond and pump station in the western portion of the City (potentially the S13 storage pond). This new pond would be located in an existing agricultural area of the City, an area which provides nesting habitat for ground-nesting birds. Overall, due to the slight reduction in construction impacts and the removal of the new pond, this alternative would have slightly reduced impacts to biological resources compared to the proposed project.

Cultural and Tribal Resources

The Near-Term Improvements Alternative would result in ground disturbing activities throughout the majority of the project site. The proposed project is not anticipated to result in significant impacts to cultural or historical resources, and the Near-Term Improvements Alternative would result in similar risks related to the unintentional discovery of such resources by developing much of the project site with residential and commercial uses. Because of the

slight reduction in the disturbance area and the removal of the new pond, this impact would be slightly reduced when compared to the proposed project.

Geology and Soils

The Near-Term Improvements Alternative would result in development of the majority of the proposed infrastructure improvements. The future development allowed under this alternative would be exposed to the same level of risk from geologic hazards as the proposed project. Therefore, this impact under this alternative would be equal to the proposed project.

Hazards and Hazardous Materials

The Near-Term Improvements Alternative is similar to the proposed project in that both the project and this alternative would result in development of the project site with infrastructure improvements. As described in Section 3.4, construction activities may result in the use and transport of common hazardous materials, including oils, fuels, paints and solvents. This potential impact would still occur under the Near-Term Improvements Alternative. Additionally, the operational phases of both the proposed project and the Near-Term Improvements Alternative would not pose a significant hazard to the public or the environment. Future development under the Near-Term Improvements Alternative would be subject to the City's General Plan policies, and other local, state, and federal regulations pertaining to hazardous materials. This impact would be equal under this alternative when compared to the proposed project.

Hydrology and Water Quality

The Near-Term Improvements Alternative would eliminate the proposed long-term infrastructure Improvements. While this alternative would result in a reduced number of improvements compared to the proposed project, the potential water quality impacts related to construction and operation would be similar to the proposed project. As described in Section 3.5, the long-term operations of the proposed project would not result in long-term impacts to surface water quality from urban stormwater runoff. Under Near-Term Improvements Alternative, these impacts would be similar as the proposed project. Because the alternative would also be required to submit a SWPPP with BMPs to the RWQCB, impacts related to water quality would be similar. Additionally, both the proposed project and the Near-Term Improvements Alternative would not include urban uses which would create new impervious surfaces or generate polluted runoff. Overall, potential impacts related to hydrology and water quality would be equal to the proposed project.

Utilities

As discussed above, operation of the project would not increase wastewater demand, water demand, or generate solid waste which would require or result in the relocation or construction of new or expanded facilities. Additionally, the proposed project would not require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities. Development under the Near-Term Improvements Alternative would also not result in an increase in wastewater demand, water demand, or generate solid

waste. Because the Near-Term Improvements Alternative would result development of the majority of the proposed infrastructure improvements, the demand for utilities as a result of this alternative would not increase. Overall, this alternative would have equal impacts to utilities when compared to the proposed project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed project.

A comparative analysis of the proposed project and each of the project alternatives is provided in Table 5.0-2 below. The table includes a numerical scoring system, which assigns a score of "2," "3," or "4" to the proposed project and each of the alternatives with respect to how each alternative compares to the proposed project in terms of the severity of the environmental topics addressed in this EIR. A score of "2" indicates that the alternative would have a better (or lessened) impact when compared to the proposed project. A score of "3" indicates that the alternative would have the same (or equal) level of impact when compared to the proposed project. A score of "4" indicates that the alternative would have a worse (or greater) impact when compared to the proposed project. The project alternative with the lowest total score is considered the environmentally superior alternative.

TABLE 5.0-2: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*PROPOSED PROJECT*	*NO PROJECT (NO BUILD) ALTERNATIVE*	*NEAR-TERM IMPROVEMENTS ALTERNATIVE*
Biological Resources	3 – Same	2 – Lesser	2 – Lesser
Cultural and Tribal Resources	3 – Same	2 – Lesser	2 – Lesser
Geology and Soils	3 – Same	2 – Lesser	3 – Same
Hazards and Hazardous Materials	3 – Same	2 – Lesser	3 – Same
Hydrology and Water Quality	3 – Same	2 – Lesser	3 – Same
Utilities	3 – Same	3 – Same	3 – Same
Summary	**18**	**13**	**16**

As shown in Table 5.0-2, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Near-Term Improvements Alternative ranks higher than the proposed project. However, the Near-Term Improvements Alternative would not fully meet all of the project objectives.

This page intentionally left blank.

REPORT PREPARERS

City of Lathrop

Greg Gibson ..... Senior Civil Engineer

De Novo Planning Group

Steve McMurtry ..... Principal Planner/Project Manager

Ben Ritchie ..... Principal Planner

Elise Carroll ..... Senior Planner

William Crenshaw ..... Associate Planner

Joshua Smith ..... Associate Planner

EKI – Engineering Consultant

Jonathan Sutter ..... Principal Engineer

This page left intentionally blank.

REFERENCES

Barbour and Major 1988. Terrestrial vegetation of California.

California Department of Fish and Game. “Special Plants List.” Natural Diversity Database.

California Department of Fish and Game. “Special Animals List.” Natural Diversity Database.

California Department of Fish and Game. “Special Vascular Plants, Bryophytes, and Lichens List.” Natural Diversity Database.

California Department of Toxic Substances Control. 2009. DTSC's Hazardous Waste and Substances Site List - Site Cleanup (Cortese List). Available: <http://www.dtsc.ca.gov/SiteCleanup/Cortese_List.cfm>.

California Department of Toxic Substances Control. 2007. Envirostor Data Management System. Available: <http://www.envirostor.dtsc.ca.gov/public/>.

California Department of Toxic Substances Control. 2019. Geotracker. Available: <http://geotracker.waterboards.ca.gov/>.

California Department of Water Resources (DWR). 2019. Best Available Maps (BAM). Available: <http://gis.bam.water.ca.gov/bam/>.

California Department of Water Resources (DWR). 2006. California’s Groundwater Bulletin 118. San Joaquin Valley Groundwater Basin, Eastern San Joaquin Subbasin. January 20, 2006.

California Department of Water Resources (DWR). 2003. Bulletin 118, California’s Groundwater, 2003 Update.

California Department of Water Resources (DWR). 2013. California Water Plan Update 2013 – Advisory Committee Draft. San Joaquin River Hydrologic Region.

California Department of Resources Recycling and Recovery. Disposal Reporting System. Accessed April 2019. Available at: <https://www.calrecycle.ca.gov/lgcentral/drs>.

California Department of Resources Recycling and Recovery. Jurisdiction Review Reports. Accessed April 2019. Available at: <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>.

California Department of Resources Recycling and Recovery. Inspection Detail: Foothill Sanitary Landfill (39-AA-0004). Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/39-AA-0004/Inspection/410233?InspectionAttachmentGrid-sort=DocumentTitle-desc>.

California Department of Resources Recycling and Recovery. SWIS Facility Detail: Forward Landfill, Inc. (39-AA-0015). Available: <https://www2.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0004/Detail/>.

California Integrated Waste Management Board. 2016. Solid Waste Information System (SWIS) Facility/Site Search. Available: <https://www2.calrecycle.ca.gov/SWFacilities/Directory/>.

City of Lathrop. 2015 Urban Water Management Plan for the City of Lathrop. October 2017.

City of Lathrop. City of Lathrop Comprehensive General Plan. Adopted December 17, 1991.

City of Lathrop. City of Lathrop General Plan Update Existing Conditions Report. Admin Draft – October 2018.

City of Lathrop. Lathrop Municipal Code. Current through Ordinance 18-397 and the August 2018.

Eastern San Joaquin County Groundwater Basin Authority. 2014 Eastern San Joaquin Integrated Regional Water Management Plan Update. June 2014.Joaquin Integrated Regional Water Management Plan Update. June 2014.

City of Lathrop. Municipal Service Review and Sphere Of Influence Plan. April 14, 2016.

Environmental Protection Agency. 2015. National Priorities List (NPL) of Superfund Sites and Proposed NPL Sites. Available: <http://www.epa.gov/superfund/npl-site-status-information>.

Environmental Protection Agency. 2015. Toxic Release Inventory (TRI) Program. Available: <http://www.epa.gov/toxics-release-inventory-tri-program>.

Environmental Protection Agency. 2016. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Search. Available: <http://www.epa.gov/enviro/cerclis-search>.

Environmental Protection Agency. 2016. Corrective Action Report (CORRACTS). Available: <http://www3.epa.gov/wastes/hazard/correctiveaction/facility/index.htm#Feds>.

Environmental Protection Agency. 2016. Resource Conservation and Recovery Information System (RCRIS) Info. Available: <http://www3.epa.gov/enviro/facts/rcrainfo/search.html>.

Hickman, James C. 1993. Jepson Manual: Higher Plants of California.

Northeastern San Joaquin County Groundwater Banking Authority (NSJCGB). 2004. Eastern San Joaquin Groundwater Basin Groundwater Management Plan. September 2004.

Personal communication with Greg Gibson, Senior Civil Engineer at the City of Lathrop. June 13, 2019.

San Joaquin Council of Governments. November 14, 2000. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

San Joaquin County. San Joaquin County General Plan 2010. San Joaquin County, CA. Adopted July 29, 1992.

State of California, Governor's Office of Planning and Research (OPR). 2003. State of California General Plan Guidelines.

United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2013. Web Soil Survey. Accessed: April 2019. Available: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>.

United States Geological Survey (USGS). 2015. Interactive Fault Map. Accessed: May 2019. Available: <http://earthquake.usgs.gov/hazards/qfaults/map/>.

West Yost Associates, 2018. Technical Memorandum: Infrastructure Analysis for the City of Lathrop General Plan Update. June 29, 2018.

This page left intentionally blank.

Appendix A

Initial Study, Notice of Preparation and NOP Comments

INITIAL STUDY / NOTICE OF PREPARATION

FOR THE

CITY OF LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

FEBRUARY 2019

Prepared for:

City of Lathrop
Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 949-3231

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

INITIAL STUDY / NOTICE OF PREPARATION

FOR THE

CITY OF LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

FEBRUARY 2019

Prepared for:

City of Lathrop
Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 949-3231

Notice of Preparation of an Environmental Impact Report and Scoping Meeting

Date: February 20, 2019

Subject: Notice of Preparation of an Environmental Impact Report and Scoping Meeting for the City of Lathrop Integrated Water Resources Master Plan

To: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies
Organizations and Interested Persons

Lead Agency: City of Lathrop
Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330

Project Planner: Greg Gibson, Senior Civil Engineer
ggibson@ci.lathrop.ca.us
(209) 941-7442

Notice of Preparation: This is to notify public agencies and the general public that the City of Lathrop, as the Lead Agency, will prepare an EIR for the City of Lathrop Integrated Water Resources Master Plan. The City of Lathrop is interested in the input and/or comments of public agencies and the public as to the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project, and public input. Responsible/trustee agencies will need to use the EIR prepared by the City of Lathrop when considering applicable permits, or other approvals for the proposed project.

Comment Period: Consistent with the time limits mandated by State law, your input, comments or responses must be received in writing and sent at the earliest possible date, but not later than 5:00 PM, March 21, 2019.

Comments/Input: Please send your comments/input (including the name for a contact person in your agency) to: Attn: Greg Gibson, Senior Civil Engineer, at the City of Lathrop, 390 Towne Centre Drive, Lathrop, CA 95330, or by e-mail at: ggibson@ci.lathrop.ca.us

Scoping Meeting: On March 13, 2019, the City of Lathrop will conduct a public scoping meeting to solicit input and comments from public agencies and the general public on the proposed project and scope of the Environmental Impact Report (EIR). This meeting will be held at the Lathrop City Hall, Council Chambers, from 2:00 PM to 3:00 PM.

This meeting will be an open house format and interested parties may drop in to review the proposed project exhibits and submit written comments at any time between 2:00 PM to 3:00 PM. Representatives from the City of Lathrop and the EIR consultant will be available to address questions regarding the EIR process and scope. Members of the public may provide written comments throughout the meeting.

If you have any questions regarding the scoping meeting, contact Greg Gibson, Senior Civil Engineer, at (209) 941-7442 or ggibson@ci.lathrop.ca.us.

Project Title: City of Lathrop Integrated Water Resources Master Plan

1. Project Location and Setting

The Lathrop Integrated Water Resources Master Plan (IWRMP) project site (project site) is located throughout Lathrop, California. The IWRMP includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area.

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's recycled water distribution system is generally contiguous with the City limits and includes some facilities north of the City limits.

2. Project Background

For the past year, the City has been working to prepare a comprehensive update to the City's water, sewer and recycled water master plan documents in order to support growth in the City while maintaining safe, reliable utility services for existing users. Collectively, these documents are referred to as the City's IWRMP.

A comprehensive update to the City's water, sewer and recycled water master plan documents was needed to forecast and update water and sewer demand projections, address changes in regulatory requirements, population and growth projections, proposed land use, climate change and other factors. The last comprehensive update of the City's water, sewer and recycled master plans were prepared in 2001 and they have been amended numerous times. A Water Supply

Study was prepared and adopted by the City in 2009 to serve as the basis for future water planning documents. A draft Water Master Plan was prepared for the City in 2013, but was never finalized and adopted. Over the course of time, numerous amendments to the master plans and changes have occurred that necessitate a comprehensive update to these documents.

The IWRMP has identified significant changes from previously approved master plan documents. Some of these changes include:

- Changes in demand factors for water, sewer and associated recycled water storage and disposal capacity.
- Changes in land use and growth projections from the General Plan.
- Closure of the Sharpe Army Depot and need for City to provide water and sewer service to the Army & Air Force Exchange Services (AAFES) and other organizations at the military base.
- Potential reductions to the City's water supply due to Sustainable Groundwater Management Act implementation, and curtailment of South San Joaquin Irrigation District surface water rights.
- Consolidation of existing proposed wastewater treatment facilities into a single facility and associated recycled water system used for land disposal of effluent.
- Need for additional treatment of groundwater for arsenic, manganese, uranium and other constituents of concern.

3. Project Description

The proposed project includes adoption and implementation of the IWRMP, which includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan. Each of these Plans is discussed in detail below.

A. WATER SYSTEM MASTER PLAN

The Water System Master Plan focuses on development of water demand unit factors and projections, hydraulic assessment of the City's existing water infrastructure and key planned improvements, and development of recommended water system capital improvement projects (CIPs). Recommended CIPs were developed to support the City's water supply strategy and address the deficiencies identified in the hydraulic assessment. A project was developed to address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of supply sources within the City's distribution system.

Table 1 in the Initial Study summarizes all the identified capacity improvement projects and their estimated planning level opinion of probable costs (OPCs).

B. WASTEWATER SYSTEM MASTER PLAN

The Wastewater System Master Plan focuses on development of wastewater flow unit factors and projections, hydraulic assessment of the City's existing infrastructure and key planned conveyances, and development of recommended wastewater CIPs.

Recommended CIPs were developed to address the potential deficiencies identified in the hydraulic assessment. For each identified gravity sewer capacity deficiency, a project was developed to remove and replace the existing pipe with a larger diameter pipe. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Proposed increases in pipe diameters were optimized to meet the applicable criteria, while preventing oversizing and resulting low velocities during dry weather conditions. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. EKI has also suggested installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas.

Table 2 in the Initial Study summarizes all the identified collection system improvement projects, including location, proposed improvements, estimated planning level costs, and alternatives.

C. Recycled Water System Master Plan

The Recycled Water System Master Plan focuses on an evaluation of recycled water use and disposal alternatives, recycled water balance analyses, hydraulic assessment of the City's existing recycled infrastructure and key planned improvements, and development of recommended recycled water system improvements and operational recommendations.

The City's recycled water system supports the disposal of the effluent produced by the City-owned Lathrop Consolidated Treatment Facility (CTF). When the draft of the Recycled Water System Master Plan was published in March 2018, the recycled water system had a disposal capacity of 1.0 million gallons per day (MGD) and included seven agricultural land application areas (LAAs; A23, A28, A30, A31, A35, A35b, and A35c), nine storage ponds (S1, S2, S3, S5, S6, S16, A, B, and C), their associated pump stations (PMP1, PMP2, PMP3, PMP10, and the Crossroads PMP), and approximately 30.3 miles of recycled water pipeline. This infrastructure supported the recent Phase 1 expansion of the Lathrop CTF and is referred to as "existing" or "Phase 1" infrastructure herein.

The City is currently expanding its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF, which will increase the Lathrop CTF treatment capacity and disposal capacity to 2.5 MGD. For purposes of this evaluation, it was assumed that the Phase 2 recycled water system expansion would be completed in two phases: Phases 2A and 2B. Phase 2A improvements were based on the planned initial infrastructure improvements as of October 2017, which were planned to provide a disposal capacity of 1.9 MGD. Phase 2B facilities would expand the disposal capacity to the full 2.5 MGD CTF Phase 2 treatment capacity.

Planned Phase 2A improvements included an expansion of the recycled water distribution network and the addition of a new lined recycled water storage pond (S28), a new percolation pond (PB-1), two new agricultural LAAs (A34 and A36), and a new pump station (RI-PS) that supplies recycled water to a private distribution system serving landscape irrigation use areas in the River Islands development area.

During 2017 and 2018, the Phase 2A improvements were implemented, with the exception that LAA A34 was not constructed. This resulted in an interim disposal capacity of approximately 1.55 MGD. In late 2018, LAA A34 was constructed, but as of December 2018, the permitting has not yet been performed to increase the disposal capacity to approximately 1.9 MGD.

In late 2018, there were some developments that may affect the phasing of the recycled water capacity as well as the configuration of Phase 2B. These developments include the possible removal or replacement of selected storage ponds and/or LAAs. These removals and/or replacements were not anticipated at the time of the original drafting of the Recycled Water System Master Plan and are therefore not considered in the analysis included in the Master Plan.

The hydraulic assessment of the distribution system indicated that the distribution system pipelines are adequately sized to meet performance criteria through Phase 2B. The Recycled Water System Master Plan identified the following improvements that should be implemented during the Phase 2A expansion, in addition to those currently under construction:

- Conversion of the low-pressure PMP-10 to a high-pressure pump station should be completed as soon as possible to be able to effectively convey recycled water from S16. This improvement is anticipated to be funded by developers.
- Installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs. Costs for these improvements were estimated to be $480,000, not inclusive of estimated contingencies (PACE, 2018).
- Establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Costs have not been estimated for these operational improvements.

For expansion of permitted recycled water uses in Phase 2B, the Recycled Water System Master Plan recommends the following improvements, in addition to those already planned:

- Increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5). This improvement is anticipated to be funded by developers.
- Install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B. This improvement is anticipated to be funded by developers.

Alternative uses of recycled water were evaluated in Phase 2B and beyond, including increased percolation and winter river discharge. These alternatives have the potential to provide increased water supply benefits and reduce the areas required for recycled water storage and disposal. The Recycled Water System Master Plan recommends that the City initiate a percolation study to assess locations in the City which have suitable soils for a percolation. The Plan also recommends that the City initiate discussion with the Regional Water Quality Control Board (RWQCB) to better assess the potential for a river discharge permit.

D. SCADA Towers and Generators

Generators would be provided in conjunction with the proposed water pump station improvements shown in Table 1 of the Initial Study. The generators will be added as the new essential facilities are constructed and brought on-line, such as the CLSP water tank, River Islands water tank/SSJID turnout, and sewer pump stations (see Table 2 of the Initial Study). The generators would all be for emergency operations in the event of a power outage, and would only be run for maintenance and air quality permit testing requirements.

The generators would typically be enclosed within a building or semi-enclosed within a masonry wall enclosure in order to help attenuate noise. The type of enclosure would depend on the location. For example, generators near residential areas would be semi-enclosed or enclosed within a building, and generators in non-residential may not be enclosed.

Additionally, SCADA communication towers would also be provided. Currently, SCADA towers are located at the City of Lathrop Corporation Yard (2112 E. Louise Avenue), the City of Lathrop City Hall (390 Town Centre Drive), the Lathrop Consolidated Treatment Facility (LCTF) (18800 Christopher Way), and at a few other locations in the River Islands and CLSP development areas. The proposed SCADA towers are required in order to provide a line-of-sight for radio communications between the facilities. The towers would be 50- to 100-feet in height, or taller.

4. Uses of the EIR and Required Agency Approvals

A more detailed description of the required agency approvals is provided in the Initial Study.

5. Project Alternatives

The exact alternatives that will be evaluated in the Draft EIR will be determined through the Notice of Preparation and Scoping Process.

Areas of Potential Impacts: With the exception of the environmental topics dismissed in the Initial Study (see below), the EIR will analyze all other topics identified in Appendix G of the State CEQA Guidelines: Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Tribal Cultural Resources, Utilities, Cumulative Impacts, and Growth Inducing Impacts.

Initial Study: An Initial Study has been prepared for this Project. All environmental topics identified in Appendix G of the State CEQA Guidelines were analyzed in the Initial Study. The Initial Study concluded that the proposed Project would have no impacts or less-than-significant impacts related to: Aesthetics, Agriculture and Forestry Resources, Air Quality, Energy, Greenhouse Gases, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, and Wildfire.

Date: 2/4/19

Signature: G Gibson

Name/Title: Greg Gibson, Senior Civil Engineer

Phone/Email: (209) 941-7442 / ggibson@ci.lathrop.ca.us

TABLE OF CONTENTS

This page left intentionally blank.

INITIAL STUDY CHECKLIST

PROJECT TITLE

Lathrop Integrated Water Resources Master Plan

LEAD AGENCY NAME AND ADDRESS

City of Lathrop
Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330

CONTACT PERSON AND PHONE NUMBER

Greg Gibson, Senior Civil Engineer
City of Lathrop
Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330
ggibson@ci.lathrop.ca.us
(209) 941-7442

PROJECT LOCATION AND SETTING

The Lathrop Integrated Water Resources Master Plan (IWRMP) project site (project site) is located throughout Lathrop, California. See Figures 1 and 2 for the regional location and the project vicinity. The IWRMP includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The City of Lathrop is located in San Joaquin County, approximately 10 miles south of the City of Stockton and directly west of the City of Manteca. The City lies east of the Coastal Range that separates California's Central Valley from the San Francisco Bay Area. Interstate 5 (I-5), a major north-south interstate corridor, bisects the City. The City is also connected by State Route (SR) 120 which runs east-west through the southeastern-most part of the City, and by Interstate 205, which connects Interstate 580 to I-5. The City is also served by the Altamont Commuter Express (ACE) train, which travels along the southern and eastern border of the City. The community was originally developed primarily east of I-5. However, most major new developments have recently been constructed west of I-5 and others are currently planned or under construction in this area.

The City is relatively flat with natural gentle slope from east to west. The City's topography has an average elevation of approximately 20 feet above sea level.

The City's water service area is generally contiguous with the City limits and includes the railroad cargo container commercial enterprise that is outside of the City limits. The City's wastewater collection system service area is generally contiguous with the City limits. The City's existing recycled water distribution system is generally contiguous with the City limits and includes some facilities north of the City limits. See Figure 3 for the water system improvements projects included in the proposed Water System Master Plan, Figure 4 for the wastewater system improvements projects included in the proposed Wastewater System Master Plan, and Figures 5, 6, and 7 for the Phase 1, Phase 2A, and Phase 2B recycled water system infrastructure projects included in the proposed Recycled Water System Master Plan, respectively.

PROJECT BACKGROUND

For the past year, the City has been working to prepare a comprehensive update to the City's water, sewer and recycled water master plan documents in order to support growth in the City while maintaining safe, reliable utility services for existing users. Collectively, these documents are referred to as the City's IWRMP.

A comprehensive update to the City's water, sewer and recycled water master plan documents was needed to forecast and update water and sewer demand projections, address changes in regulatory requirements, population and growth projections, proposed land use, climate change and other factors. The last comprehensive update of the City's water, sewer and recycled master plans were prepared in 2001 and they have been amended numerous times. A Water Supply Study was prepared and adopted by the City in 2009 to serve as the basis for future water planning documents. A draft Water Master Plan was prepared for the City in 2013, but was never finalized and adopted. Over the course of time, numerous amendments to the master plans and changes have occurred that necessitate a comprehensive update to these documents.

The IWRMP has identified significant changes from previously approved master plan documents. Some of these changes include:

- Changes in demand factors for water, sewer and associated recycled water storage and disposal capacity.
- Changes in land use and growth projections from the General Plan.
- Closure of the Sharpe Army Depot and need for City to provide water and sewer service to the Army & Air Force Exchange Services (AAFES) and other organizations at the military base.
- Potential reductions to the City's water supply due to Sustainable Groundwater Management Act implementation, and curtailment of South San Joaquin Irrigation District surface water rights.
- Consolidation of existing proposed wastewater treatment facilities into a single facility and associated recycled water system used for land disposal of effluent.
- Need for additional treatment of groundwater for arsenic, manganese, uranium and other constituents of concern.

PROJECT DESCRIPTION

The proposed project includes adoption and implementation of the IWRMP, which includes the improvement projects summarized in the proposed Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan. Each of these Plans is discussed in detail below.

Water System Master Plan

The Water System Master Plan focuses on development of water demand unit factors and projections, hydraulic assessment of the City's existing water infrastructure and key planned improvements, and development of recommended water system capital improvement projects (CIPs). Recommended CIPs were developed to support the City's water supply strategy and address the deficiencies identified in the hydraulic assessment. A project was developed to address each identified fire flow capacity deficiency, either by replacing existing mains, installing new mains, or replacing undersized hydrants. Additional projects were developed to improve transmission of supply sources within the City's distribution system.

Table 1 summarizes all the identified capacity improvement projects and their estimated planning level opinion of probable costs (OPCs).

Table 1: Summary of Recommended Water System Capital Improvement Projects

Project #	Project	Time Frame[1]	Addresses Fire Flow Deficiency	Total Project OPC[2,3]
Water Supply Improvements				
WS-1	SGMA Compliance[4]	Existing	--	$300,000
WS-2	SSJID Turnout Emergency Backup Power[5]	Near-Term	--	$770,000
WS-3	Well 21 WTF Phase 2 Improvements[6]	Near-Term	--	$1,300,000
WS-4	Well 21 WTF Tank, BPS, and Transmission Main[7]	Near-Term	--	$5,520,000
WS-5	SCWSP Phase 2	Near-Term	--	$23,200,000
WS-6	SSJID Turnout 2 Expansion[5]	Long-term	--	$3,680,000
			Total Water Supply Improvements OPC	*$34,770,000*
Water Distribution System Improvements				
WD-1	Booster Pump Station 1 Pipeline Replacement and Residential Fire Flow Improvement Project	Existing	Yes	$1,200,000
WD-2	Booster Pump Station 3 Pipeline Replacement and Harlan Rd. Fire Flow Improvement Project	Existing[8]	Yes	$1,510,000
WD-3	Northern McKinley Industrial Area Fire Flow Improvement Project	Existing	Yes	$1,290,000
WD-4	Old Harlan Fire Flow Improvement Project	Existing	Yes	$110,000
WD-5	Crossroads Fire Flow Improvement Project	Existing	Yes	$50,000
WD-6	McKinley Ave. and E. Louise Ave. Fire Flow Improvement Project	Existing	Yes	$80,000
WD-7	Booster Pump Station 2 Pipeline Replacement Project	Existing	No	$230,000
WD-8	LAWTF Transmission Improvement Project	Existing[9]	No	$2,890,000
WD-9	Sadler Oak Transmission Improvement Project	Near-Term[10]	No	$360,000
WD-10	SSJID Transmission Improvement Project	Long-Term[11]	No	$1,630,000
			Total Water Distribution System Improvements OPC	*9,350,000*
			Total Water Distribution Supply and System Improvements OPC	***44,120,000***

NOTES: [1] TIME FRAME REFERS TO WHEN PROJECTS ARE IDENTIFIED TO BE REQUIRED.

[2] COSTS SHOWN ARE PRESENTED IN NOVEMBER 2018 DOLLARS BASED ON AN ENR CCI OF 11,183 (20-CITY AVERAGE), WITH TOTALS ROUNDED TO THE NEAREST $10,000.

[3] COSTS INCLUDE MARK-UPS EQUAL TO 60% FOR CONSTRUCTION CONTINGENCY (25%), DESIGN (10%), CONSTRUCTION MANAGEMENT (10%), PERMITTING (10%), AND PROJECT IMPLEMENTATION (5%).

[4] THE CITY'S CURRENT BUDGET FOR SGMA COMPLIANCE HAS BEEN RETAINED HEREIN, BUT WILL BE REEVALUATED IN THE FUTURE TO ADDRESS THE FINAL RESULT OF THE BASIN BOUNDARY MODIFICATION REQUEST AND THE LEVEL OF EFFORT IDENTIFIED IN THE GSP FOR IMPLEMENTATION.

[5] CONSTRUCTION COSTS FOR IMPROVEMENTS HAVE BEEN CARRIED OVER FROM ESTIMATES IN THE 2013 DRAFT WATER MASTER PLAN, ESCALATED TO NOVEMBER 2018 DOLLARS.

[6] CONSTRUCTION COSTS FOR WELL 21 WTF PHASE 2 IMPROVEMENTS REFLECT THE CURRENT ENGINEER'S ESTIMATE PREPARED BY H2O URBAN SOLUTIONS IN JULY 2017, ESCALATED TO NOVEMBER 2018 DOLLARS. NOTE THAT THE RAW WATER LINE FROM MCKINLEY TO WELL 21 MAY BE CONSTRUCTED IN PHASE 1.

[7] CONSTRUCTION COSTS FOR WELL 21 WTF TANK AND BPS REFLECT THE CURRENT ENGINEER'S ESTIMATE PREPARED BY H2O URBAN SOLUTIONS IN JULY 2017, ESCALATED TO NOVEMBER 2018 DOLLARS. TRANSMISSION LINE COST REFLECT THE IWRMP UNIT PIPELINE COSTS FOR UNDEVELOPED AREAS.

[8] THE BPS-3 PIPELINE REPLACEMENT IS SIZED TO ADDRESS HEAD LOSS DEFICIENCIES INCREASED BY CENTRAL LATHROP SPECIFIC PLAN (CLSP) DEVELOPMENT.

[9] THE LAWTF TRANSMISSION IMPROVEMENT PROJECT IMPROVES TRANSMISSION CAPABILITIES AND SUPPLY RESILIENCY BETWEEN THE LAWTF AND THE MOSSDALE, RIVER ISLANDS, AND CLSP DEVELOPMENT AREAS.

[10] THE SADLER OAK TRANSMISSION IMPROVEMENT PROJECT TRANSMISSION CAPABILITIES AND SUPPLY RESILIENCY BETWEEN TANK 4 AND RIVER ISLANDS AND SOUTH LATHROP.

[11] THE SOUTH SAN JOAQUIN IRRIGATION DISTRICT (SSJID) TRANSMISSION IMPROVEMENT PROJECT TRANSMISSION CAPABILITIES AND SUPPLY RESILIENCY BETWEEN SSJID TURNOUT 1 AND CLSP AND ADDRESS HEAD LOSS DEFICIENCIES WHICH ARE WORSENED BY INCREASED DEMAND CONDITIONS WEST OF I-5.

SOURCE: CITY OF LATHROP WATER SYSTEM MASTER PLAN, TABLE ES-2.

Wastewater System Master Plan

The Wastewater System Master Plan focuses on development of wastewater flow unit factors and projections, hydraulic assessment of the City's existing infrastructure and key planned conveyances, and development of recommended wastewater CIPs.

Recommended CIPs were developed to address the potential deficiencies identified in the hydraulic assessment. For each identified gravity sewer capacity deficiency, a project was developed to remove and replace the existing pipe with a larger diameter pipe. Existing pipe slopes and depths were preserved when upsizing sewers in-place. Proposed increases in pipe diameters were optimized to meet the applicable criteria, while preventing oversizing and resulting low velocities during dry weather conditions. Improvements were also identified to address the potential deficiency at the City's pump stations, including construction of parallel force mains and/or pump upgrades. EKI has also suggested installation of permanent flow meter and flow monitoring programs in the Historic Lathrop and Crossroads areas.

Table 2 summarizes all the identified collection system improvement projects, including location, proposed improvements, estimated planning level costs, and alternatives.

Table 2: Summary of Recommended Wastewater System Capital Improvement Projects

Project #	***Project***	***Time Frame***	***Addresses Modeled Surcharging in Existing Scenario***	***Total Project OPC[1]***
Treatment Facility Improvement				
WWT-1	Lathrop CTP Expansion to 5.0 MGD	Existing	--	$36,000,000[3]
Collection System Improvements				
WW-1	Stonebridge Gravity Main Replacement and Pump Station Upgrade	Existing	No	700,000
WW-2A	Woodfield West Deficiency Project - Alternative A	Existing[2]	No	2,240,000
WW-2B	Woodfield West Deficiency Project - Alternative B	Existing[2]	No	1,970,000
WW-3	Woodfield Pump Station Upgrade	Existing[2]	No	720,000
WW-4	J St. Gravity Main Replacement Project	Existing[2]	Yes	1,390,000
WW-5	Easy Ct. / O St. Gravity Main Replacement Project	Existing	No	1,130,000
WW-6	O St. Pump Station Upgrade	Existing	No	1,280,000
WW-7	Crossroads Gravity Main Replacement Project	Near-Term Future	No	1,690,000
			Collection System CIP Cost Subtotal	*$8,880,000 to $9,150,000*
	Miscellaneous Collection System Project			
WW-8	Temporary Flow Monitoring	--	--	$100,000
			Total CIP Cost	***$44,980,000 to $45,250,000***

NOTES: [1] COSTS SHOWN ARE PRESENTED IN NOVEMBER 2018 DOLLARS BASED ON AN ENR CCI OF 11,184 (20-CITY AVERAGE).

[2] PROJECT ADDRESSES EXISTING DEFICIENCIES, HOWEVER FUTURE DEVELOPMENT INFLUENCES RECOMMENDED PIPE OR PUMP SIZES TO BE INSTALLED.

[3] TOTAL PROJECT OPC CONSISTS OF CONSTRUCTION OPC DEVELOPED BASED ON A UNIT COST OF $9 PER GALLON ADDITIONAL ADWF CAPACITY, 25% CONSTRUCTION CONTINGENCY, AND 35% ENGINEERING AND ADMINISTRATION COSTS.

SOURCE: CITY OF LATHROP WASTEWATER SYSTEM MASTER PLAN, TABLE ES-2.

Recycled Water System Master Plan

The Recycled Water System Master Plan focuses on an evaluation of recycled water use and disposal alternatives, recycled water balance analyses, hydraulic assessment of the City's existing

recycled infrastructure and key planned improvements, and development of recommended recycled water system improvements and operational recommendations.

The City's recycled water system supports the disposal of the effluent produced by the City-owned Lathrop Consolidated Treatment Facility (CTF). When the draft of the Recycled Water System Master Plan was published in March 2018, the recycled water system had a disposal capacity of 1.0 million gallons per day (MGD) and included seven agricultural land application areas (LAAs; A23, A28, A30, A31, A35, A35b, and A35c), nine storage ponds (S1, S2, S3, S5, S6, S16, A, B, and C), their associated pump stations (PMP1, PMP2, PMP3, PMP10, and the Crossroads PMP), and approximately 30.3 miles of recycled water pipeline. This infrastructure supported the recent Phase 1 expansion of the Lathrop CTF and is referred to as "existing" or "Phase 1" infrastructure herein.

The City is currently expanding its recycled water distribution system to meet disposal requirements for the Phase 2 expansion of the Lathrop CTF, which will increase the Lathrop CTF treatment capacity and disposal capacity to 2.5 MGD. For purposes of this evaluation, it was assumed that the Phase 2 recycled water system expansion would be completed in two phases: Phases 2A and 2B. Phase 2A improvements were based on the planned initial infrastructure improvements as of October 2017, which were planned to provide a disposal capacity of 1.9 MGD. Phase 2B facilities would expand the disposal capacity to the full 2.5 MGD CTF Phase 2 treatment capacity.

Planned Phase 2A improvements included an expansion of the recycled water distribution network and the addition of a new lined recycled water storage pond (S28), a new percolation pond (PB-1), two new agricultural LAAs (A34 and A36), and a new pump station (RI-PS) that supplies recycled water to a private distribution system serving landscape irrigation use areas in the River Islands development area.

During 2017 and 2018, the Phase 2A improvements were implemented, with the exception that LAA A34 was not constructed. This resulted in an interim disposal capacity of approximately 1.55 MGD. In late 2018, LAA A34 was constructed, but as of December 2018, the permitting has not yet been performed to increase the disposal capacity to approximately 1.9 MGD.

In late 2018, there were some developments that may affect the phasing of the recycled water capacity as well as the configuration of Phase 2B. These developments include the possible removal or replacement of selected storage ponds and/or LAAs. These removals and/or replacements were not anticipated at the time of the original drafting of the Recycled Water System Master Plan and are therefore not considered in the analysis included in the Master Plan.

The hydraulic assessment of the distribution system indicated that the distribution system pipelines are adequately sized to meet performance criteria through Phase 2B. The Recycled Water System Master Plan identified the following improvements that should be implemented during the Phase 2A expansion, in addition to those currently under construction:

- Conversion of the low-pressure PMP-10 to a high-pressure pump station should be completed as soon as possible to be able to effectively convey recycled water from S16. This improvement is anticipated to be funded by developers.
- Installation of flow meters and automatic control valves with radio telemetry at each LAA turnout location to facilitate automated delivery of recycled water to the LAAs. Costs for these improvements were estimated to be $480,000, not inclusive of estimated contingencies (PACE, 2018).

- Establish Supervisory Control and Data Acquisition (SCADA) controls on pump and storage ponds to automate system operations. Costs have not been estimated for these operational improvements.

For expansion of permitted recycled water uses in Phase 2B, the Recycled Water System Master Plan recommends the following improvements, in addition to those already planned:

- Increase the capacity of PMP-1 in conjunction with the installation of Pond S-X (located directly north of S5). This improvement is anticipated to be funded by developers.
- Install a new pond and pump station in the western portion of the City, potentially at locations S13 and PMP6, to meet storage requirements and to meet system pressure criteria in Phase 2B. This improvement is anticipated to be funded by developers.

Alternative uses of recycled water were evaluated in Phase 2B and beyond, including increased percolation and winter river discharge. These alternatives have the potential to provide increased water supply benefits and reduce the areas required for recycled water storage and disposal. The Recycled Water System Master Plan recommends that the City initiate a percolation study to assess locations in the City which have suitable soils for a percolation. The Plan also recommends that the City initiate discussion with the Regional Water Quality Control Board (RWQCB) to better assess the potential for a river discharge permit.

SCADA Towers and Generators

Generators would be provided in conjunction with the proposed water pump station improvements shown above in Table 1. The generators will be added as the new essential facilities are constructed and brought on-line, such as the CLSP water tank, River Islands water tank/SSJID turnout, and sewer pump stations (see Table 2 above). The generators would all be for emergency operations in the event of a power outage, and would only be run for maintenance and air quality permit testing requirements.

The generators would typically be enclosed within a building or semi-enclosed within a masonry wall enclosure in order to help attenuate noise. The type of enclosure would depend on the location. For example, generators near residential areas would be semi-enclosed or enclosed within a building, and generators in non-residential may not be enclosed.

Additionally, SCADA communication towers would also be provided. Currently, SCADA towers are located at the City of Lathrop Corporation Yard (2112 E. Louise Avenue), the City of Lathrop City Hall (390 Town Centre Drive), the Lathrop Consolidated Treatment Facility (LCTF) (18800 Christopher Way), and at a few other locations in the River Islands and CLSP development areas. The proposed SCADA towers are required in order to provide a line-of-sight for radio communications between the facilities. The towers would be 50- to 100-feet in height, or taller.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The City of Lathrop is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050.

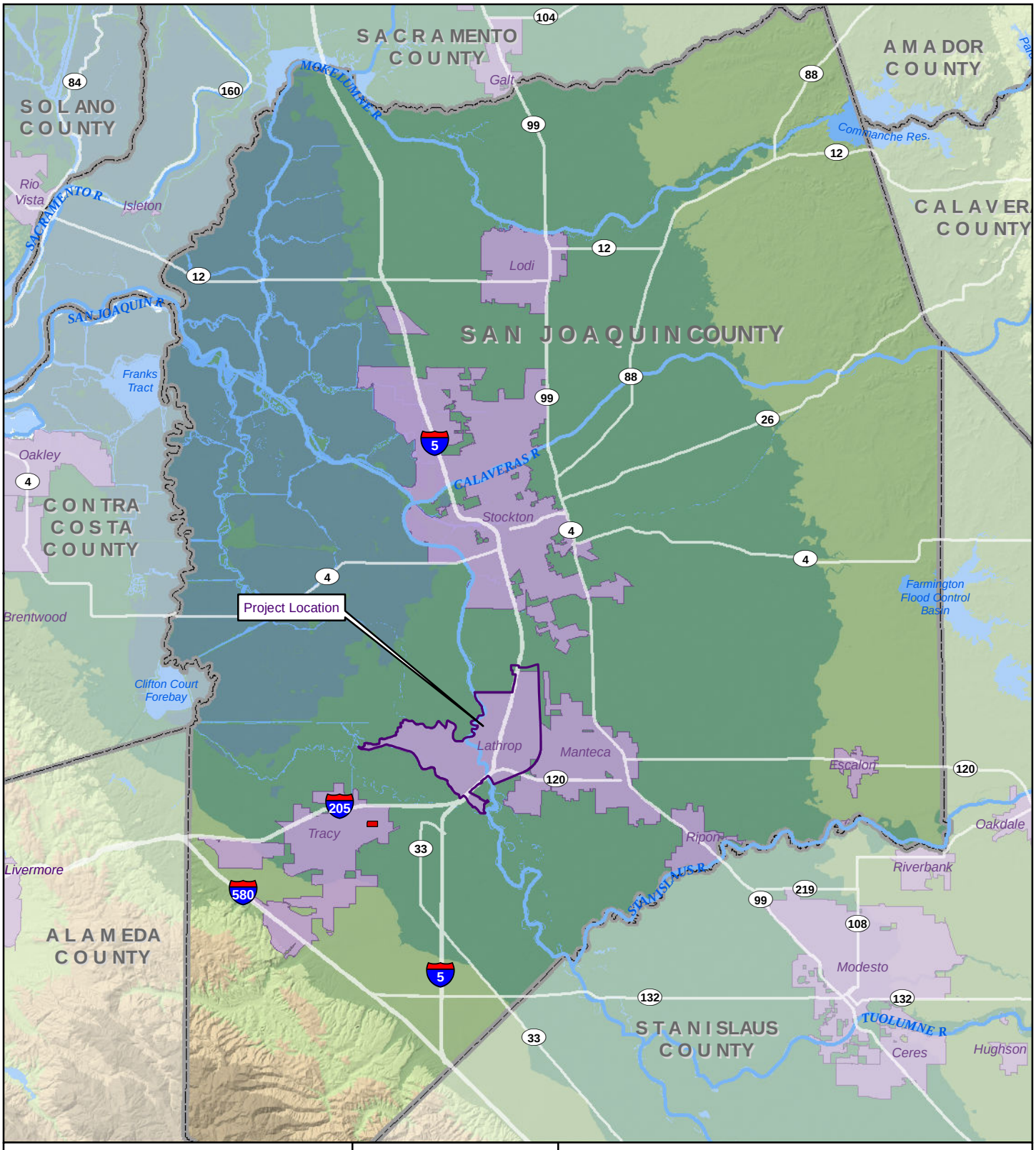
This document will be used by the City of Lathrop to take the following actions:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- City review and approval of the Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan.

The following agencies may be required to issue permits or approve certain aspects of the proposed project:

- RWQCB – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES);
- RWQCB – The Storm Water Pollution Prevention Plan (SWPPP) would be required to be approved prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Approval of construction-related air quality permits;
- San Joaquin Council of Governments (SJCOG) – Review of project application to determine consistency with the San Joaquin County Multi-Species Habitat, Conservation, and Open Space Plan (SJMSCP).

This page left intentionally blank.



Legend

City Area

County Boundary

0 2½ 5

Miles

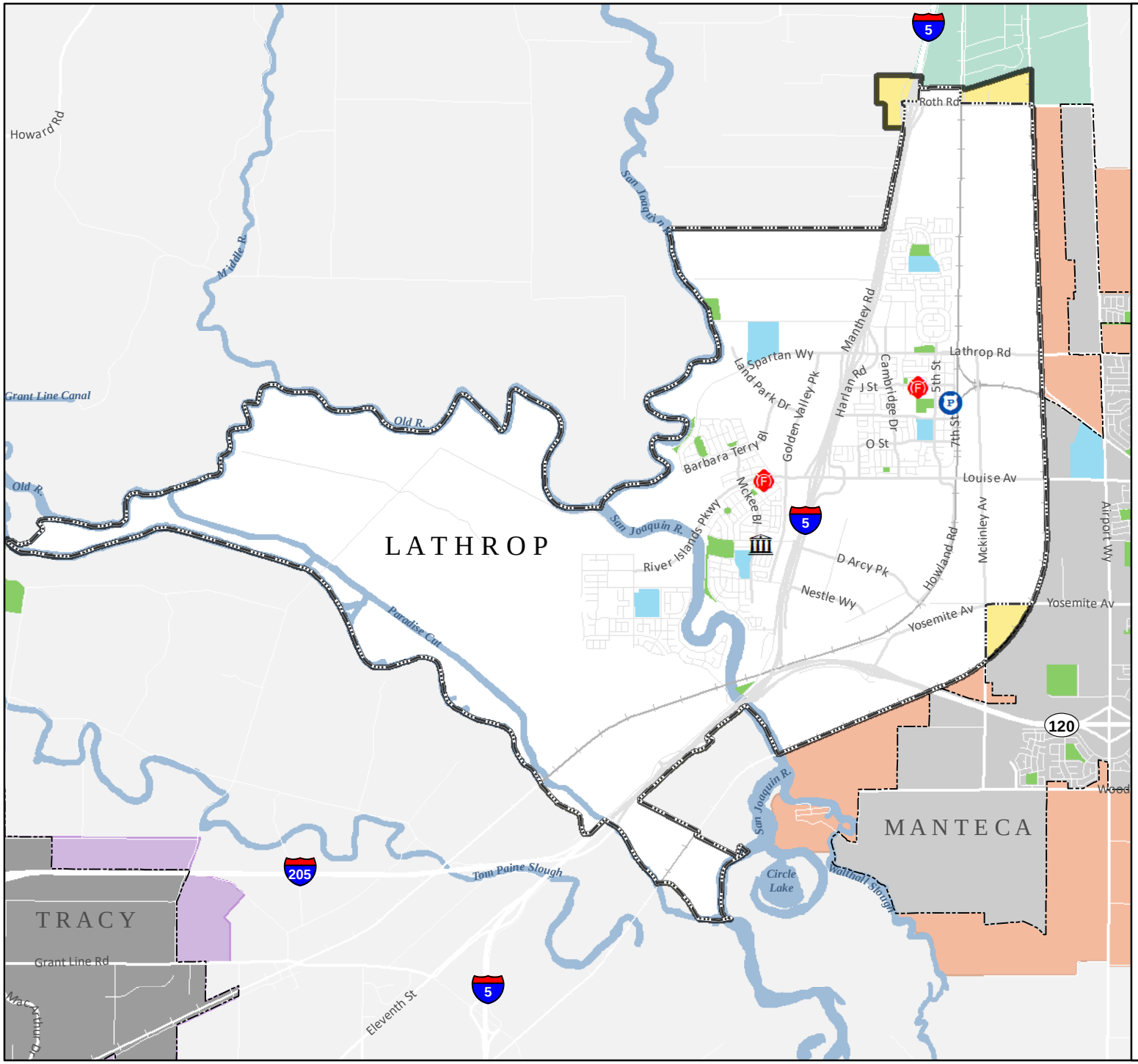
Sources: CalAtlas; Sacramento County, San Joaquin County, Solano County, Contra Costa County, Alameda County, Stanislaus County.
Map date: January 27, 2019

LATHROP INTEGRATED WATER RESOURCES MASTER PLAN

Figure 1. Regional Location Map

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

This page left intentionally blank.



LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

Figure 2. Vicinity Map

Legend

- Project Boundary

CityLimits

- Lathrop
- Manteca
- Tracy

Spheres Of Influence

- Lathrop
- Manteca
- Tracy
- Stockton

Places of Interest

- City Hall
- Fire Station
- Police Department
- Public Park
- Public School

N

0 ½ 1
Miles

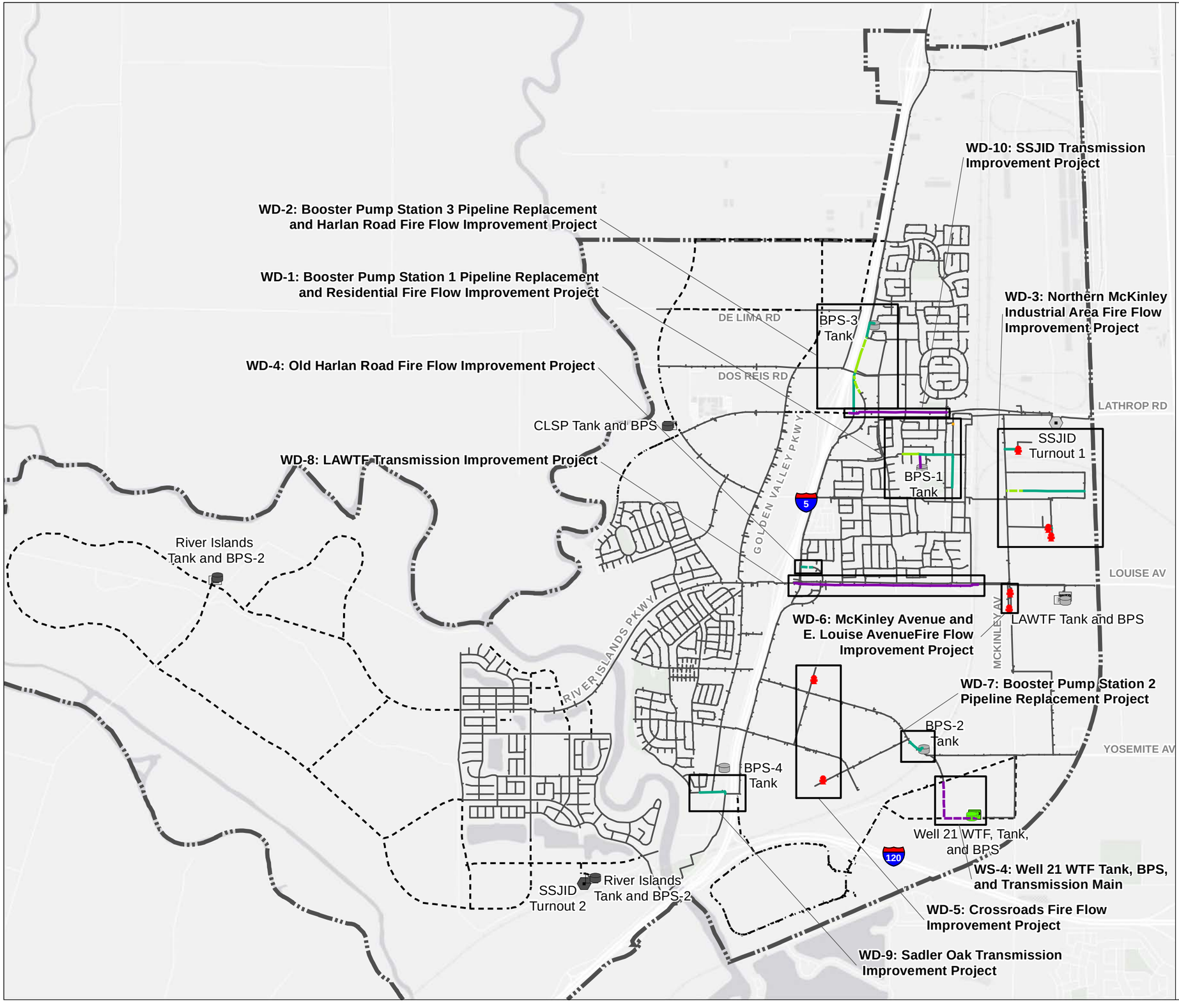
Sources: San Joaquin County; Google Maps. Map date: January 27, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 3.
Water System Improvement Projects



Legend

- Sphere of Influence

Existing Infrastructure

- Treatment Plant
- Pump Station
- Enclosed Storage Facility
- SSJID Turnout
- Existing Pipe

Future Infrastructure

- Future Pump Station
- Future Enclosed Storage Facility
- Future SSJID Turnout
- Future Pipe

Recommended CIPS

- Replace existing hydrant with 8-inch hydrant & lateral
- Future Pump Station
- Future Enclosed Storage Facility
- Future SSJID Turnout

Replacement Pipe, inches

- 6
- 8
- 12
- 16

New Pipe, inches

- 6
- 8
- 12
- 16

N

0 3,000 6,000

(Scale in Feet)

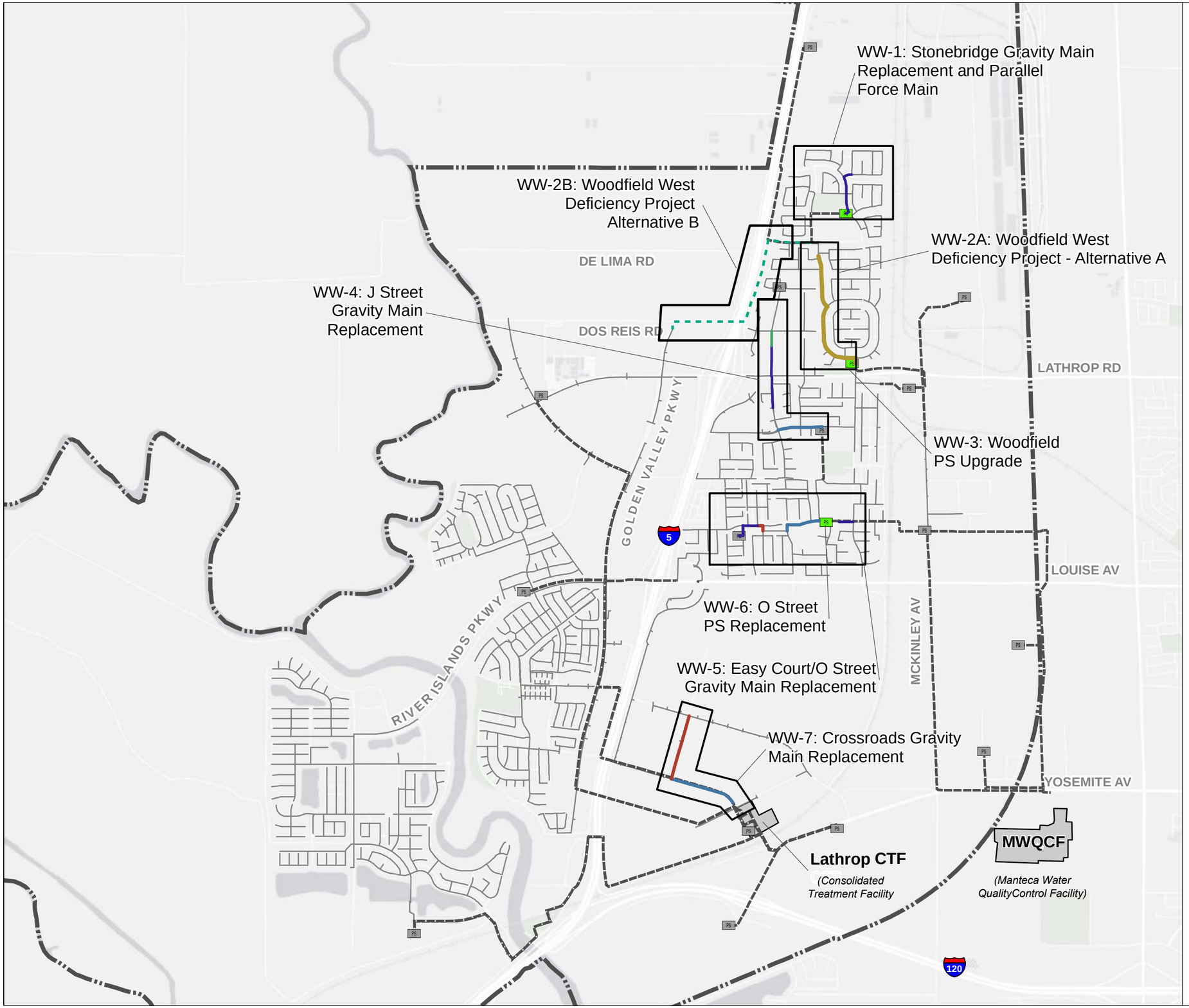
Source: eki environment & water, Recommended Water System Improvement Projects, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES MASTER PLAN

Figure 4.
Wastewater System Improvement Projects



Legend

- Sphere of Influence
- Approximate Area of WWTF
- Pump Station or Lift Station
- Pump Station or Lift Station Upgrade
- Force Main
- Gravity Main

Diameter of Replacement Sewer

- 8"
- 10"
- 12"
- 15"
- 18"

Diameter of New Force Main

- 6"

N

0 2,500 5,000

(Scale in Feet)

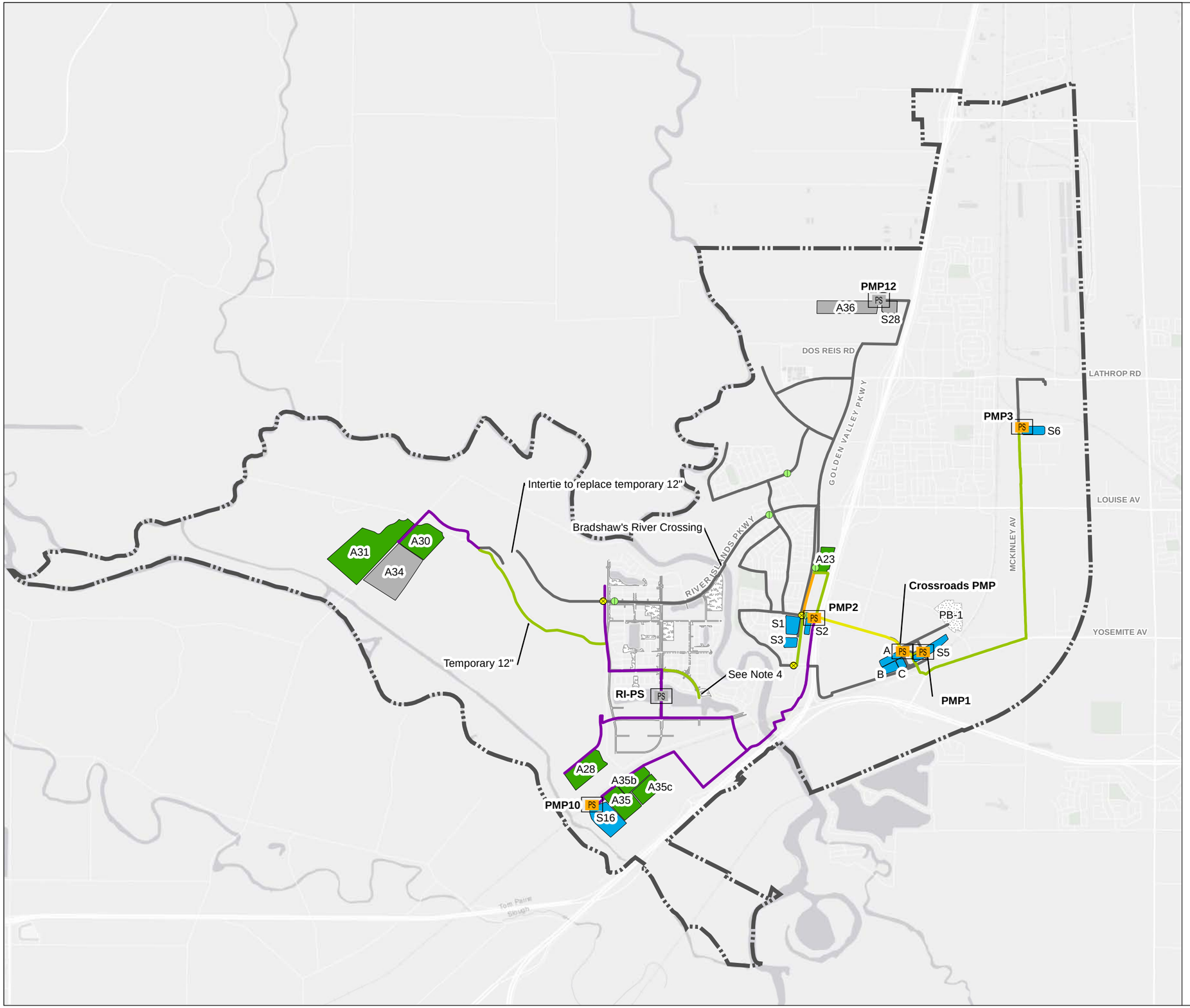
Source: eki environment & water, Recommended Collections System Improvement Projects, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 5.
Phase 1 Recycled Water System Infrastructure Projects



Legend

Pipe Diameter, Inches

- 6
- 8
- 10
- 12
- 16
- 18
- 20
- 24
- Inactive Pipe

Recycled Water Ponds

- Phase 1
- Inactive (Phase 2A)

Percolation Basins

- Inactive (Phase 2A)

Agricultural Irrigation Use Areas

- Phase 1
- Inactive (Phase 2A)

Landscape Irrigation Use Areas

- Inactive (Phase 2A)

Recycled Water Pump Stations

- PS Phase 1
- PS Inactive (Phase 2A)

Other Infrastructure

- Closed Valve
- Isolation Plate

N

0 4,000 8,000

(Scale in Feet)

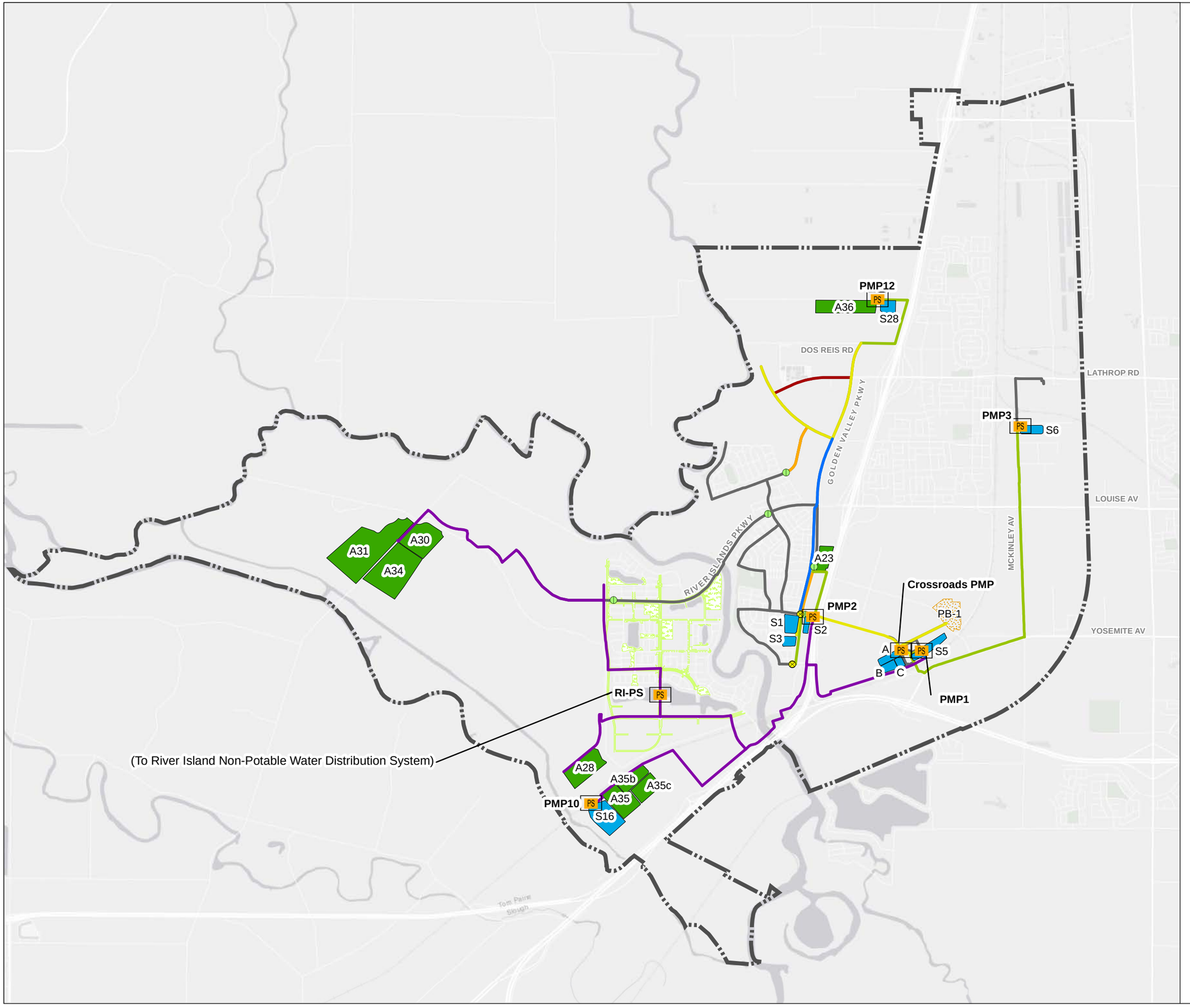
Source: eki environment & water, Phase 1 Recycled Water Systems Infrastructure, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 6.
Phase 2A Recycled Water System Infrastructure Projects



Legend

Sphere of Influence

Pipe Diameter, Inches

6
8
10
12
16
18
20
24
Inactive Pipe

Recycled Water Distribution Infrastructure

Storage Pond
Percolation Basin
Land Application Area
Landscape Irrigation Area
PS Pump Station

Other Infrastructure

Closed Valve
Isolation Plate

N

0 4,000 8,000
(Scale in Feet)

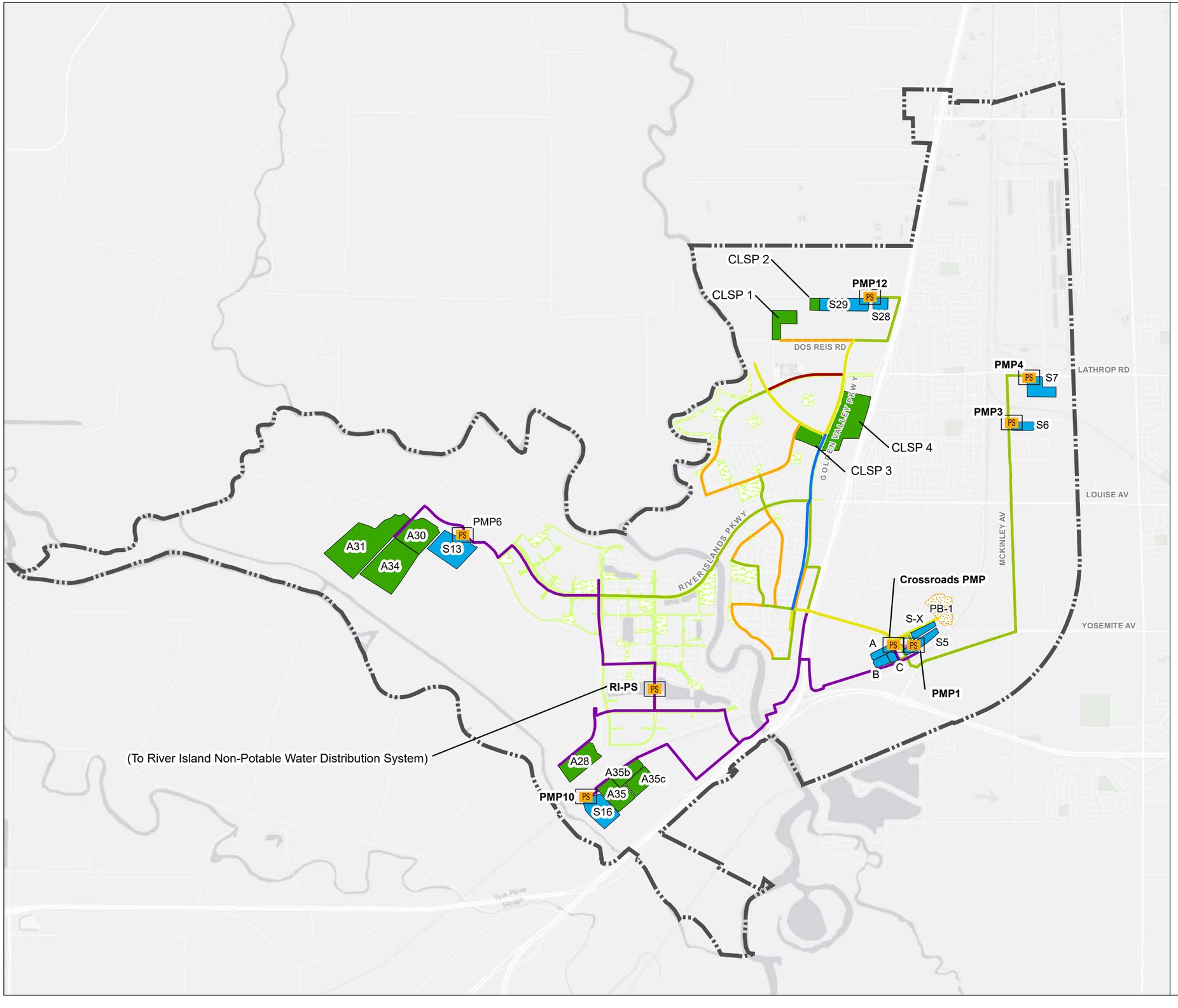
Source: eki environment & water, Phase 2A Recycled Water Systems Infrastructure, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

LATHROP
INTEGRATED WATER RESOURCES
MASTER PLAN

Figure 7.
Phase 2B Recycled Water System Infrastructure Projects



Legend

Sphere of Influence

Pipe Diameter, Inches

6	16
8	18
10	20
12	24

Recycled Water Distribution Infrastructure

- Storage Pond
- Percolation Basin
- Land Application Area
- Landscape Irrigation Area
- PS Pump Station

Other Infrastructure

- Closed Valve
- Isolation Plate

N

0 4,000 8,000
(Scale in Feet)

Source: eki environment & water, Phase 2B Recycled Water Systems Infrastructure, December 2018. Map date: January 28, 2019.

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

This page left intentionally blank.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

Eight of the environmental factors listed below would have potentially significant impacts as a result of development of this project, as described on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
X	Biological Resources	X	Cultural Resources		Energy
X	Geology and Soils		Greenhouse Gasses	X	Hazards and Hazardous Materials
X	Hydrology and Water Quality		Land Use and Planning		Mineral Resources
	Noise		Population and Housing		Public Services
	Recreation		Transportation	X	Tribal Cultural Resources
X	Utilities and Service Systems		Wildfire	X	Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
X	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Greg Gibson, Senior Civil Engineer — 2/5/19

Signature — Date

EVALUATION INSTRUCTIONS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9) The explanation of each issue should identify:
    a) The significance criteria or threshold, if any, used to evaluate each question; and
    b) The mitigation measure identified, if any, to reduce the impact to less than significant.

EVALUATION OF ENVIRONMENTAL IMPACTS

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 21 environmental topic areas.

I. AESTHETICS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Responses to Checklist Questions

Responses a), c): The City of Lathrop General Plan does not specifically designate any scenic viewsheds within the city. The existing Lathrop General Plan does, however, note Lathrop's scenic environmental resources including the San Joaquin River environment, and scenic vistas of the Coast Range and the Sierra.

For analysis purposes, a scenic vista can be discussed in terms of a foreground, middleground, and background viewshed. The middleground and background viewshed is often referred to as the broad viewshed. Examples of scenic vistas can include mountain ranges, valleys, ridgelines, or water bodies from a focal point of the forefront of the broad viewshed, such as visually important trees, rocks, or historic buildings. An impact would generally occur if a project would change the view to the middle ground or background elements of the broad viewshed, or remove the visually important trees, rocks, or historic buildings in the foreground.

Development of the majority of the proposed improvements will not significantly disrupt views from public viewpoints. The project would result in development of infrastructure facilities within currently developed areas (i.e., existing roadway right-of-way), as well as development of agricultural irrigation use areas within existing agricultural or public areas. This would contribute to changes in the visual character of the site. However, the majority of the proposed alterations to the project site would be at the terrestrial ground level and would not be visible from surrounding areas.

However, some of the proposed improvements, including generators, storage pond berms, and SCADA communication towers, would be visible from surrounding areas. For example, some of the generators near residential areas would be enclosed within a building or semi-enclosed within a masonry wall enclosure in order to help attenuate noise. The vertical structures required for generators in residential areas, however, would blend with the built environment and would not significantly alter the visual character of the existing residential areas. Similarly, the storage pond berms would be approximately 12- to 15-feet in height. The storage ponds would be located in agricultural areas of the City or clustered near existing storage ponds and/or LAAs. As such, the proposed storage ponds would also blend with the built environment and would not significantly alter the visual character of the area.

The proposed SCADA towers would be 50- to 100-feet in height, or taller. The proposed towers would be visible from public viewpoints in the City. The towers would be visible from nearby residences and businesses in the City of Lathrop and portions of unincorporated San Joaquin County. From the perspective of some residents, the addition of the towers could degrade the existing visual character and/or quality of the site and its surroundings; however, absent significant scenic visual qualities in the vicinity, there would not be a significant impact.

Implementation of the project would not greatly alter the areas overall characteristics. Therefore, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response b): The project site is not located within view of a state scenic highway. Only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 from Interstate 5 to State Route 205. The City of Lathrop is not visible from this roadway segment. Therefore, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Implementation of the proposed project would have ***no impact*** relative to this topic.

Response d): There is a potential for the implementation of the proposed project to introduce new sources of light and glare into the project area in the short-term only. Contributors to light and glare impacts would include temporary construction lighting that would create ongoing light impacts to the area. Nighttime construction activities are not anticipated to be required as part of on-site roadway construction. Operational lighting would not likely be required. However, should outdoor lighting be required for operation of the facilities, the lighting would be subject to Section 17.73.010 of the City's Municipal Code, which requires lighting to be in good operating condition and fully-shielded. Therefore, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Responses to Checklist Questions

Response a): The majority of the project site is located on Urban and Built-Up Land, Vacant or Disturbed Land, or Farmland of Local Importance. Some of the proposed future improvements would be located on Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. The proposed project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Although some of the improvements (including water and recycled water pipes, land application areas for recycled water, and storage ponds for recycled water) would be located on Prime Farmland and Farmland of Statewide Importance, these listed improvements are considered agricultural uses.

The City currently provides recycled water to approximately seven land application areas, but plans to expand service to urban landscape irrigation areas. The City has approximately 222 acres of land application areas. These sites are generally sown with farm fodder crops such as rye grass or alfalfa. These sites are flood irrigated, with recycled water applied from a standpipe at the high side of the site. A mild slope directs water across the site. Return flows may be pumped from a tailwater return ditch to the high side of the site.

As noted in the Recycled Water System Master Plan, agricultural land application remains primarily a disposal method of the City's tertiary effluent but provides limited benefit to the City's water demand and supply portfolio. Currently the City staff manually operate the pumps to deliver recycled water to each land application areas when requested by the farmers. The City is planning to install a flow meter and automatic control valve with a radio telemetry system at each land application areas turnout to increase automation of system operations in Phase 2A.

New landscape irrigation areas will be added in River Islands as part of the Phase 2A CTF expansion. Landscape irrigation areas will include ornamental turf, shrubs, and trees along parkways, road medians, and parks. Crops are generally grown and harvested from a land

application area to take up wastewater constituents such as nitrogen and dissolved solids, as well as maintain roots which promote wastewater infiltration rates. When climatic conditions are favorable, double cropping a land application area can increase the uptake of wastewater constituents.

There will be a temporary impact to agricultural lands during construction of the water and recycled water pipes, land application areas for recycled water, and storage ponds for recycled water; however, once the pipelines are installed underground, the surface will be restored and remain available for agricultural use. Additionally, as detailed above, the land application areas and storage ponds are considered agricultural uses. The proposed project will not permanently convert any agricultural land. The farmers will still have access to surface lands with an underlying public utilities easement. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response b): The project site is not zoned for agricultural use nor is it under a Williamson Act contract. The proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response c): The project site is not forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526). The proposed project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response d): The project site is not forest land. The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response e): The project site contains agricultural land and developed land. As noted above, there will be a temporary impact to some agricultural lands during construction; however, once the pipelines are installed underground, the surface will be restored and remain available for agricultural use. The proposed project will not permanently convert any agricultural land. The farmers will still have access to surface lands with an underlying public utilities easement. Implementation of the proposed project would have ***no impact*** relative to this issue.

III. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?		X		
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Existing Setting

The project site is located within the San Joaquin Valley Air Pollution Control District (SJVAPCD). This agency is responsible for monitoring air pollution levels and ensuring compliance with federal and state air quality regulations within the San Joaquin Valley Air Basin (SJVAB) and has jurisdiction over most air quality matters within its borders.

Responses to Checklist Questions

Responses a-c): Air quality emissions would be generated during construction of the proposed project. Operational emissions would be negligible as the project does not propose any new structures or uses that would increase trip generation or VMT's. Construction-related air quality impacts are addressed below.

Construction would result in numerous activities that would generate dust. Fine, silty soils and often strong afternoon winds exacerbate the potential for dust, particularly during the summer months. Grading, leveling, earthmoving and excavation are the activities that generate the most particulate emissions. Impacts would be localized and variable. The initial phase of project construction would involve grading and leveling the various project site areas and associated improvements such as underground infrastructure.

Construction activities that could generate dust and vehicle emissions are primarily related to grading and other ground-preparation activities in order to prepare the various project site areas for paving. All construction activities shall comply with all applicable measures from SJVAPCD Rule VIII which limits construction related emissions and particulates.

In addition to construction emissions, the SJVAPCD has thresholds applicable to CO emissions that require projects to perform localized CO modeling. These thresholds include the following:

- Project traffic would impact signalized intersections operating at level of service (LOS) D, E or F or would cause LOS to decline to D, E or F.
- Project traffic would increase traffic volumes on nearby roadways by 10 percent or more.
- The project would contribute to CO concentrations exceeding CAAQS of 9 parts per million (ppm) averaged over 8 hours and 20 ppm for one hour.

As described in greater detail under the traffic impact analysis section in this document, the proposed project is not a traffic generator and would not cause an intersection to decline to LOS D, E, or F. Additionally, the proposed project would not increase traffic volumes on nearby roadways by 10 percent or more. Therefore, localized CO modeling is not warranted for this project.

Because construction activities could generate dust and vehicle emissions, the following mitigation shall be incorporated into the construction plans of this project. With implementation of the following measures, this impact would be ***less than significant.***

> ***Mitigation Measure 1:*** *Prior to the commencement of grading activities, the City shall require the contractor hired to complete the grading activities to prepare a construction emissions reduction plan that meets the requirements of SJVAPCD Rule VIII. The construction emissions reductions plan shall be submitted to the SJVAPCD for review and approval. The City of Lathrop shall ensure that all required permits from the SJVAPCD have been issued prior to commencement of grading activities.*
>
> ***Mitigation Measure 2:*** *The following mitigation measures, in addition to those required under Regulation VIII of the SJVAPCD, shall be implemented by the project's contractor during all phases of project grading and construction to reduce fugitive dust emissions:*
>
> - *Water previously disturbed exposed surfaces (soil) a minimum of two-times/day or whenever visible dust is capable of drifting from the site or approaches 20 percent opacity.*
> - *Dust from all on-site and off-site unpaved access roads shall be effectively stabilized by applying water or other approved suppressants.*
> - *Reduce speed on unpaved roads to less than 15 miles per hour.*
> - *Restrict vehicular access to the area*
> - *Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and the use of blowers is expressly forbidden.)*
> - *Cease grading activities during periods of high winds (greater than 20 mph over a one-hour period).*
> - *Asphalt-concrete paving shall comply with SJVAPCD Rule 4641 and restrict use of cutback, slow-sure, and emulsified asphalt paving materials.*

Response d): Sensitive receptors are those parts of the population that can be severely impacted by air pollution. Sensitive receptors include children, the elderly, and the infirm. The residents located to the east and west of the project site are considered sensitive receptors. However, as described below, the construction and operation of the proposed project would not contribute substantial concentrations of pollutants to sensitive receptors. Additionally, the proposed project would not contribute to any CO hotspots.

Due to the City-wide scope of the project area, there are existing schools in the project vicinity. Similarly, there are several existing residences located in the project vicinity. However, implementation of the proposed project would not expose these sensitive receptors to substantial pollutant concentrations. Air emissions would be generated during the construction phase of the project, but would be short term in duration. The construction phase of the project would be temporary and short-term, and the implementation of Mitigation Measures 1 and 2 would greatly reduce pollution concentrations generated during construction activities, and prevent spillover into residential areas. Operation of the proposed project would not result in increased emissions from vehicle trips. As described under Response a) – c) above, the proposed project would not generate significant concentrations of air emissions. Implementation of the proposed project would not result in a significant increased exposure of sensitive receptors to

localized concentrations of TACs, or create a CO hotspot. This project would have a ***less than significant*** impact relative to this topic.

Mitigation Measures: *Implement Mitigation Measure 1 and Mitigation Measure 2*

Response d): The proposed project would not generate objectionable odors. People in the immediate vicinity of construction activities may be subject to temporary odors typically associated with construction activities (diesel exhaust, hot asphalt, etc.). However, any odors generated by construction activities would be minor and would be short and temporary in duration.

Examples of facilities that are known producers of operational odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant. If a project would locate receptors and known odor sources in proximity to each other further analysis may be warranted; however, if a project would not locate receptors and known odor sources in proximity to each other, then further analysis is not warranted. The project does not propose sensitive receptors that could be exposed to odors in the vicinity. Although the project would include wastewater system facilities, a wastewater treatment facility would not be constructed as a result of the project. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

IV. BIOLOGICAL RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	X			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	X			
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	X			
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	X			
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X			
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	X			

Responses to Checklist Questions

Responses a-f): Based on the documented special status species, sensitive natural communities, wetlands, and other biological resources in the region, it has been determined that the potential impacts on biological resources caused by the proposed project will require a detailed analysis. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on biological resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will provide a summary of local biological resources, including descriptions and mapping of plant communities, the associated plant and wildlife species, and sensitive biological resources known to occur, or with the potential to occur in the project vicinity. The analysis will conclude with a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented in order to reduce impacts on biological resources and to ensure compliance with federal and state regulations.

V. CULTURAL RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	X			
c) Disturb any human remains, including those interred outside of formal cemeteries?	X			

Responses to Checklist Questions

Response a-c): Based on known historical and archaeological resources in the region, and the potential for undocumented underground cultural resources in the region, it has been determined that the potential impacts on cultural resources caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the three environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on cultural resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an overview of the prehistory and history of the area, the potential for surface and subsurface cultural resources to be found in the area, the types of cultural resources that may be expected to be found, a review of existing regulations and policies that protect cultural resources, an impact analysis, and mitigation that should be implemented in order to reduce potential impacts to cultural resources. In addition, the CEQA process will include a request to the Native American Heritage Commission for a list of local Native American groups that should be contacted relative to this project. The CEQA process will also include consultation with any Native American groups that have requested consultation with the City of Lathrop.

VI. ENERGY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Responses to Checklist Questions

Response a-b): Diesel-fired Emergency generators would be provided in conjunction with the proposed water pump station improvements shown previously in Table 1. The emergency generators will be added as the new essential facilities are constructed and brought on-line, such as the CLSP water tank, River Islands water tank/SSJID turnout, and sewer pump stations (see Table 2). The emergency generators would all be for emergency operations in the event of a power outage, and would otherwise only be run for maintenance and air quality permit testing requirements.

In Lathrop, the SJVAPCD regulates the use of diesel-fired emergency generators. As defined by the SJVAPCD, an emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. The emergency generators would not be used to produce power for the electrical distribution system (SJVPACD District Rule 4702 and 17 CCR 93115). In addition, the SJVAPCD limits the operation of the emergency generators for maintenance, testing, and required regulatory purposes to a maximum of 50 hours per calendar year (SJVAPCD District Rules 2201, 4102 and 4702, and 17 CCR 93115). Since the use of the emergency generators would only occur during emergency scenarios, and otherwise only be run very briefly for maintenance and air quality testing requirements, the amount of diesel fuel used by these generators over the course of the lifetime of the proposed project would be minimal.

The exact amount of diesel fuel used by these generators would depend on the temporal extent of electrical power outages experienced during the lifetime of the proposed project, on the number of hours the generators are used for maintenance, testing, and the required regulatory purposes (i.e., up to 50 hours per calendar year). A typical 1502 brake-horsepower (BHP) Caterpillar Model C32 diesel-fired emergency engine (Tier 2 certified) would consume a maximum of approximately 71.9 gallons of diesel fuel per hour. This is based on an assumption of 100% load (Caterpillar, 2014).

Furthermore, the City of Lathrop is required by the SJVAPCD to maintain monthly records of emergency and non-emergency operation. These records are required to include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring (SJVAPCD District Rule 4702 and 17 CCR 93115). For units with automated testing systems, the operator of the diesel generator(s) has the option to, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule (SJVAPCD District Rule 4702 and 17 CCR 93115).

These requirements, as provided by the SJVAPCD, are described under the conditions contained within the Authority to Construct permit that the proposed project would be required to obtain prior to operation of the emergency generators. Based on these requirements, and the minimal amount of diesel fuel used by the emergency generators proposed by the proposed project, the proposed project would neither result in a wasteful, inefficient, or unnecessary consumption of energy resources, nor conflict with or obstruct any plan for renewable energy or energy efficiency. Implementation of the proposed project would result in a ***less than significant*** impact relative to this topic.

VII. GEOLOGY AND SOILS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	X			
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	X			
ii) Strong seismic ground shaking?	X			
iii) Seismic-related ground failure, including liquefaction?	X			
iv) Landslides?	X			
b) Result in substantial soil erosion or the loss of topsoil?	X			
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	X			
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	X			
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			

Responses to Checklist Questions

Responses a.i-d), and f): It has been determined that the potential impacts from geology and soils will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from geology and soils. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a review of existing geotechnical reports, published documents, aerial photos, geologic maps and other geological and geotechnical literature pertaining to the site and

surrounding area to aid in evaluating geologic resources and geologic hazards that may be present. The EIR will include a description of the applicable regulatory setting, a description of the existing geologic and soils conditions on and around the project site, an evaluation of geologic hazards, a description of the nature and general engineering characteristics of the subsurface conditions within the project site, and the provision of findings and potential mitigation strategies to address any geotechnical concerns or potential hazards.

This section will provide an analysis including thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with geology and soils.

Response e): The proposed project would not require the use of septic tanks or alternative waste water disposal systems for the disposal of waste water. Implementation of the proposed project would result in ***no impact*** relative to this topic.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?			X	

Responses to Checklist Questions

Responses a), b): Implementation of the proposed project would not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems in accordance with City master plans. Improvements to utility systems created by the project represent a planned effort to coordinate improvements to accommodate the future buildout of the General Plan. The project would not result in significant generation of construction or operational GHG emissions. Construction related GHG emissions would be temporary and would cease upon project completion. During operation, the project is not anticipated to generate substantial amounts of GHGs either directly or indirectly, as project infrastructure does not rely on sources of GHG emitting inputs for their operation. Emissions associated with project construction and operation would not be great enough to approach established significance thresholds, nor would it conflict with any plan policy or regulation regarding GHG reduction measures. Therefore, GHG impacts would be considered ***less than significant***.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X			
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	X			
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	X			
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	X			
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	X			
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	X			
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	X			

Responses to Checklist Questions

Responses a-g): It has been determined that the potential impacts from hazards and/or hazardous materials by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from hazards and/or hazardous materials. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a review of existing environmental site assessments and any other relevant studies for the project site to obtain a historical record of environmental conditions. The analysis will also include a review of recent records and aerial photographs. A site reconnaissance will be performed to observe the site and potential areas of interest. Property owners/managers will be interviewed to gather information on the current and historical use of the properties, and the potential for project implementation to introduce hazardous materials to and from the area

during construction and operation. If environmental conditions are identified, mitigation measures, as applicable, will be identified to address the environmental conditions.

This section will provide an analysis including the methodology, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with hazards and hazardous materials.

X. HYDROLOGY AND WATER QUALITY

Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporation**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	X			
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	X			
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	X			
(i) Result in substantial erosion or siltation on- or off-site;	X			
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	X			
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	X			
(iv) Impede or redirect flood flows?	X			
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	X			
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	X			

Responses to Checklist Questions

Responses a-e): Flood hazards can result from intense rain, snowmelt, cloudbursts, or a combination of the three, or from failure of a water impoundment structure, such as a dam. Floods from rainstorms generally occur between November and April and are characterized by high peak flows of moderate duration. Human activities have an effect on water quality when chemicals, heavy metals, hydrocarbons (auto emissions and car crank case oil), and other materials are transported with stormwater into drainage systems. Construction activities can increase sediment runoff, including concrete waste and other pollutants.

It has been determined that the potential impacts on hydrology and water quality caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on hydrology and water quality. At this point a definitive impact conclusion for each of these

environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will present the existing FEMA flood zones, levee protection improvements, reclamation districts, and risk of flooding on the project site and general vicinity.

The EIR will evaluate the potential construction and operational impacts of the proposed project on water quality. This section will describe the surface drainage patterns of the project site and adjoining areas, and identify surface water quality in the project site based on existing and available data. This section will identify impaired water bodies, listed pursuant to Section 303(d) of the federal Clean Water Act, in the vicinity of the project site. Conformity of the proposed project to water quality regulations will also be discussed. Mitigation measures will be developed to incorporate best management practices (BMPs), consistent with the requirements of the Central Valley Regional Water Quality Control Board to reduce the potential for site runoff.

This section will provide an analysis including the methodology, thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with hydrology and water quality.

XI. LAND USE AND PLANNING

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

Responses to Checklist Questions

Response a): The project site is located within the Lathrop city limits and is adjacent primarily to undeveloped land, and agricultural land. The project site would result in a extensions of utility lines, development of land application areas, and development of pump stations and other related infrastructure. Development of the project would not result in any physical barriers, such as a wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing utilities. The project would have ***no impact*** in regards to the physical division of an established community.

Response b): The key planning documents that are directly related to, or that establish a framework within which the proposed project must be consistent, include:

- City of Lathrop General Plan; and
- City of Lathrop Zoning Ordinance.

Due to the City-wide scope of the project area, there are numerous different land use and zoning designations in the project area. However, the proposed project would not require changes to any land use or zoning designations, and is supportive to the utility demands for each of these uses. Therefore, impacts to land use compatibility would be ***less than significant***.

XII. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Responses to Checklist Questions

Response a): The southeastern portion of the City General Plan Planning Area near the Stewart Tract and Oakwood Lake contains large Portland cement concrete (PCC)-grade sand deposit situated along the San Joaquin Rivers. This sector is classified as Mineral Resources Zone (MRZ)-2 (PCC sand). Implementation of the project would not result in the loss of availability of known mineral resources in the aforementioned area. The project site does not contain a known mineral resource that would be of value to the region and the residents of the state. The proposed project would not result in loss of an important regional or state mineral resource. Implementation of the proposed project would have ***no impact*** relative to this issue.

Response b): The project site does not contain a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. As noted above, known mineral resources that would be of value to the region no longer exist within the project site. The proposed project would not result in loss of a mineral resource. Implementation of the proposed project would have ***no impact*** relative to this issue.

XIII. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

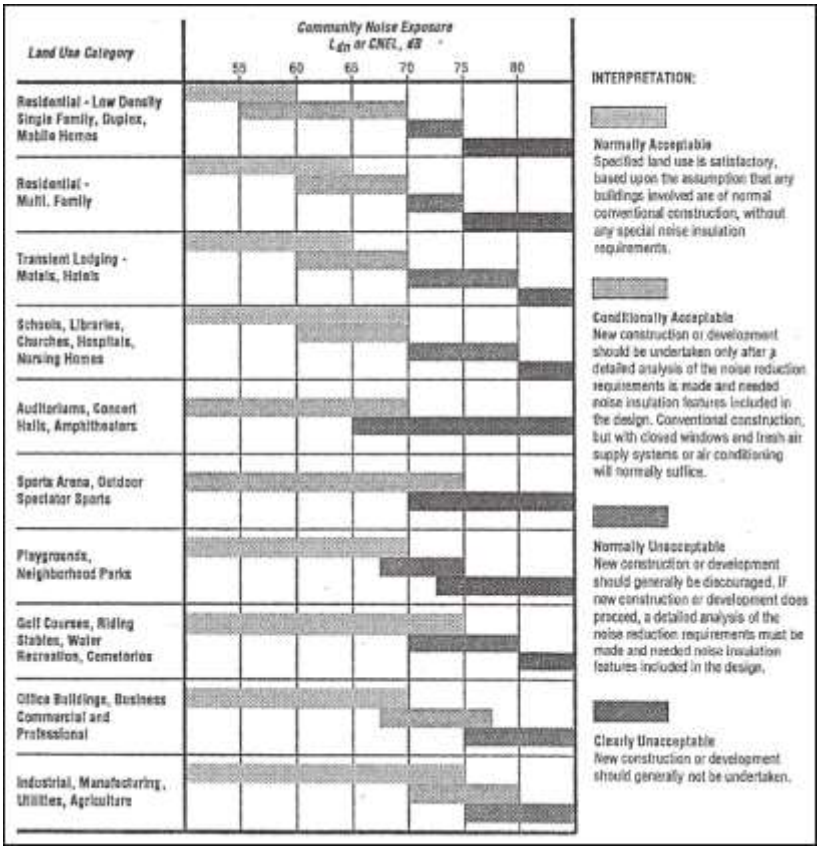
Responses to Checklist Questions

Response a): The City of Lathrop General Plan Noise Element contains goals and policies for assessing noise impacts within the City.

The Goals of the Noise Element of the General Plan are to protect citizens from the harmful effects of exposure to excessive noise, and to protect the economic base of the City by preventing the encroachment of incompatible land uses near noise-producing roadways, industries, the railroad, and other sources.

Listed below are the noise policies that are applicable to the proposed project:

1. Areas within the City shall be designated as noise-impacted if exposed to existing or projected future noise levels exterior to buildings exceeding 60 dB CNEL or the performance standards prescribed in Table VI-1.
2. New development of residential or other noise sensitive land uses will not be permitted in noise impacted areas unless effective mitigation measures are incorporated into project designs to reduce noise to the following levels:



2a. Noise sources preempted from local control, such as railroad and highway traffic:
- 60 dB CNEL or less in outdoor activity areas;
- 45 dB CNEL within interior living spaces or other noise-sensitive interior spaces.
- Where it is not possible to achieve reductions of exterior noise to 60 dB CNEL or less by using the best available and practical noise reduction technology, an exterior noise level of up to 65 dB CNEL will be allowed.
- Under no circumstances will interior noise levels be allowed to exceed 45 dB CNEL with windows and doors closed.

2b. For noise from other sources, such as local industries:
- 60 dB CNEL or less in outdoor activity areas;
- 45 dB CNEL or less within interior living spaces, plus the performance standards contained in Table VI-1.

3. New development of industrial, commercial or other noise generating land uses will not be permitted if resulting noise levels will exceed 60 dB CNEL in areas containing residential or other noise-sensitive land uses. Additionally, new noise generating land uses which are not preempted from local noise regulation by the State of California will not be permitted if resulting noise levels will exceed the performance standards contained in Table VI-1 in areas containing residential or other noise-sensitive land uses.
4. Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with the recommendations of the California Office of Noise Control.
5. New equipment and vehicles purchased by the City shall comply with noise level performance standards consistent with the best available noise reduction technology.

Additionally, the City of Lathrop Noise Ordinance sets limits for community noise exposure, similar to those outlined above in the General Plan Noise Element. The Noise Ordinance standards are contained in Section 8.20.040 of the Lathrop Municipal Code. Construction activities are exempt from these regulations, when conducted according to Section 8.20.110, as outlined below.

Sound Level A, Decibels
Community Environment Classification

Zone	Time	Very Quiet (rural, suburban)	Slightly Quiet (suburban, urban)	Noisy (urban)
R1 and R2	10 pm to 7 am	40	45	50
	7 pm to 10 pm	45	50	55
	7 am to 7 pm	50	55	60
R3 and R4	10 pm to 7 am	45	50	55
	7 am to 10 pm	50	55	60
Commercial	10 pm to 7 am	50	55	60
	7 am to 10 pm	55	60	65
M1	anytime	70	70	70
M2	anytime	75	75	75

Pursuant to Section 8.20.110 of the City's Noise Ordinance, it shall be unlawful for any person within a residential zone or within a radius of five hundred (500) feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefore has been duly obtained from the office or body of the city having the function to issue permits of this kind. No permit shall be required to perform emergency work as defined in Sections 8.20.010 through 8.20.040. (Prior code § 99.40).

Construction Noise

Construction activities have the potential to create temporary, or periodic increases in ambient noise levels in the project vicinity above levels existing without the project. During the construction of the project, including water, sewer, and recycled water lines, and related infrastructure, noise from construction activities would add to the noise environment in the project vicinity. The site improvements and roadway construction would include the use of heavy equipment including grading and compacting that can generate noise. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours.

Table 3 provides a list of the types of equipment which may be associated with construction activities and the associated noise levels. The nearest residential receptors would be located roughly 50 feet or further from construction activities, although most construction activities would be over 300 feet from a receptor.

Table 3: Construction Equipment Noise

Type of Equipment	*Predicted Noise Level (L_{max} Db)*				*Distances To Noise Contours (Feet)*	
	Noise Level At 50'	*Noise Level At 100'*	*Noise Level At 50'*	*Noise Level At 100'*	*Noise Level At 50'*	*Noise Level At 100'*
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Construction activities would be temporary in nature and are exempt from noise regulation, as outlined in the City's Municipal Code Section 8.20.110. Additionally, the project site was assumed for urban development as part of the City's General Plan and General Plan EIR. Build-out of the City's General Plan land use map, including the proposed project site, will inherently result in construction and construction-related noise levels. Adherence to City Municipal Code would minimize any impacts from noise during construction to the extent practicable. Because of the nature time and duration of construction activities near sensitive receptors noise impacts from construction activities would cease upon project completion. Therefore, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

The proposed project would not result in operational traffic noise. The proposed project would not cause increased noise levels exceeding the City of Lathrop exterior noise level standard at existing noise-sensitive residential receptors. Therefore, this impact would be considered ***less than significant*** relative to this topic.

Response b): Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 4 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). One-half this minimum threshold or 0.1 in/sec p.p.v. is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec p.p.v.

Table 4: Effects of Vibration on People and Buildings

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/sec.	in./sec.		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

The vibration-generating activities typically happen during construction when activities such as grading, utilities placement, and road construction occur. Sensitive receptors which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 100 feet or further from the activity. At this distance, construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural. Table 5 shows the typical vibration levels produced by construction equipment.

Table 5: Vibration Levels for Varying Construction Equipment

Type of Equipment	Peak Particle Velocity @ 25 feet (inches/second)	Peak Particle Velocity @ 100 feet (inches/second)
Large Bulldozer	0.089	0.011
Loaded Trucks	0.076	0.010
Small Bulldozer	0.003	0.000
Auger/drill Rigs	0.089	0.011
Jackhammer	0.035	0.004
Vibratory Hammer	0.070	0.009
Vibratory Compactor/roller	0.210	0.026

SOURCE: FEDERAL TRANSIT ADMINISTRATION, TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES, MAY 2006.

Table 5 data indicate that construction vibration levels anticipated for the proposed project are less than the 0.1 in/sec criteria at distances of 50 feet. Therefore, construction vibrations are not predicted to cause damage to existing buildings or cause annoyance to sensitive receptors.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and roadway

construction occur. Sensitive receptors could be impacted by construction related vibrations. The nearest residential receptors would be located roughly 50 feet or further from construction activities, although most construction activities would be over 300 feet from a receptor. At these distances, construction vibrations are not predicted to exceed acceptable levels. The use of construction equipment near existing receptors will not exceed the 0.1 in/sec threshold of annoyance criteria and threshold for structure damage of 0.2 in/sec. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours. Therefore, this impact would be considered ***less than significant***.

Response c): The project site is not located within the vicinity of an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. The Stockton Metropolitan Airport is located approximately 2.8 miles north of the Lathrop City limits. The proposed project would, therefore, not expose people residing or working in the project area to excessive noise levels associated with such airport facilities. The project site is not located within the vicinity of a private airstrip. The proposed project would, therefore, not expose people residing or working in the project area to excessive noise levels associated with such private airport facilities. Implementation of the proposed project would have ***no impact*** relative to this topic.

XIV. POPULATION AND HOUSING

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Responses to Checklist Questions

Response a): The project does not propose any housing that would result in direct population growth. However, projects that do not directly induce population growth still have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems. However, improvements to utility systems created by the project represent a planned effort to coordinate improvements to accommodate the future buildout under the General Plan. Any individual future projects would have to be consistent with the General Plan and are subject to environmental review under CEQA. No substantial population increases would result from implementation of the proposed project. Therefore, implementation of the proposed project would have a ***less than significant*** impact relative to this topic.

Response b): The project site is located within the Lathrop city limits and contains developed roadways, undeveloped land, and agricultural land. The proposed project would not displace housing or people. Implementation of the proposed project would have ***no impact*** relative to this topic.

XV. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

Responses to Checklist Questions

Response a):

Fire Protection

The project site is currently under the jurisdiction of the Lathrop-Manteca Fire Department. The proposed project would not include additional residential units, or people to the City of Lathrop. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. No additional demand for fire protection will be created by the project. Implementation of the proposed project wouldn't require additional demands for fire protection services from the Lathrop Fire Department. Therefore, implementation of the proposed project will have ***no impact*** Lathrop-Manteca to this topic.

Police Protection

The project site is currently under the jurisdiction of the Lathrop Police Department. The proposed project would not include additional residential units, or people to the City of Lathrop. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. No additional demand for police protection will be created by the project. Implementation of the proposed project wouldn't require additional demands for police protection services from the Lathrop Police Department. Therefore, implementation of the proposed project will have ***no impact*** relative to this topic.

Schools

Most schools within the City of Lathrop are part of the Manteca Unified School District (MUSD). The MUSD provides school services for grades kindergarten through 12 (K-12) within the communities of Manteca, Lathrop, Stockton, and French Camp. The District is approximately 113 square miles and serves more than 23,000 students. Within the City of Lathrop, there are three elementary schools (Lathrop Elementary School, Joseph Widmer School, and Mossdale Elementary School) and one high school (Lathrop High School). River Islands has two charter elementary schools, located within the Banta Unified School District (River Islands Technology Academy and the S.T.E.A.M. Academy). The proposed project does not include any residential units, or any other type of use that would directly, or indirectly increase the student population in the area. The proposed project will not result in intensification of land use, or the addition of

structures or uses that would differ from the current General Plan. Therefore, the proposed project would not result in the need for new school facilities, thus it is anticipated to have ***no impact*** relative to this topic.

Parks

The proposed project does not include any residential units or any other type of use that would directly, or indirectly increase the population, or park demand in the area, or include any other type of use that would directly increase the park needs. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. Therefore, the proposed project would not have the potential to require construction of additional park and recreational facilities which may cause substantial adverse physical environmental impacts. This, it is anticipated to have ***no impact*** relative to this topic.

Other Public Facilities

The proposed project would not result in a need for other public facilities that are not addressed in the Utilities and Service Section. The proposed project does not trigger the need for new facilities associated with other public services. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. Consequently, new facilities or other public services are not proposed at this time. This, it is anticipated to have ***no impact*** relative to this topic.

XVI. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Responses to Checklist Questions

Responses a-b): The proposed project does not include any residential units or any other type of use that would increase the population, or park and recreation facility demand in the area, or include any other type of use that would directly increase the use of park and recreation facilities. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. Therefore, the proposed project would not significantly increase the use of existing facilities. Furthermore, it is not anticipated that any substantial physical deterioration of existing facilities would occur, or be accelerated. Implementation of the proposed project would have a ***no impact*** relative to this topic.

XVII. TRANSPORTATION

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			X	
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

Responses to Checklist Questions

Responses a-b): No new structures, uses, or visitor serving areas are included in the project. Therefore, the project is not expected to result in an overall increase in vehicle trips within the area. The project is not anticipated to increase vehicle trips or congestion, or decrease LOS. Therefore, impacts are considered ***less than significant*** relative to this topic.

Response c): No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay that could impede emergency vehicles or emergency access. The project does not include any design features or incompatible uses that pose a significant safety risk. The project would create no adverse impacts to emergency vehicle access or circulation. Therefore, project implementation would have a ***less than significant*** impact relative to this topic.

Response d): No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay that could impede emergency vehicles or emergency access. The project does not include any design features or incompatible uses that pose a significant safety risk. The project would create no adverse impacts to emergency vehicle access or circulation. Therefore, project implementation would have a ***less than significant*** impact relative to this topic.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	X			
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.	X			

Responses to Checklist Questions

Responses a.i), a.ii): Based on known historical, cultural, tribal, and archaeological resources in the region, and the potential for undocumented underground cultural resources in the region, it has been determined that the potential impacts on tribal cultural resources caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine the two environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on tribal cultural resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an overview of the prehistory and history of the area, the potential for surface and subsurface tribal cultural resources to be found in the area, the types of tribal cultural resources that may be expected to be found, a review of existing regulations and policies that protect tribal cultural resources, an impact analysis, and mitigation that should be implemented in order to reduce potential impacts to tribal cultural resources. In addition, the CEQA process will include a request to the Native American Heritage Commission for a list of local Native American groups that should be contacted relative to this project, as per the requirements of Assembly Bill (AB) 52. The CEQA process will also include consultation with any Native American groups that have requested consultation with the City of Lathrop.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Require or result in the relocation or construction of new or expanded water, wastewater or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	X			
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	X			
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?	X			
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	X			
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	X			

Responses to Checklist Questions

Responses a-e): Implementation of the proposed project would result in impacts related to utilities and service systems. As such, the EIR will examine each of the five environmental issues listed in the checklist above and will decide whether the proposed project has the potential to have a significant impact to utilities and service systems. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will analyze wastewater, water, and storm drainage infrastructure, as well as other utilities (i.e. solid waste, gas, electric, etc.). The EIR will analyze the impacts associated with on-site construction of the proposed water, wastewater, and recycled water system, including temporary impacts associated with the construction phase. The proposed infrastructure will be presented. The EIR will provide a discussion of the wastewater treatment plants that are within proximity to the project site, including current demand and capacity at these plants. The analysis will discuss the disposal methods and location, including environmental impacts and permit requirements associated with disposal of treated wastewater.

The EIR will identify permit requirements and mitigation needed to minimize and/or avoid impacts related to storm water and drainage. The EIR will include an assessment for consistency with City Master Plans and Management Plans that are directly related to these utilities.

The EIR will analyze the impacts associated with on-site and off-site construction of the water system, including temporary impacts associated with the construction phase. The EIR will also

identify permit requirements and mitigation needed to minimize and/or avoid impacts, and will present the proposed infrastructure as provided by the Master Plans.

The EIR will also address solid waste collection and disposal services. This will include an assessment of the existing capacity and project demands. The assessment will identify whether there is sufficient capacity to meet the project demands.

The EIR will provide thresholds of significance, a consistency analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with utilities and service systems.

XX. WILDFIRE

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
d) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

Responses to Checklist Questions

Responses a, c) The project includes development of infrastructure (water, sewer, and recycled water). The proposed infrastructure improvements would allow for decreased fire risk relative to existing conditions. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed infrastructure improvements would require maintenance; however, the infrastructure improvements would not exacerbate fire risk. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response b) The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The County has areas with an abundance of flashy fuels (i.e. grassland) in the foothill areas of the eastern and western portion of the County. The project site is located in an area that is predominately agricultural and urban, which is not considered at a significant risk of wildlife. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

Response d) The project does not propose any housing that would result in direct population growth. However, projects that do not directly induce population growth still have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. The proposed project will not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. The project will expand utility systems. As such, exposure to people or structures to any significant risk would not result. Therefore, impacts from project implementation would be considered ***less than significant*** relative to this topic.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	X			
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

Responses to Checklist Questions

Responses a-c): It has been determined that the potential for the proposed project to: degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of a rare or endangered plant or animal; eliminate important examples of the major periods of California history or prehistory; create cumulatively considerable impacts; or adversely affect human beings will require more detailed analysis in an EIR. As such, the EIR will examine each of these environmental issues and will decide whether the proposed project has the potential to have a significant impact on these environmental issues. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

REFERENCES

California Air Resources Board. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October 2000. Available at: <https://www.arb.ca.gov/diesel/documents/rrpFinal.pdf>.

California Air Resources Board. 2016. ARB Databases: Aerometric Data Analysis and Management System (ADAM). Available at: <http://www.arb.ca.gov/html/databases.htm>.

California Department of Conservation. 2016. California Important Farmland Finder. Available at: <http://maps.conservation.ca.gov/ciff/ciff.html>.

California Department of Conservation. California Land Conservation Act of 1965 2016 Status Report, The Williamson Act. December 2016.

California Department of Transportation. Transportation Related Earthborn Vibrations. TAV-02-01-R9601 February 20, 2002.

California Energy Commission. 2005. Global Climate Change: In Support of the 2005 Integrated Energy Policy Report. (CEC-600-2005-007.) Available at: <http://www.energy.ca.gov/2005publications/CEC-100-2005-007/CEC-100-2005-007-CMF.PDF>.

California Energy Commission. 2006. Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004. (CEC-600-2006-013-SF.) Available at: <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF>.

Caterpillar. Diesel Generator Set – Mission Critical 1000 ekW 1250 kVa 60 Hz 1800 rpm 480 Volts. Available at: <http://s7d2.scene7.com/is/content/Caterpillar/C10252389>. 2014.

City of Lathrop. Adopted December 17, 1991. City of Lathrop Comprehensive General Plan.

City of Lathrop. 1991. Comprehensive General Plan for the City of Lathrop, California. Adopted by the Lathrop City Council December 17, 1991.

City of Lathrop. 1991. Final Environmental Impact Report for the Comprehensive General Plan for the City of Lathrop, California.

City of Lathrop. 2004. Central Lathrop Specific Plan Draft EIR.

City of Lathrop. 2014. City of Lathrop Department of Public Works Design and Construction Standards.

City of Lathrop. 2016. Municipal Service Review and Sphere Of Influence Plan.

City of Lathrop. 2017. Lathrop Municipal Code. Current through Ordinance 18-397 and the August 2018.

City of Lathrop. 2018. City of Lathrop General Plan Update – Existing Conditions Report. Admin Draft – October 2018.

City of Lathrop. 2018. Wastewater System Master Plan - City of Lathrop – Integrated Water Resources Master Plan Update. Draft – December 2018.

City of Lathrop. 2018. Water System Master Plan - City of Lathrop – Integrated Water Resources Master Plan Update. December 2018.

City of Lathrop. 2018. Recycled Water System Master Plan - City of Lathrop – Integrated Water Resources Master Plan Update. December 2018.

Federal Highway Administration. Roadway Construction Noise Model User's Guide, FHWA-HEP-05-054. January 2006.

Federal Transit Administration. Transit Noise and Vibration Impact Assessment Guidelines. May 2006

Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: The Physical Science Basis, Summary for Policy Makers. Available at: <http://fire.pppl.gov/ipcc_summary_020207.pdf>.

West Yost Associates, 2018. Technical Memorandum: Infrastructure Analysis for the City of Lathrop General Plan Update. June 29, 2018.

This page left intentionally blank.

RECEIVED
MAR 18 2019
CITY OF LATHROP
PUBLIC WORKS

CALIFORNIA Water Boards

GAVIN NEWSOM
GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

14 March 2019

Greg Gibson
City of Lathrop Public Works Department
390 Towne Centre Drive
Lathrop, CA 95330

CERTIFIED MAIL
7014 2120 0001 4292 3426

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, LATHROP INTEGRATED WATER RESOURCES MASTER PLAN PROJECT, SCH#2019029106, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 20 February 2019 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 Integrated Water Resources Master Plan 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 Activities (Construction General Permit), Construction General Permit Order No. 2009-009-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

[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.

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 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/

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 Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. 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 Risk 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 Risk Waiver and the application process, visit the Central Valley Water Board website at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/for_growers/coalition_groups/ or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 11-100 acres are currently $1,277 + $8.53/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

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) 464-4812 or Jordan.Hensley@waterboards.ca.gov.

Jordan Hensley
Environmental Scientist

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

Pacific Gas and Electric Company

Plan Review Team
Land Management

PGEPlanReview@pge.com

6111 Bollinger Canyon Road 3370A
San Ramon, CA 94583

February 20, 2019

Greg Gibson
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Ref: Gas and Electric Transmission and Distribution

Dear Mr. Gibson,

Thank you for submitting Integrated Water Resources Master Plan for our review. PG&E will review the submitted plans in relationship to any existing Gas and Electric facilities within the project area. If the proposed project is adjacent/or within PG&E owned property and/or easements, we will be working with you to ensure compatible uses and activities near our facilities.

Attached you will find information and requirements as it relates to Gas facilities (Attachment 1) and Electric facilities (Attachment 2). Please review these in detail, as it is critical to ensure your safety and to protect PG&E's facilities and its existing rights.

Below is additional information for your review:

1. This plan review process does not replace the application process for PG&E gas or electric service your project may require. For these requests, please continue to work with PG&E Service Planning: https://www.pge.com/en_US/business/services/building-and-renovation/overview/overview.page.

2. If the project being submitted is part of a larger project, please include the entire scope of your project, and not just a portion of it. PG&E's facilities are to be incorporated within any CEQA document. PG&E needs to verify that the CEQA document will identify any required future PG&E services.

3. An engineering deposit may be required to review plans for a project depending on the size, scope, and location of the project and as it relates to any rearrangement or new installation of PG&E facilities.

Any proposed uses within the PG&E fee strip and/or easement, may include a California Public Utility Commission (CPUC) Section 851 filing. This requires the CPUC to render approval for a conveyance of rights for specific uses on PG&E's fee strip or easement. PG&E will advise if the necessity to incorporate a CPUC Section 851filing is required.

This letter does not constitute PG&E's consent to use any portion of its easement for any purpose not previously conveyed. PG&E will provide a project specific response as required.

Sincerely,

Plan Review Team
Land Management

Pacific Gas and Electric Company

Attachment 1 – Gas Facilities

There could be gas transmission pipelines in this area which would be considered critical facilities for PG&E and a high priority subsurface installation under California law. Care must be taken to ensure safety and accessibility. So, please ensure that if PG&E approves work near gas transmission pipelines it is done in adherence with the below stipulations. Additionally, the following link provides additional information regarding legal requirements under California excavation laws: http://usanorth811.org/wp-content/uploads/2017/05/CA-LAW-English.pdf

1. Standby Inspection: A PG&E Gas Transmission Standby Inspector must be present during any demolition or construction activity that comes within 10 feet of the gas pipeline. This includes all grading, trenching, substructure depth verifications (potholes), asphalt or concrete demolition/removal, removal of trees, signs, light poles, etc. This inspection can be coordinated through the Underground Service Alert (USA) service at 811. A minimum notice of 48 hours is required. Ensure the USA markings and notifications are maintained throughout the duration of your work.

2. Access: At any time, PG&E may need to access, excavate, and perform work on the gas pipeline. Any construction equipment, materials, or spoils may need to be removed upon notice. Any temporary construction fencing installed within PG&E's easement would also need to be capable of being removed at any time upon notice. Any plans to cut temporary slopes exceeding a 1:4 grade within 10 feet of a gas transmission pipeline need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

3. Wheel Loads: To prevent damage to the buried gas pipeline, there are weight limits that must be enforced whenever any equipment gets within 10 feet of traversing the pipe.

Ensure a list of the axle weights of all equipment being used is available for PG&E's Standby Inspector. To confirm the depth of cover, the pipeline may need to be potholed by hand in a few areas.

Due to the complex variability of tracked equipment, vibratory compaction equipment, and cranes, PG&E must evaluate those items on a case-by-case basis prior to use over the gas pipeline (provide a list of any proposed equipment of this type noting model numbers and specific attachments).

No equipment may be set up over the gas pipeline while operating. Ensure crane outriggers are at least 10 feet from the centerline of the gas pipeline. Transport trucks must not be parked over the gas pipeline while being loaded or unloaded.

4. Grading: PG&E requires a minimum of 36 inches of cover over gas pipelines (or existing grade if less) and a maximum of 7 feet of cover at all locations. The graded surface cannot exceed a cross slope of 1:4.

5. Excavating: Any digging within 2 feet of a gas pipeline must be dug by hand. Note that while the minimum clearance is only 12 inches, any excavation work within 24 inches of the edge of a pipeline must be done with hand tools. So to avoid having to dig a trench entirely with hand tools, the edge of the trench must be over 24 inches away. (Doing the math for a 24 inch wide trench being dug along a 36 inch pipeline, the centerline of the trench would need to be at least 54 inches [24/2 + 24 + 36/2 = 54] away, or be entirely dug by hand.)

Water jetting to assist vacuum excavating must be limited to 1000 psig and directed at a 40° angle to the pipe. All pile driving must be kept a minimum of 3 feet away.

Any plans to expose and support a PG&E gas transmission pipeline across an open excavation need to be approved by PG&E Pipeline Services in writing PRIOR to performing the work.

6. Boring/Trenchless Installations: PG&E Pipeline Services must review and approve all plans to bore across or parallel to (within 10 feet) a gas transmission pipeline. There are stringent criteria to pothole the gas transmission facility at regular intervals for all parallel bore installations.

For bore paths that cross gas transmission pipelines perpendicularly, the pipeline must be potholed a minimum of 2 feet in the horizontal direction of the bore path and a minimum of 12 inches in the vertical direction from the bottom of the pipe with minimum clearances measured from the edge of the pipe in both directions. Standby personnel must watch the locator trace (and every ream pass) the path of the bore as it approaches the pipeline and visually monitor the pothole (with the exposed transmission pipe) as the bore traverses the pipeline to ensure adequate clearance with the pipeline. The pothole width must account for the inaccuracy of the locating equipment.

7. Substructures: All utility crossings of a gas pipeline should be made as close to perpendicular as feasible (90° +/- 15°). All utility lines crossing the gas pipeline must have a minimum of 12 inches of separation from the gas pipeline. Parallel utilities, pole bases, water line 'kicker blocks', storm drain inlets, water meters, valves, back pressure devices or other utility substructures are not allowed in the PG&E gas pipeline easement.

If previously retired PG&E facilities are in conflict with proposed substructures, PG&E must verify they are safe prior to removal. This includes verification testing of the contents of the facilities, as well as environmental testing of the coating and internal surfaces. Timelines for PG&E completion of this verification will vary depending on the type and location of facilities in conflict.

8. Structures: No structures are to be built within the PG&E gas pipeline easement. This includes buildings, retaining walls, fences, decks, patios, carports, septic tanks, storage sheds, tanks, loading ramps, or any structure that could limit PG&E's ability to access its facilities.

9. Fencing: Permanent fencing is not allowed within PG&E easements except for perpendicular crossings which must include a 16 foot wide gate for vehicular access. Gates will be secured with PG&E corporation locks.

10. Landscaping: Landscaping must be designed to allow PG&E to access the pipeline for maintenance and not interfere with pipeline coatings or other cathodic protection systems. No trees, shrubs, brush, vines, and other vegetation may be planted within the easement area. Only those plants, ground covers, grasses, flowers, and low-growing plants that grow unsupported to a maximum of four feet (4') in height at maturity may be planted within the easement area.

11. Cathodic Protection: PG&E pipelines are protected from corrosion with an "Impressed Current" cathodic protection system. Any proposed facilities, such as metal conduit, pipes,

service lines, ground rods, anodes, wires, etc. that might affect the pipeline cathodic protection system must be reviewed and approved by PG&E Corrosion Engineering.

12. Pipeline Marker Signs: PG&E needs to maintain pipeline marker signs for gas transmission pipelines in order to ensure public awareness of the presence of the pipelines. With prior written approval from PG&E Pipeline Services, an existing PG&E pipeline marker sign that is in direct conflict with proposed developments may be temporarily relocated to accommodate construction work. The pipeline marker must be moved back once construction is complete.

13. PG&E is also the provider of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs which may endanger the safe operation of its facilities.

Attachment 2 – Electric Facilities

It is PG&E's policy to permit certain uses on a case by case basis within its electric transmission fee strip(s) and/or easement(s) provided such uses and manner in which they are exercised, will not interfere with PG&E's rights or endanger its facilities. Some examples/restrictions are as follows:

1. Buildings and Other Structures: No buildings or other structures including the foot print and eave of any buildings, swimming pools, wells or similar structures will be permitted within fee strip(s) and/or easement(s) areas. PG&E's transmission easement shall be designated on subdivision/parcel maps as "**RESTRICTED USE AREA – NO BUILDING."**

2. Grading: Cuts, trenches or excavations may not be made within 25 feet of our towers. Developers must submit grading plans and site development plans (including geotechnical reports if applicable), signed and dated, for PG&E's review. PG&E engineers must review grade changes in the vicinity of our towers. No fills will be allowed which would impair ground-to-conductor clearances. Towers shall not be left on mounds without adequate road access to base of tower or structure.

3. Fences: Walls, fences, and other structures must be installed at locations that do not affect the safe operation of PG&'s facilities. Heavy equipment access to our facilities must be maintained at all times. Metal fences are to be grounded to PG&E specifications. No wall, fence or other like structure is to be installed within 10 feet of tower footings and unrestricted access must be maintained from a tower structure to the nearest street. Walls, fences and other structures proposed along or within the fee strip(s) and/or easement(s) will require PG&E review; submit plans to PG&E Centralized Review Team for review and comment.

4. Landscaping: Vegetation may be allowed; subject to review of plans. On overhead electric transmission fee strip(s) and/or easement(s), trees and shrubs are limited to those varieties that do not exceed 15 feet in height at maturity. PG&E must have access to its facilities at all times, including access by heavy equipment. No planting is to occur within the footprint of the tower legs. Greenbelts are encouraged.

5. Reservoirs, Sumps, Drainage Basins, and Ponds: Prohibited within PG&E's fee strip(s) and/or easement(s) for electric transmission lines.

6. Automobile Parking: Short term parking of movable passenger vehicles and light trucks (pickups, vans, etc.) is allowed. The lighting within these parking areas will need to be reviewed by PG&E; approval will be on a case by case basis. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications. Blocked-up vehicles are not allowed. Carports, canopies, or awnings are not allowed.

7. Storage of Flammable, Explosive or Corrosive Materials: There shall be no storage of fuel or combustibles and no fueling of vehicles within PG&E's easement. No trash bins or incinerators are allowed.

8. Streets and Roads: Access to facilities must be maintained at all times. Street lights may be allowed in the fee strip(s) and/or easement(s) but in all cases must be reviewed by PG&E for

proper clearance. Roads and utilities should cross the transmission easement as nearly at right angles as possible. Road intersections will not be allowed within the transmission easement.

9. Pipelines: Pipelines may be allowed provided crossings are held to a minimum and to be as nearly perpendicular as possible. Pipelines within 25 feet of PG&E structures require review by PG&E. Sprinklers systems may be allowed; subject to review. Leach fields and septic tanks are not allowed. Construction plans must be submitted to PG&E for review and approval prior to the commencement of any construction.

10. Signs: Signs are not allowed except in rare cases subject to individual review by PG&E.

11. Recreation Areas: Playgrounds, parks, tennis courts, basketball courts, barbecue and light trucks (pickups, vans, etc.) may be allowed; subject to review of plans. Heavy equipment access to PG&E facilities is to be maintained at all times. Parking is to clear PG&E structures by at least 10 feet. Protection of PG&E facilities from vehicular traffic is to be provided at developer's expense AND to PG&E specifications.

12. Construction Activity: Since construction activity will take place near PG&E's overhead electric lines, please be advised it is the contractor's responsibility to be aware of, and observe the minimum clearances for both workers and equipment operating near high voltage electric lines set out in the High-Voltage Electrical Safety Orders of the California Division of Industrial Safety (https://www.dir.ca.gov/Title8/sb5g2.html), as well as any other safety regulations. Contractors shall comply with California Public Utilities Commission General Order 95 (http://www.cpuc.ca.gov/gos/GO95/go_95_startup_page.html) and all other safety rules. No construction may occur within 25 feet of PG&E's towers. All excavation activities may only commence after 811 protocols has been followed.

Contractor shall ensure the protection of PG&E's towers and poles from vehicular damage by (installing protective barriers) Plans for protection barriers must be approved by PG&E prior to construction.

13. PG&E is also the owner of distribution facilities throughout many of the areas within the state of California. Therefore, any plans that impact PG&E's facilities must be reviewed and approved by PG&E to ensure that no impact occurs that may endanger the safe and reliable operation of its facilities.

RIVER ISLANDS

March 21, 2019

Mr. Greg Gibson, Senior Civil Engineer
City of Lathrop
390 Towne Centre Drive
Lathrop, California 95330

Re: Comments on Notice of Preparation – City of Lathrop Integrated Water Resources Master Plan Update DEIR

Dear Greg:

We have reviewed the Notice of Preparation for the proposed Draft EIR for the Integrated Water Resources Master Plan (IWRMP) Update and have the following comments:

1. River Islands and the City entered into a Fifth Amendment to the River Islands Development Agreement (5th Amendment) by City Council action in February 2019 (effective date April 11, 2019) that clarifies the process sewer and water allocations are made for the River Islands project; a copy of the 5th Amendment is attached for you reference. The 5th Amendment requires that both parties monitor actual usage and resulting data regarding potable water and sewer allocations. The proposed IWRMP should reflect the provisions of the 5th Amendment, including the ability of the City Manager to administratively adjust future allocations. Additionally, River Islands staff has been analyzing recent water consumption data for its residents (from 2014 to February 2019) and have found that the water demand for River Islands residential customers appears to be much lower than the 430 gallons per day per unit currently assumed in the IWRMP and the Urban Water Management Plan. We look forward to working with you and your consultants on continuing to address this issue in the near future.

2. The NOP states that the DEIR will analyze potential reductions in potable water resources due "curtailment of South San Joaquin Irrigation District surface water rights." It should be noted that SSJID has filed legal action against the State of California regarding any possible infringement on its water rights. The IWRMP and the DEIR needs to monitor this legal action and potential Court action or potential settlement. Additionally, SSJID has additional treatment of potable water available with implementation of Phase 2 of the South County Surface Water Project and the IWRMP and DEIR should also include the potential for additional potable water capacity as a result.

3. Tables 1 and 2 of the NOP lists current and planned Capital Improvement Program (CIP) projects within the City for sewer and water facilities. The tables do not cover River Islands related improvements, including L-2 SSJID turnout for water, booster pump station and storage, permanent sewer pump station and other facilities already under construction and others planned for the River Islands planning area. The IWRMP should include River Islands facilities; we can provide additional information on these projects to you and your consultants.

4. The NOP states that, "the Plan also recommends that the City initiate discussion with the Regional Water Quality Control Board (RWQCB) to better assess the potential for a river discharge permit." This discussion has already begun and the City's consultant, Robertson-Bryan, Inc. has been actively collecting data towards this effort. The IWRMP needs to include background information and relative data regarding the potential year-round discharge of

73 West Stewart Road
Lathrop, California 95330
209. 879.7900
RiverIslands.com

RIVER ISLANDS

recycled water into the San Joaquin River system and the DEIR should at least analyze the potential effects on a programmatic basis.

5. The draft IWRMP includes storage ponds S11, S12, and S13 within River Islands. The City should note that these ponds and possibly others may not need to be constructed if either a seasonal or year-round discharge of recycled water becomes available.

Thank you for the opportunity to comment on the NOP. Please provide us with notice of future documents and meetings regarding the IWRMP and the DEIR. Should you have any questions or concerns regarding this letter, please contact me at (209) 879-7900.

Sincerely,

Susan Dell'Osso

Susan Dell'Osso
Project Director

cc: Mark Meissner, Community Development Director
Glenn Gebhardt, City Engineer

73 West Stewart Road

Lathrop, California 95330

209. 879.7900

RiverIslands.com

SAN JOAQUIN
—COUNTY—
Greatness grows here.

Public Works
San Joaquin County
Working for YOU

Department of Public Works

Kris Balaji, Director of Public Works

Fritz Buchman, *Deputy Director/Development*
Alex Chetley, *Interim Deputy Director/Engineering*
Jim Stone, *Deputy Director/Operations*
Kristi Rhea, *Manager of Strategic Initiatives*

March 22, 2019

Greg Gibson, Senior Civil Engineer
City of Lathrop, Public Works Dept
390 Towne Centre Drive
Lathrop, CA 95330

SUBJECT: Notice of Preparation of an EIR and Scoping Meeting for the Integrated Water Resources Master Plan

Dear Mr. Gibson,

The San Joaquin County Department of Public Works has reviewed the Notice of Preparation of an Environmental Impact Report for the Integrated Water Resources Master Plan. The Division of Water Resources has requested access to the Environmental Impact Report when it is available, so that any impacts to the County might be evaluated.

The County does request to be included on the circulation list for any additional project documents as well.

Thank you for the opportunity to review and comment. Should you have questions please contact me at lsears@sjgov.org or (209) 468-3085.

Sincerely,

Laurel Sears, MA/ MUP
Associate Planner

LS:JL c:Dodgie Vidad, Engineer IV

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

March 19, 2019

Greg Gibson
City of Lathrop
390 Towne Centre Drive
Lathrop, CA 95330

Project: Notice of Preparation of an Environmental Impact Report for the City of Lathrop Integrated Water Resources Master Plan

District CEQA Reference No: 20190211

Dear Mr. Gibson:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) for the City of Lathrop Integrated Water Resources Master Plan project. The proposed project consists of a Water System Master Plan, Wastewater System Master Plan, and Recycled Water System Master Plan to improve water, and sewer infrastructure (Project) to support growth in the City of Tracy while maintaining safe, reliable utility services for existing users. The District offers the following comments:

Emissions Analysis

1) At the federal level for the National Ambient Air Quality Standards (NAAQS), the District is currently designated as extreme nonattainment for the 8-hour ozone standards; nonattainment for the PM2.5 standards; and attainment for the 1-Hour ozone, PM10 and CO standards. At the state level, the District is currently designated as nonattainment for the 8-hour ozone, PM10, and PM2.5 California Ambient Air Quality Standards (CAAQS). The District recommends that the Air Quality section of the Environmental Impact Report (EIR) include a discussion of the following impacts:

   a) **Criteria Pollutants:** Project related criteria pollutant emissions should be identified and quantified. The discussion should include existing and post-project emissions.

Samir Sheikh
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

i) Construction Emissions: Construction emissions are short-term emissions and should be evaluated separately from operational emissions. For reference, the District's annual criteria thresholds of significance for construction are: 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).

- *Recommended Mitigation Measure if needed:* To reduce impacts from construction related exhaust emissions, the District recommends feasible mitigation for the project to utilize off-road construction fleets that can achieve fleet average emissions equal to or cleaner than the Tier III emission standards, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations. This can be achieved through any combination of uncontrolled engines and engines complying with Tier III and above engine standards.

ii) Operational Emissions: Permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. For reference, the annual criteria thresholds of significance for operation of permitted and non-permitted sources each are: 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).

- *Recommended Mitigation Measure if needed:* Project related impacts on air quality can be reduced through incorporation of design elements, for example, that increase energy efficiency, reduce vehicle miles traveled, and reduce construction exhaust related emissions.

iii) Recommended Model: Project related criteria pollutant emissions from construction and operation non-permitted (limited to equipment not subject to District permits) 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.

b) **Nuisance Odors:** The Project should be evaluated to determine the likelihood that the Project would result in nuisance odors. Nuisance orders are subjective, thus the District has not established thresholds of significance for 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 objectionable odors.

c) **Health Risk Screening/Assessment:** A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TAC's) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TAC's are air pollutants identified by the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) (https://www.arb.ca.gov/toxics/healthval/healthval.htm) 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. Industry specific TACs generated must also be identified and quantified.

The District recommends the Project 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. The 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 projects that result in a prioritization score of 10 or greater. It is recommended that the Project proponent contact the District to review the proposed modeling protocol. The 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.

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

d) **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. The District recommends that an AAQA be performed for the Project if emissions 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.

2) In addition to the discussions on potential impacts identified above, if preliminary review indicates that an EIR should be prepared, the District recommends the EIR also include the following discussions:

a) A discussion of the methodology, model assumptions, inputs and results used in characterizing the Project's impact on air quality. To comply with CEQA requirements for full disclosure, the District recommends that the modeling outputs be provided as appendices to the EIR. The District further recommends that the District be provided with an electronic copy of all input and output files for all modeling.

b) A discussion of the components and phases of the Project and the associated emission projections, including ongoing emissions from each previous phase.

c) A discussion of Project design elements and mitigation measures, including characterization of the effectiveness of each mitigation measure incorporated into the Project.

d) 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.

District Rules and Regulations

3) The proposed Project may be subject to District rules and regulations, including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). 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).

4) This Project may be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and will 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 (559) 230-5888.

5) District Rule 9510 (Indirect Source Review) is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site fees. The proposed Project may be subject to District Rule 9510 if it will receive a project-level discretionary approval from a public agency and will equal or exceed 9,000 square feet of space. If subject to the rule, an Air Impact Assessment (AIA) application is required prior to applying for project-level approval from a public agency. In this case, if not already done, please immediately submit an AIA application to the District to comply with District Rule 9510.

   In the case the Project is subject to District Rule 9510 an 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.

6) The above list of rules is neither exhaustive nor exclusive. 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 (559) 230-5888. Current District rules can be found online at the District's website at: www.valleyair.org/rules/1ruleslist.htm.

The District recommends that a copy of the District's comments be provided to the Project proponent. If you have any questions or require further information, please call Mark Montelongo at (559) 230-5905.

Sincerely,

Arnaud Marjollet
Director of Permit Services

for Brian Clements
Program Manager

AM: mm

March 18, 2019

VIA EMAIL

City of Lathrop
Public Works Department
Attn: Greg Gibson, Senior Civil Engineer
390 Towne Centre Drive
Lathrop, CA 95330
(ggibson@ci.lathrop.ca.us)

Re: Public Comments to be considered in conjunction with the Notice of Preparation of an Environmental Impact Report for the City of Lathrop Integrated Water Resources Master Plan.

Dear Project Team Members,

My name is Martin Harris and I am an authorized representative for Terra Land Group, LLC ("TLG"). TLG operates in the Manteca and Lathrop area of San Joaquin County in California. Over the past few years, TLG representative Martin Harris has:

(i) Attended many public and private meetings; and
(ii) Reviewed thousands of pages of environmental documents; and
(iii) Presented both oral and written comments relating to local, state and federal efforts supporting a higher level of flood water protection to the urban and urbanizing areas along the South Delta.

TLG believes there appears to be an unsustainable level of development growth in and along the South Delta-Lower San Joaquin River Basin, which is a recognized floodplain. TLG believes that this growth may create and/or increase flood risks to the urban and rural residents, businesses, and property owners located in the areas to be affected. TLG is not necessarily opposed to this growth, provided however, that the urban and urbanizing areas already approved or to be considered for development growth must fully identify, allow for, and provide for timely mitigation measures. These measures should fully offset any and all upstream and downstream flood water, storm water, waste water, agricultural/irrigation water delivery, and back water short-term as well as long-range impacts that may be created.

I. Public concerns related to development growth and what appears to be a difficult and misguided flood protection process:

Over the past five years, TLG has written over five hundred letters to local and state authorities expressing our concerns related to the effects of development on flooding in our area. TLG has received very few responses to these letters, but one response was received in February 2019.

At this time, TLG has reviewed a February 28, 2019 letter from San Joaquin Area Flood Control Agency ("SJAFCA") representative Chris Elias, Executive Director, to Kevin Jorgensen, City Engineer, Community Development Department, City of Manteca ("SJAFCA letter"). In response to the SJAFCA letter, TLG took considerable time to put forth its best effort to provide a meaningful response that fully addresses and carries forward the public concerns of everyone that may be adversely affected. TLG's responses are documented in **Enclosures 1-3**.

II. Public concerns associated with SJAFCA's level of reliance on the "Lower San Joaquin River Feasibility Study ("LSJRFS") as related to any future projects to be considered."

TLG believes flood protection improvements relating to the LSJRFS, in conjunction with California Senate Bill No. 5 ("SB5"), has the potential to result in very significant flood impacts in relation to future development projects, as well as roadway, rail transit, flood protection projects, waste water, storm water, and other forms of public utilities infrastructure being considered. (**See Enclosures 3-7**)

As part of the SJAFCA letter, Mr. Elias references the Lower San Joaquin River Feasibility Study before going on to the state that, "the study…has been completed and the final product, the Lower San Joaquin River Flood Risk Management (Project) is now a Congressionally–authorized project." Mr. Elias also states that, "SJAFCA's mission is limited to flood risk and does not include land use or siting component."

III. Other public concerns to consider:

The SJAFCA letter goes on to state that "SJAFCA takes the issue of flood risk very seriously and is working on a number of programs that might decrease the risk faced by the City of Manteca and the surrounding community." (**See Enclosures 22-26**)

QUESTION: Will the number of programs that might decrease the risk faced by the City of Manteca, the City of Lathrop, and the surrounding community represent a staged collection of various projects that will be presented for approvals in a manner that represents "RD17's plan to pursue a phased strategy of levee improvements," as stated in the letter? What corrective reservoir and dam/spillway operation management changes are being considered?

The SJAFCA letter says, "the RD17 alternatives were ultimately removed from consideration"

QUESTION: In relation to any significance as to the degree of importance that is attributed to Mr. Elias's statement that the "study …has been completed," is it in the best interests of the residents, businesses and property owners located in the rural areas south of Manteca for SJAFCA to rely on what appears to be a programmatic Federal Lower San Joaquin River Study (and any related federal project approval) that allows the RD17 south tie back levee to be extended without a project-based environmental review? (**See Enclosure 5**)

Mr. Elias further states that "the authorized federal project did not, and was not intended to, address Senate (SB) 5, as those are California-only requirements."

QUESTION: What consideration should be given to what appears to be conflicting statements made by local stakeholders as presented to the California Department of Water Resources ("DWR") as included in the March 2017 Draft Basin – Wide Feasibility Study: San Joaquin River Basin Response to stakeholder comments – Main Report ("BWFS")? (Within **Enclosure 3**, see its own Enclosure 4, pages 3 & 4)

Mr. Elias goes on to state, "As SJAFCA reviews its charter and embarks on its Strategic Planning Process during Spring 2019, representatives of TLG are cordially invited to participate and provide their input".

QUESTION: Will additional environmental review and flood modeling be performed "prior to implementation, as part of the Supplemental EIR" as referred to in the BWFS? (Within **Enclosure 3**, see its own Enclosure 4, pages 3 & 4)

QUESTION: Is SJAFCA aware that TLG and other members of the public located in the rural areas south of Manteca believe that the SB5 flood protection process has been performed unfairly? TLG believes that many affected rural property owner's questions and concerns have often been ignored or responded to in ways that often appear to be misleading or fail to properly address the concerns presented in a clear and timely manner.

TLG believes this is especially true when it is considered that at no time since the close of the public comment period for the LSJRFS has anyone representing SJAFCA responded to any one of the three TLG response letters. These letters were submitted in a timely manner to SJAFCA on February 26, 2018, March 5, 2018 and March 8, 2018. (**See Enclosures 3 & 5-7**)

TLG has attached additional enclosures to further illustrate why a growing number of south Manteca residents, businesses, and property owners have lost a significant level of trust in our local and state authorities' ability and/or willingness to fairly and equitably mitigate any and all upstream and downstream flood water, storm water, waste water, agricultural irrigation water delivery, and backwater effects that may be created. (Within **Enclosure 3**, see its own Enclosures 4-7, 10, 11, 13, 25, 27 & 31)

TLG believes there is a potential for very significant cumulative impacts to occur relating to many past, present, and reasonably foreseeable projects as may be affected by SB5, both locally and statewide. To review a full list of the projects with a potential to affect hydrology in the area, please see **Enclosure 27.**

In light of all these projects, TLG has a few questions for you to consider.

QUESTION: If the City of Manteca redirects Eckert Cold Storage effluent waste water into the San Joaquin River, what effect will such abandonment of the city waste water spray field infrastructure currently in place have on depleting ground water recharge and/or protecting current local land surface elevations from potential impacts due to subsidence?

QUESTION: As the managing member and Lathrop-area designated authority for the Eastern San Joaquin Groundwater Basin, what actions will the City of Lathrop take to protect the public's

continuing right to fair and sustainable amounts of ground water and surface water serving agriculture in our area?

QUESTION: TLG believes there is a lot of uncertainty relating to the legal and moral challenges resulting from the DWR plans to require unimpaired flow increases from the higher elevation reservoirs of as much as 46,000 cubic feet per second into and through the San Joaquin River watershed. Isn't it time that the Cities of Manteca, Lathrop, Ripon, and Tracy take immediate action and work together to develop a strategic water management and recycle plan that promotes the most beneficial use and reuse of any and all water resources being managed while prioritizing the short term and long range flood protection and potable water supply and irrigation water delivery needs for both our local and/or adjacent urban and rural communities?

TLG believes it would make sense for SSJID and the Cities of Manteca, Lathrop, and Ripon to partner together and construct blending operations to mix low salt concentration SSJID surface water with high salt concentration effluent waste water. This mixture could result in a blended irrigation water byproduct that can be utilized on higher value food crops. The current local practice utilizes applying effluent waste water to limited-value and often unprofitable crops such as alfalfa and other animal feed crops as utilized most commonly in traditional recycled and potentially outdated recycled water irrigation management plans.

QUESTION: Will a local or regional environmental review be conducted at the county level?

QUESTION: Will the City of Manteca and/or the City of Lathrop be performing any localized environmental reviews related to flood water protection, storm water drainage, and waste water discharge, as well as other forms of hydrology-related impacts affecting the South Delta and especially the rural areas south of Manteca? What potential impacts should be considered as part of any flood water, storm water, waste water, agricultural irrigation water delivery, and/or back water mitigation plan to be included as part of any environmental review to be performed? (Within **Enclosure 3**, see its own Enclosures 3-5, 7-11, 13, 21-23, 25-29 & 31. Also **See Enclosures 5-7 & 13-21** as included with this letter)

QUESTION: Will any environmental reviews be performed at the state level? (Within **Enclosure 3**, see its own Enclosure 4, pages 3 & 4)

QUESTION: What potential impacts should be determined as part of any flood water, storm water, waste water, agricultural irrigation water delivery, and/or back water mitigation plan to be included as part of any local, regional, or state-wide environmental review to be performed? (**See Enclosures 1-27**)

QUESTION: What involvement will the San Joaquin Local Agency Formation Commission ("LAFCo"), SJAFCA and/or the San Joaquin Council of Governments have in any environmental review to be performed?

QUESTION: Will protections be put in place to ensure that any and all local municipal effluent waste water generated is first made available for the benefit of sustaining the immediate and/or future needs of any local member of the public affected by urbanization and any related water

shortages before approving any agreement or provision that allows any locally produced and treated effluent wastewater discharges to be sold (and/or transported) to users outside of our local waste water community service district area(s)?

QUESTION: When considering all of the public and special district concerns related to current DWR efforts to change the way that San Joaquin River watershed storage water is allowed to be managed, stored, discharged, and allocated into and through and diverted from the State of California watershed system, are our local authorities being transparent in providing the public with sufficient information to allow the public to fully understand any and all short-term and long-range water supply and other hydrology-related impacts that may be created?

QUESTION: Have our local authorities been totally transparent in conducting any and all environmental reviews necessary to fully identify and allow for the short-term and long-range effects of lowering our local urbanizing areas subsurface ground water elevations (ie. lowering the high water table) by incorporating shallow ground water pumping plant facilities into developing regions to facilitate the pumping of ground water from beneath the ground to the surface prior to discharging that same ground water into what appears to be the San Joaquin River?

QUESTION: When you consider all of the State of California water conservation laws that have been enacted over the past few years, does allowing what appears to be various shallow ground water pump and associated San Joaquin River discharge operations (to lower groundwater elevations) serving the developing areas demonstrate the best way to manage and protect what many believe to be our most precious resource?

QUESTION: What potential upstream and downstream flood water, storm water, waste water, and back-water effects may be created as a result of the San Joaquin County LAFCo 3/14/19 meeting agenda item 3 (Dissolution of Inactive Special Districts: NJYO Water District (LAFC 02-19) and DOS REIS Storm District (LAFC 07-19)?

QUESTION: Will any approval associated with the LAFCo 3/14/19 meeting agenda item 3, affect any future public right or water use or drainage benefit to local water users that may be affected by any currently existing or future plans to either remove existing infrastructure or consider new water delivery, water drainage, and other forms of flood water protection, storm water drainage, or waste water discharge infrastructure in the areas subject to the LAFCo decision?

QUESTION: Should any consideration by LAFCo to proceed with any further approval actions relating to the dissolution of any one or both of the drainage districts being considered be postponed until such time that a full and complete comprehensive environmental review is performed (at the local level) that fully evaluates any and all hydrology-related impacts that may be involved?

QUESTION: What immediate action(s) and/or position should the City of Manteca (in association with the City of Lathrop and other local and regional authorities) take to safeguard and protect our urban and rural communities from any and all surface and ground water supply delivery, flood water protection, storm water drainage, waste water discharge, and other hydrology-related impacts associated with the State of California's plans to move forward with its 2018 Water Plan Update?

QUESTION: Isn't this especially important when considering any and all additional drainage impacts that may be created in association with SB5-required mandates?

IV. Current funding programs that appear to promote a phased strategy of flood protection improvements:

QUESTION: Can provisions be required that shall ensure that any flood protection improvement funding application(s) submitted by SJAFCA, San Joaquin County, SSJID, Tri-Dam Project members and/or managers, the cities of Lathrop, Manteca, Tracy, Ripon, or Stockton, RD17, RD 2062, RD 2094, or any other stakeholder or non-federal sponsor shall include any and all additional funding necessary to offset any drainage and back-water effects to any and all upstream and downstream areas affected? (**See Enclosures 1-27**)

QUESTION: Can the affected public count on those same mitigated flood protection improvements to be performed in a timely manner to offset any short-term as well as long-range exposure to increased risks due to flooding?

TLG finds it quite concerning that in spite of all the letters that TLG has submitted in recent years, no agency or staff member or representative has responded in a manner that leads TLG to gain confidence at the local, regional or state levels as to the status of identifying system-wide solutions in relation to current and anticipated future improvements being made in support of any improvements to the urban level of protection or SB5-compliant flood water, storm water, waste water and/or current state and/or federal reservoir water management and protection programs. (Within **Enclosure 3**, see its own Enclosures 4-7, 10, 11, 13, 25 & 31. Also **See Enclosures 5-7 & 13-21** as included with this letter)

At this time, TLG requests that the City of Manteca (in association with SJAFCA, the City of Lathrop, and any other non-federal sponsors that may be involved) please consider and provide for these conditions.

When considering any and all flood protection, water management or other forms of state and/or federal roadway, rail transit and/or various types of public utilities infrastructure funding assistance application to be considered (and/or submitted for approval):

- Then, please require that adequate funding must be provided to identify any and all flood water, storm water, waste water and back water effects related to any impacts associated with any form of infrastructure with the potential to block, impede or exasperate drainage flows in and along the South Delta;

- Please provide for and ensure that any and all flood and other hydrology-related impacts affecting any and all upstream and downstream areas that may be affected, shall be mitigated and receive funding to construct any and all flood protection infrastructure deemed necessary to offset any and all flood water, storm water, waste water, and back water effects that may be created; (**See Enclosures 8-12**)

- Most important, any and all mitigation measures and related infrastructure to be constructed shall be completed in a timely manner to reduce any short-term and long-range impacts that may be created to those affected to less than significant levels. (**See Enclosures 8-12**)

In this way, TLG believes that the floodwater, storm water, waste water, drainage, and agricultural irrigation water delivery infrastructure to be constructed and put in place may ensure the protection and serve the best interests of everyone that may be affected.

In closing, TLG believes that achieving better flood protection starts with being prepared. This is a process that needs to begin with early and meaningful intervention that includes storm forecasting and continuing dialog between the City of Lathrop and any and all local, regional, state, and federal authorities (and agencies). This should be done in conjunction with the reservoir and dam/spillway operators that are entrusted by the public to make the critical and timely reservoir management decisions necessary to safeguard and protect the public from the greater and potentially catastrophic flood risks involved.

Various authorities either received directly or received copies of TLG letters that were sent between October 15-22, 2018 regarding "winter storm season flood preparedness week." These letters included what appeared to be significant winter storm season snow and rain precipitation volumes to be expected.

QUESTION: What action(s) have the City of Lathrop taken to prepare for what appears to be greater flood risks involved? (**See Enclosures 22-26**)

QUESTION: Is the City of Lathrop aware that almost every reservoir draining into the San Joaquin and Sacramento River systems is approaching full capacity? Has the City of Lathrop paid attention to the amount of snow currently existing in the mountains above us? Is the City of Lathrop aware that portions of the town of Sonora were recently flooded?

QUESTION: Has the potential for a Stanislaus River right bank levee break been properly analyzed and allowed for?

QUESTION: What effect on drainage will the southern projection of the City of Manteca Griffin Park project have on impeding or redirecting any Stanislaus River right bank levee breach flood water flows that may be created at the time of a future flood event?

QUESTION: Do we really need any more development projects to be approved prior to conducting a full and complete comprehensive environmental review?

QUESTION: Whose best interests are being served? Whose best interests are being put at risk?

Finally, TLG believes that more can and must be done to safeguard and protect our entire urban and rural community from the eventual disaster that appears to be headed our way. TLG believes that this can best be done by putting an end to the continuing delays and immediately performing a full and comprehensive environmental review that fully considers and mitigates for the State of

California's growing water use, transportation, and transit needs as well as any and all development-related flood and other hydrology-related impacts as affected by the Lower San Joaquin River Flood Management Project in association with SB5 requirements. (**See Enclosures 1-27**) Most important, TLG believes that this full and comprehensive environmental process should be conducted as part of this storm water, waste water, and Integrated Water Resources Master Plan.

Thank you for your attention to this very important matter.

Respectfully,

Martin Harris
for Terra Land Group, LLC.

MH/cm

Enclosures:

These Enclosures can be downloaded via Dropbox through the provided hyperlinks. Any Enclosure without a hyperlink is attached to the end of the letter.

1. 02/28/2019 letter from Chris Elias, SJAFCA, to Kevin Jorgensen, City of Manteca
2. 01/28/2019 letter from TLG to the Manteca City Council (https://www.dropbox.com/s/m3se4vizeto6gsc/2019-01-28_LTR_MCC_AgItsB2B3.pdf?dl=0)
3. 03/04/2019 letter from TLG to the Manteca City Council (https://www.dropbox.com/s/a8ldad6e6or9c6p/2019-03-04_LTR_MCC_AgItD3.pdf?dl=0)
4. 03/11/2019 letter from TLG to the Lathrop City Council (https://www.dropbox.com/s/wdwqsyt50uq0iqx/2019-03-11_LTR_LCC_AgIt4.3.pdf?dl=0)
5. 02/26/2018 letter from TLG to SJAFCA (https://www.dropbox.com/s/8scnhemfwexbkr9/2018-02-26_LTR_SJAFCA_LSJR%20EIR_PublicComm_wEncl.pdf?dl=0)
6. 03/05/2018 letter from TLG to SJAFCA (https://www.dropbox.com/s/tl0ir7soookd6ze/2018-03-05_LTR_SJAFCA_Letter2.pdf?dl=0)
7. 03/08/2018 letter from TLG to SJAFCA (https://www.dropbox.com/s/wt0bmm77jxi39zd/2018-03-08_LTR_SJAFCA_LTR3_LSJRFS_MHjr_stamped.pdf?dl=0)
8. 02/27/2019 letter from TLG to the CA Department of Water Resources, Re: Riverine Stewardship Program (https://www.dropbox.com/s/947bo8junuebo24/2019-02-27_LTR_DWR_Riverine.pdf?dl=0)
9. 02/27/2019 Letter #2 from TLG to the CA Department of Water Resources, Re: Draft Regional Flood Management Assistance Program (https://www.dropbox.com/s/718rbibad73w91a/2019-02-27_LTR2_DWR_DRFMAP.pdf?dl=0)
10. 02/06/2019 Letter #1 from TLG to the CA Department of Water Resources, Re: Draft Regional Flood Management Assistance Program (https://www.dropbox.com/s/trdov4vwlg1skid/2019-02-06_LTR_DWR_DRFMAPG.pdf?dl=0)

11. 01/15/2019 letter from TLG to the CA Department of Water Resources (https://www.dropbox.com/s/0rgif3aql6dwg35/2019-01-15_LTR_DWR_CAWaterPlan.pdf?dl=0)
12. 12/04/2018 letter from TLG to the State Water Resources Control Board (https://www.dropbox.com/s/ioo64ry9cb6cxbu/2018-12-04_LTR_SWRCB_AgIt13.pdf?dl=0
13. 04/22/2014 letter from Mike Babitzke to the San Joaquin Council of Governments (https://www.dropbox.com/sh/pmyrdrirddvs05u/AABhgN5re7iAu3TZ1jWHpGPWa?dl=0)
14. 10/22/2018 letter from TLG to the Central Valley Flood Protection Board (https://www.dropbox.com/s/mog9q2fjxyjtrvr/2018-10-22_LTR_CVFPB_AgIt5.C.pdf?dl=0)
15. 07/09/2018 letter from TLG to the Lathrop City Council (https://www.dropbox.com/s/9xy3puvtpc9fad7/2018-07-09_LTR_LCC_AgIts4.11_4.13_4.14.pdf?dl=0)
16. 08/13/2018 letter from TLG to the Lathrop City Council (https://www.dropbox.com/s/xlwx0bwci4hzphz/2018-08-13_LTR_LCC_AgIt2.3.pdf?dl=0)
17. 09/10/2018 letter from TLG to the Lathrop City Council (https://www.dropbox.com/s/kmlm7ojyva9y6e9/2018-09-10_LTR_LCC_AgIts4.11%265.1.pdf?dl=0)
18. 10/16/2018 letter from TLG to the Lathrop Planning Commission (https://www.dropbox.com/s/u3hlqgixbmxjcww/2018-10-16_LTR_LPC_AgIt9.1.pdf?dl=0)
19. 12/18/2018 Letter #2 from TLG to the Lathrop Planning Commission (https://www.dropbox.com/s/l7bgolu7wi7psjw/2018-12-18_LTR_LPC_AgIt9.1.pdf?dl=0)
20. Two Manteca Bulletin newspaper articles: 04/14/2012 “Mining gold from sewer land” and 07/15/2013 “Farmland key to Great Wolf”
21. 12/12/2017 email from TLG to the San Joaquin County Planning Commission
22. 01/03/2019 Sacramento Bee newspaper article: “PG&E sued over Camp Fire as insurance claims hit billions”
23. 10/22/2018 letter from TLG to the San Joaquin County Board of Supervisors (https://www.dropbox.com/s/bve2x34a1h7ocq0/2018-10-22_LTR_SJCBOS_AgIt8.pdf?dl=0)
24. Daily Reservoir Storage Summary (accessed on the California Data Exchange Center website on March 18, 2019)
25. 10/15/2018 letter from TLG to the Manteca City Council, Re: Flood Preparedness Week (https://www.dropbox.com/s/m8b17k38mjdj1do/2018-10-15_LTR_MCC_AgItAPubComm_FloodWeek.pdf?dl=0)
26. 03/04/2019 Wall Street Journal news article “California’s Weather Cycles”
27. List of development and infrastructure projects in California

cc:

Central Valley Flood Protection Board, % Leslie Gallagher, Executive Officer
San Joaquin Area Flood Control Agency, % Marlo Duncan, Project Manager
Amanda Bohl, Delta Stewardship Council
California Department of Water Resources, Attn: Mary Jimenez
South San Joaquin Irrigation District Board of Directors, % Betty Garcia, Executive Secretary/Clerk of the Board
San Joaquin Flood Control and Water Conservation District, % Fritz Buchman
Ripon City Council, %Tricia Raymond, Deputy City Clerk
Lathrop City Council, % Teresa Vargas, City Clerk

Lathrop Planning Commission, % Mark Meissner
Manteca City Council, % Lisa Blackmon, City Clerk
Manteca Planning Commission

ENCLOSURE 1

ATTACHMENT 1

SJAFCA
San Joaquin Area FLOOD CONTROL Agency

February 28, 2019

Kevin Jorgensen II, PE, PLS
City Engineer
Community Development Department
City of Manteca
1001 W. Center St, Suite C
Manteca, CA 95337

JANUARY 29, 2019 MANTECA CITY COUNCIL ("MCC") SPECIAL MEETING AGENDA ITEM B.2 (19-045): REVIEW CITY COUNCIL GOALS ADOPTED IN PREPARATION FOR THE FISCAL YEAR 19/20 BUDGET; AND ITEM B.3 (19-046): REVIEW AND APPROVE COUNCIL PRIORITIES FOR FISCAL YEAR 19/20 AND DIRECT STAFF TO INCLUDE PRIORITIES INTO THE BUDGET WORK PLAN

Dear Mr. Jorgensen:

This letter is in response to your request for the San Joaquin Area Flood Control Agency (SJAFCA) to review the letter dated January 28, 2019 by Terra Land Group, LLC (TLG) regarding the Lower San Joaquin River Feasibility Study (Study). In their letter, TLG expressed concerns about a number of land use and flood risk management matters. On the subject of flood risk management, TLG stated, among other things, that the Study may not have fully considered "the potential for any and all flood and other hydrology-related impacts involved due RD 17's plan to pursue a phased strategy of levee improvements and other federally-assisted improvements in order to meet SB-5 requirements." This letter summarizes SJAFCA's response to some of the relevant items identified by TLG in the referenced letter and will focus solely on the flood risk management concerns while respectfully deferring to the City of Manteca on other matters, including land use issues.

Let me start by stating that SJAFCA takes the issue of flood risk very seriously and is working on a number of programs that might decrease the risk faced by the City of Manteca and the surrounding community. To be very clear, SJAFCA's mission is limited to flood risk and does not include land use or siting component. I would also like to clarify that the Study, referenced in TLG's letter, has been completed and the final product, the Lower San Joaquin River Flood Risk Management (Project) is now a Congressionally-authorized project. Further, the authorized federal project did not, and was not intended to, address Senate Bill (SB) 5 as those are California-only requirements.

In response to the statements in the third paragraph of the referenced letter, the purpose of the Lower San Joaquin River Feasibility Study was to identify a cost-effective plan to reduce flood risk in the Stockton metropolitan area. An unacceptably high risk of flooding from levee failure threatens the safety of 235,000 people, as well as property and critical

ATTACHMENT 1

infrastructure throughout the area. Following an exhaustive planning process by the US Army Corps of Engineers, the final recommended plan was selected because it maximized net National Economic Development (NED) benefits consistent with protecting the Nation's environment. The NED plan, also known as the Recommended Plan, considered and addressed flood risk management problems and opportunities in the Lower San Joaquin River basin.

As noted below, the ultimately approved Federal project did not include any changes to the RD 17 levees. However, during the planning process the Federal government noted that the existing RD 17 project levees provide flood risk management for approximately 46,500 people in portions of the cities of Stockton, Lathrop, Manteca and San Joaquin County. The project levees also provide flood risk management for critical infrastructure including schools, fire and police stations, the county jail, Sharpe Army Depot, a hospital and major transportation routes including Interstate 5 and Highway 120. During the Study, the US Army Corps of Engineers determined that the alternatives that include RD 17 should incorporate a tieback extension at the southern end of RD 17, thereby placing a limit on future growth to the south by not providing improvements below Manteca. Without the tie-back extension, levee improvements would have been necessary further upstream on the San Joaquin River and along the Stanislaus River to achieve the same flood risk reduction for the already urbanized portions of RD 17 and would have added about 16,000 acres of land that would be available for future development. However, as noted above the RD 17 alternatives were ultimately removed from consideration based on concern that the Principles and Guidelines, which state that Federal investments in water resources should avoid the unwise use of floodplains and flood-prone areas and minimize adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone area must be used. The US Army Corps of Engineers determined that placement of development within the RD 17 basin - in the deepest part of the floodplain (with the highest life safety consequence) – might ultimately constitute an unwise use of flood plain in direct contravention of Executive Order (EO) 11988 and thus deferred this issue for future consideration.

With respect to the second to the last paragraph about taking the time to "consider and mitigate against.....rural areas of Manteca and Lathrop" I would like to remind TLG that the Study began in 2009 and was completed in 2018. I would also like to add that the Study was a transparent process with robust public participation structure (involving USACE, CVFPB, and SJAFCA) that satisfied NEPA and CEQA requirements for public scoping and agency consultation and coordination. In fact, the Environmental Impact Statement process ended on February 8, 2019 when the Assistant Secretary of the Army for Civil Works issued the Record of Decision (ROD) explaining USACE's decision on the Project following description of the alternatives that federal government considered and discussion of the agency's plans for mitigation and monitoring.

To address the final paragraph in the letter by TLG requesting the Manteca City Council to "condition any current or future strategic plan .....to mitigate the effects on drainage....along the South Delta/Lower San Joaquin River", the Board of Directors of

ATTACHMENT 1

SJAFCA as the governing regional flood control agency, consists of representatives from the City Councils of member agencies and the San Joaquin County of Board of Supervisors. These elected representatives take their responsibilities on land use matters very seriously and use that knowledge to inform the mission and direction of SJAFCA as a regional flood control entity.

As SJAFCA reviews its Charter and embarks on its Strategic Planning Process during Spring 2019, representatives of TLG are cordially invited to participate and provide their input for consideration by the Board of Directors during these series of public meetings.

Finally, I thank you for the opportunity to review and provide clarification on the relevant portions of the TLG letter. If you have any questions about my response, please contact me at 209-937-8866.

Sincerely,

CHRIS ELIAS
EXECUTIVE DIRECTOR

cc: Glenn Gebhardt, City of Lathrop
Stephen Salvatore, City of Lathrop
Fritz Buchman, San Joaquin County
Mel Lytle, City of Stockton
Michael Wright, CVFPB, Sacramento
Scott Shapiro, SJAFCA Counsel
Juan Neira, SJAFCA

Mining gold from sewer land

Resort, business park & entertainment may sprout up there

By DENNIS WYATT
MANTECA (CALIF.) BULLETIN

Extending Milo Candini Drive to Airport Way as well as Daniels Street to McKinley Avenue is the next step in Manteca's effort to turn sewer – or more precisely sewer plant land – into gold.

The goal is to open up 100-plus acres of city-owned land along the 120 Bypass for commercial entertainment and retail development and additional land north of the Big League Dreams for the creation of a business park.

ECONOMY

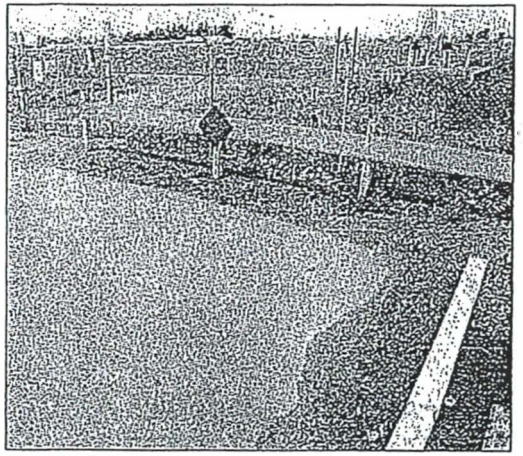
It would essentially take land now worth several thousand dollars an acre and make it worth well over $50,000 an acre with some land such as where the Great Wolf resort is being proposed worth as much as $100,000 an acre.

Manteca Mayor Willie Weatherford has indicated he would like to see the street extensions that include infrastructure such as sewer, water, and storm pipe move forward as quickly as possible. He believes that will mean hiring outside consultants to handle preliminary work that would normally be handled by staff.

He said staffing cutbacks due to general fund budget pressures means it would be prudent to obtain outside help to keep the road extensions moving forward. Such work could be funded by the growth fees collected for public infrastructure improvements.

The mayor noted that the increased value of the land could generate the money needed to pay for the street

SEE ECONOMY, PAGE A8



Milo Candini Drive will eventually be extended to Yosemite Avenue to open up city-owned land to development as a business park.

HIME ROMERO/ The Bulletin

ENCLOSURE 20

ECONOMY

FROM PAGE A1

extensions and other infrastructure improvements. Essentially, a private concern would buy a parcel to develop retail or a business park and that money paid could finance the public improvements. The bottom line for the city would be increased property and sales tax as well as more jobs.

In essence, the wastewater treatment plan could become an engine that powers economic development for Manteca.

Manteca already has converted close to 80 acres of former wastewater treatment plant land into economic engines in the firm of the Stadium Retail Center and the Big League Dreams sports complex.

The city is currently in negotiations with McWhinney Development of Colorado. The frim is willing to invest upwards of $200 million to build a 400- to 600-room Great Wolf Lodge resort hotel complete with a 70,000-square-foot indoor water park along with a conference center.

Great Wolf - should it be built - is projected to have 45 salaried management positions, 370 full-time hourly positions and an annual payroll of almost $10 million.

The city has already inked a deal with the San Joaquin County Board of Supervisors to develop a South County administrative services center on former wastewater treatment plant land on the northeast corner of Milo Candini Drive and Daniels Street in the future.

Making the city's long-term economic strategy to convert land at the treatment plant into prime real estate given its proximity to the 120 Bypass and Airport Way work was a deal closed this past summer to buy 417 acres deep in the rural farm country to the south of the city.

The $3.4 million purchase of the farmland at 23000 South Hays Road near the San Joaquin River roughly over a mile west of the T-intersection of Airport Way and West Ripon Road was paid through sewer connection fees assessed on new development. It comes out to a purchase price of $7,529 per acre.

Acquisition of the land will enable the city to:

- create spray fields to pipe untreated agricultural waste water from Eckert's for disposal.
- use those same spray fields to actively go after securing food processors that seek locations to expand near crop production in the San Joaquin Valley that by some estimates could add between 5,000 and 1,000 jobs.
- the relocation of spray fields plus the transporting of sewer sludge for drying to the Hays Road location will eliminate any traces of odors connected with the present wastewater treatment plant.
- to replace wetlands that are part of more than 100 acres of city-owned wastewater treatment property west of Costco and Big League Dreams to allow the land to be converted into prime commercial uses.
- create the first wetland mitigation bank in San Joaquin County working in conjunction with the Army Corps of Engineers that they can they sell easements to other jurisdictions in the county for the replacement of wetlands when needed within their communities.
- develop its own green waste composting facility.
- secure a site for a possible regional wastewater treatment plant 50 years or more into the future.

Future wetlands

Some 50 acres of the 417 acre site purchased by the city is considered ideal for an easy conversion into wetlands. That would mean for every acre of wetland that Manteca must compensate for, the city would save $124,500 per acre through the Hays site instead of accessing a wetland mitigation bank.

At the same time that same land west of Costco that is part of the wastewater treatment plant site is valued at $100,000 an acre even in today's market due to its proximity to a major interchange, freeway frontage, and adjacent economic activity. By that measuring stick, Manteca would be earning a return of $92,500 per acre if and when they go to sell the land west of Costco. And on land that is actual wetlands, between savings for replacement wetlands and a potential sale at today's prices, Manteca would come out $217,000 an acre ahead.

The city would need to build a pipeline for the wastewater treatment plant to divert agricultural wastewater form Eckert's and other potential food processing plants to the proposed spray fields on Hays Road nearly three miles to the south.

The food processing strategy is a sharp departure from the last 30 plus years where the city avoided such operations like the plague since they gobbled up wastewater treatment plant capacity at the expensive of being able to serve homes. And because they are seasonal in nature they don't send waste water for treatment year round. Even so, the city could never commit the unused capacity during off season for other uses as it was reserved for Eckert's.

The shift to land disposable via spray fields a few years back for Eckert's changed all of that.

Agricultural water waste has nutrients in it that can play havoc with a treatment process balanced primarily for human waste. However those nutrients are conducive to growing many crops specifically grain crops used to feed livestock. Manteca has leased land at the wastewater treatment plan land disposal fields of treated wastewater and wastewater from Eckert's for years to a farmer growing feed.

This isn't the first time that the city has turned a sewer plant into an attractive use.

The Manteca Park Golf Course - the most successful municipal course in the Northern San Joaquin Valley based on rounds played - was built atop the old municipal dump and wastewater treatment plant.

Print This Article

Farmland key to Great Wolf

Resort could break ground in mid-2014 if it gets green light

Dennis Wyatt
dwyatt@mantecabulletin.com
July 15, 2013

Construction of the Great Wolf Lodge that represents upwards of a $200 million private sector investment could start in the summer of 2014.

The construction timeline for the 400 to 600 room hotel with a 70,000-square-foot indoor water park plus conference center would take two years to complete. Ultimately, Great Wolf is projected to have a $9.4 million annual payroll with 414 permanent jobs and 156 part-time jobs.

The construction timeline for the project that is still undergoing extensive financial analysis by both the investment firm of McWhinney Development and the City of Manteca is included in a report the City Council is reviewing Tuesday in relation to the status of 417 acres on Hays Road. A final decision on whether Great Wolf will proceed is not expected until at least November.

Manteca bought the farmland at 23000 Hays Road in June 2011 for $3.4 million. That was the equivalent of $7,529 an acre. The purchase of the farmland near the San Joaquin River roughly over a mile west of the T-intersection of Airport Way and West Ripon Road was paid for with sewer connection fees assessed on new development.

The land purchase actually cleared the way for the potential Great Wolf project envisioned on 30 acres of city-owned land west of Costco as well as the proposed 140-acre family entertainment zone.

The resort and entertainment zone would be located on property currently that is part of the municipal wastewater treatment plant. The Big League Dreams complex at one time was also part of the wastewater treatment plant's land bank.

The strategy was to eventually utilize the Hays Road for the disposal of agricultural waste and possibly other treated effluent to free up the 170 acres. The wastewater

treatment plant land has become increasingly more valuable as the 120 Bypass corridors develops. At one point three years ago, commercial real estate experts contacted by the Bulletin said the land could eventually be valued by as much as $100,000 an acre or almost 12 times what Manteca paid for the Hays Road property.

The council during Tuesday's meeting will be informed of how the city is working to obtain regulatory permit approval to utilize the Hays Road property. The council will also be told of the timetable for a master plan for the hays property as well as obtaining the right-of-way for a purple pipe to carry the discharge to the property.

The land will allow the:

u creation of spray fields to pipe untreated agricultural waste water from Eckert's for disposal.

uuse of those same spray fields to actively go after securing food processors that seek locations to expand near crop production in the San Joaquin Valley that by some estimates could add between 500 and 1,000 jobs.

urelocation of spray fields plus the possible transporting of sewer sludge for drying to the Hays Road location will to eliminate any traces of odors connected with the present wastewater treatment plant.

ureplacement of wetlands that are part of more than 100 acres of city-owned wastewater treatment property west of Costco and Big League Dreams to allow the land to be converted into prime commercial uses.

ucreation of the first wetland mitigation bank in San Joaquin County working in conjunction with the Army Corps of Engineers that they can they sell easements to other jurisdictions in the county for the replacement of wetlands when needed within their communities.

udevelopment of the city's own green waste composting facility.

usecuring of a site for a possible regional wastewater treatment plant 50 years or more into the future.

Future wetlands

Some 50 acres of the 417 acre site being purchased by the city is considered ideal

for an easy conversion into wetlands. That would mean for every acre of wetland that Manteca must compensate for, the city would save $124,500 per acre through the Hays site instead of accessing a wetland mitigation bank.

At the same time that same land west of Costco that is part of the wastewater treatment plant site is valued at $100,000 an acre even in today's market due to its proximity to a major interchange, freeway frontage, and adjacent economic activity. By that measuring stick, Manteca would be earning a return of $92,500 per acre if and when they go to sell the land west of Costco. And on land that is actual wetlands, between savings for replacement wetlands and a potential sale at today's prices, Manteca would come out ahead by $217,000 an acre.

The city would need to build a pipeline for the wastewater treatment plant to divert agricultural wastewater from Eckert's and other potential food processing plants to the proposed spray fields on Hays Road nearly three miles to the south.

The food processing strategy is a sharp departure from the last 30 plus years where the city avoided such operations like the plague since they gobbled up wastewater treatment plant capacity at the expensive of being able to serve homes. And because they are seasonal in nature they don't send waste water for treatment year round. Even so, the city could never commit the unused capacity during off season for other uses as it was reserved for Eckert's.

The shift to land disposable via spray fields a few years back for Eckert's changed all of that.

Agricultural water waste has nutrients in it that can play havoc with a treatment process balanced primarily for human waste. However those nutrients are conducive to growing many crops specifically grain crops used to feed livestock. Manteca has leased land at the wastewater treatment plan land disposal fields of treated wastewater and wastewater from Eckert's for years to a farmer growing feed.

San Joaquin County jurisdictions get inquires from an average of three firms a year that want to locate processing operations in the valley near farm production.

The council meets Tuesday at 7 p.m. at the Civic Center, 1001 W. Center St.

To contact Dennis Wyatt, e-mail dwyatt@mantecabulletin.com

http://www.mantecabulletin.com/archives/79604/

ENCLOSURE 21

From: Terra Land Group
To: rhoo@sjgov.org
Subject: Please Distribute: Letter for San Joaquin County Planning Commissioners
Date: Tuesday, December 12, 2017 2:19:13 PM
Attachments: ZoneClassificationSupportingDocs.pdf

Dear San Joaquin County Planning Commissioners,

Terra Land Group ("TLG") anticipates that the December 21, 2017 San Joaquin County Planning Commission ("SJCPC") meeting agenda will include an action item to consider approving Zone Reclassification Application # PA-1700172. TLG would like to submit this email and its attachments in relation to the Public Comments item on the December 21, 2017 agenda.

With this in mind, TLG believes that the potential for flood water drainage and other hydrology related impacts and associated water damages to the south Manteca rural community appear to be significant and deserving of close attention and careful study in conjunction with California Senate Bill No. 5 ("SB5") flood protection improvements being considered.

For some time now, TLG has written and submitted numerous letters to provide supporting evidence and to build an overall context and framework for public concerns. Through careful study, TLG believes that the enclosures attached to the letters included in this email can offer the SJCPC board members significant details relating to information presented and public concerns expressed during the City of Manteca SB5 public hearing processes (as conducted by the City of Manteca).

Due to the complex nature of the potential flood issues involved, TLG believes that by submitting this information prior to the release of the agendas for the December 21, 2017 SJCPC meeting, the Commissioners will be enabled to devote more adequate time to review any and all potential for flood impacts and associated damages that may be created. This review should be conducted prior to taking any action relating to approving Zone Reclassification Application # PA-1700172.

Attached are copies of two items:

1. Notice of Public Hearing on 12-21-2017: Zone Reclassification Application # PA-1700172
2. Letter dated 12-12-2017 from Terra Land Group to the Manteca City Council

   Re: December 19, 2017 Manteca City Council Meeting Public Concerns Associated with Unidentified Municipal and/or Public Utilities and Services Infrastructure and the Potential for Drainage and Other Hydrology-Related Impacts Affecting the Lower San Joaquin River Basin.

   This letter can be downloaded via Dropbox at this link:
   https://www.dropbox.com/s/claoc2wm9iis5w2/2017-12-12_LTR_MCC_PublicConcerns_MHcm.pdf?dl=0

Please advise if you experience any trouble downloading the letters.

Thank you for your attention to this very important matter.

Respectfully,

Martin Harris
Terra Land Group
MH/cm

SAN JOAQUIN COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT

1810 E. HAZELTON AVE., STOCKTON, CA 95205-6232
PHONE: 209/468-3121 FAX: 209/468-3163

November 21, 2017

RE: December 7, 2017 Notice of Public Hearing – Item Rescheduled

To Whom It May Concern:

Please note Zone Classification application No. PA-1700172 of San Joaquin County to process the zone reclassifications for the Landowner Requests of the 2035 General Plan Update has been removed from the December 7, 2017 San Joaquin County Planning Commission hearing agenda and the item is now scheduled for the December 21, 2017 San Joaquin County Planning Commission hearing. You will receive an updated Notice of Public Hearing for the rescheduled item at a future date.

If you have any questions please feel free to contact me at (209) 468-0222 or alisa.goulart@sjgov.org

Sincerely,

Alisa Goulart
Associate Planner

NOTICE OF PUBLIC HEARING
Before the
SAN JOAQUIN COUNTY PLANNING COMMISSION

On Thursday, December 7, 2017, at 6:30 p.m., or as soon as possible thereafter, in the Auditorium of the San Joaquin County Department of Public Health Services, 1601 East Hazelton Avenue, Stockton, California, the Planning Commission will hold a public hearing to consider:

PROJECT:

ZONE RECLASSIFICATION APPLICATION NO. PA-1700172 OF SAN JOAQUIN COUNTY to process the zone reclassifications for the Landowner Requests of the 2035 General Plan Update that were approved and adopted by the Board of Supervisors. The adopted Landowner Requests changed the General Plan designation of the subject parcels. Adoption of these Zone Reclassifications will assign zoning to the subject parcels that is consistent with the General Plan. The project site is located Countywide (Supervisorial District: All).

ENVIRONMENTAL REVIEW OF PROJECT:

Based on the Initial Study, which indicates that this project will not have a significant effect on the environment, and a Negative Declaration has been prepared.

PUBLIC HEARING PROCEDURE:

Following is a brief explanation of Planning Commission hearings. For meetings with large agendas, or if an item is particularly controversial, the time limits noted below may be applied by the Chairman:

- Staff report and recommendation are presented.
- Primary project proponents give their testimony (limited to 20 minutes). Other project proponents give their testimony (limited to 5 minutes).
- Primary project opponents give their testimony (limited to 20 minutes if there is an agreed upon spokesperson). Other project opponents give their testimony (limited to 5 minutes).
- Applicant may rebut the opponents' testimony (limited to 10 minutes).
- Time limits do not apply to responses to questions from Planning Commissioners or staff.
- Chairman will close the public hearing and bring the matter back to the Planning Commission for discussion and decision.

All persons interested in this matter are invited to be present at this hearing and submit oral statements regarding either the project or the Environmental Determination. Any written materials or statements you want to be considered at the hearing must be submitted to the Community Development Department no later than noon on the Friday before the public hearing. Only those persons who attend the hearing or participate by making oral or written comments may appeal any Planning Commission actions to the Board of Supervisors. If you challenge the nature of any proposed actions in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Community Development Department prior to the public hearing. If you have any questions about this matter, please contact San Joaquin County Community Development Department, 1810 East Hazelton Avenue, Stockton, CA 95205. Phone: 209-468-3120.

Kerry Sullivan, Director
San Joaquin County
Community Development Department

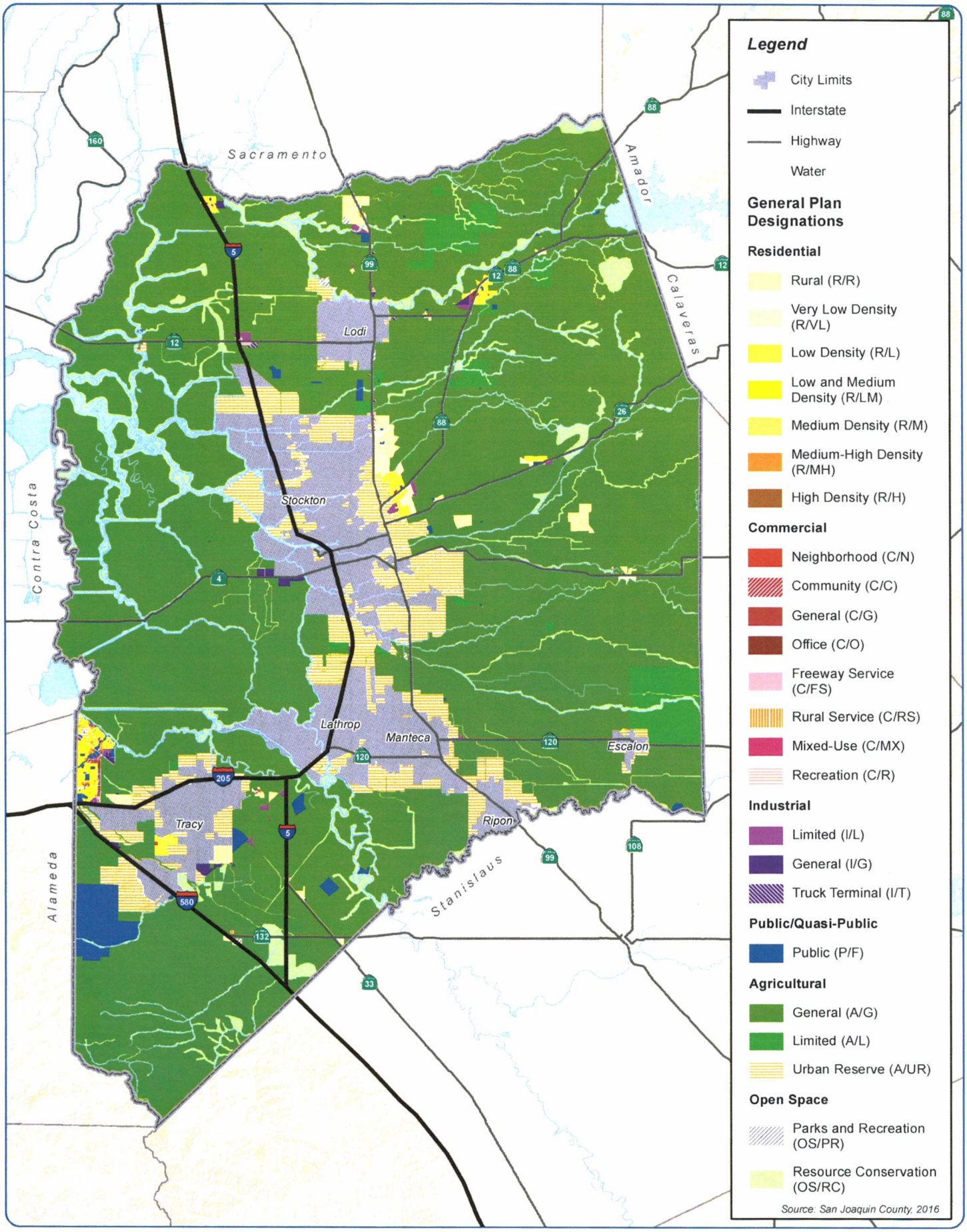
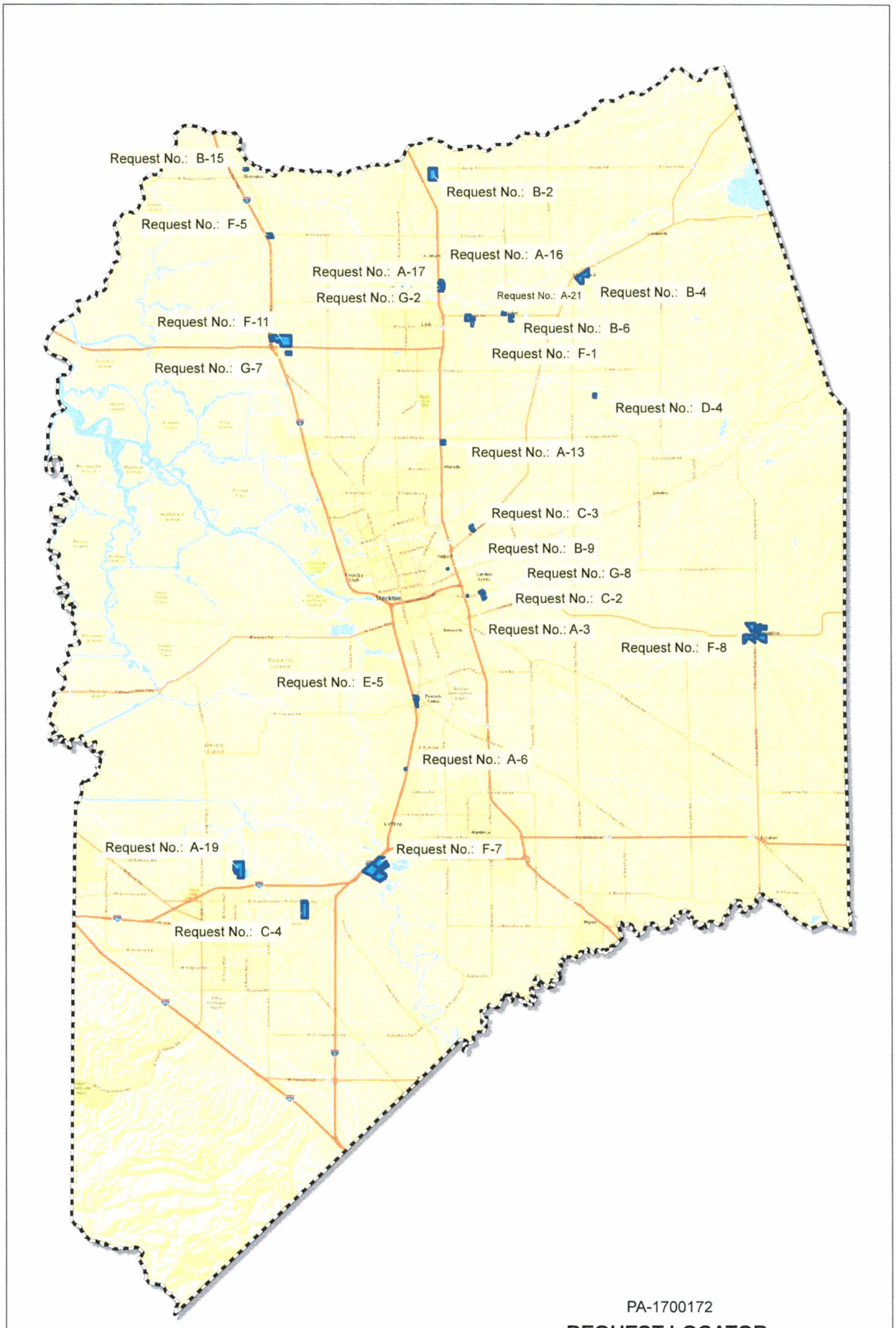


Figure LU-1
General Plan Land Use Diagram



PA-1700172

REQUEST LOCATOR

Google Maps

Imagery ©2017 Google, Map data ©2017 Google 2000 ft

https://www.sacbee.com/news/state/california/fires/article223870985.html

PG&E sued over Camp Fire as insurance claims hit billions

BY DALE KASLER

JANUARY 03, 2019 09:39 AM,

UPDATED JANUARY 03, 2019 01:17 PM

Three major insurance companies are suing PG&E over the billions of dollars in claims they expect to face from the Camp Fire.

The lawsuits, by Allstate Insurance Co., State Farm and USAA, represent another potentially staggering blow to PG&E, which has already acknowledged that problems occurred on a high-voltage transmission tower near the spot where the fire started Nov. 8. Multiple lawsuits have already been filed by Camp Fire survivors, and the company is under intense scrutiny by Cal Fire, the Public Utilities Commission and federal prosecutors.

Cal Fire is investigating and hasn't yet assigned any cause for the Camp Fire. But the insurance companies are laying the blame squarely on Pacific Gas and Electric Co., arguing the company did a poor job of maintaining its power lines, towers and other equipment.

"Plaintiffs have suffered damages caused by an act or omission of defendants," Allstate said in its lawsuit, filed Dec. 21 in Sacramento Superior Court.

State Farm's lawsuit accused PG&E of "failing to keep the power lines, wires, and any and all associated equipment in a safe condition at all times to prevent fires."

The wildfires of the past two years are putting property-casualty insurers under financial strain. A small San Joaquin Valley insurer, Merced Property & Casualty, was declared insolvent in early December because of Camp Fire claims. An industry-funded guaranty association will pay Merced Property customers for their losses, but by law can only pay up to $500,000 per claim.

The Camp Fire killed 86 people, making it the deadliest wildfire in California history, and is expected to generate billions of dollars in damages. About 90 percent of the housing stock in Paradise was destroyed, forcing the evacuation of the entire town of 27,000.

The insurers' lawsuits, filed Dec. 21, were first reported by the Sacramento Business Journal.

Besides civil claims, PG&E could also face criminal penalties over the Camp Fire and the deadly blazes that struck Santa Rosa and the wine country in October 2017. Federal prosecutors who secured felony convictions against PG&E after the deadly 2010 San Bruno pipeline explosion have said the fires could represent a violation of the terms of probation the utility received in the San Bruno case. PG&E has acknowledged that possibility as well. The consequences of a probation volation are unclear.

Xavier Becerra, California's attorney general, has said the utility could be prosecuted for murder in the Camp Fire case.

PG&E, asked about the insurers' lawsuits, said in an email, "Our focus continues to be on assessing our infrastructure to further enhance safety, restoring electric and gas service where possible, and helping customers begin to recover and rebuild. Throughout our service area, we are committed to doing everything we can to further reduce the risk of wildfire."

ENCLOSURE 24

Archived Report Products: 2019-03-18

Daily Reservoir Storage Summary

ENDING AT MIDNIGHT - 03/17/2019

FOR SELECTED RESERVOIRS IN NORTHERN AND SOUTHERN CALIFORNIA

Report generated: March 18, 2019 10:05

WATER STORAGE

Reservoir Name	StaID	Capacity (AF)	Elevation (FT)	Storage (AF)	Storage Change	% of Capacity	Average Storage	% of Average	Outflow (CFS)	Inflow (CFS)	Storage-Year Ago This Date
TRINITY RIVER											
TRINITY LAKE	CLE	2,447,650	2,329.11	1,833,384	3,412	75	1,877,064	98	621	2,445	1,811,743
WHISKEYTOWN	WHI	241,100	1,202.58	217,899	-1,246	90	210,088	104	1,775	1,155	205,122
LEWISTON	LEW	14,660	1,901.40	14,210	-120	97	13,805	103	672	618	14,098
RUSSIAN RIVER											
SONOMA(WARM SPRINGS)	WRS	381,000	456.79	260,477	-1,074	68	232,570	112	1,010	475	207,907
MENDOCINO (COYOTE)	COY	122,400	748.18	86,685	17	71	76,244	114	188	205	66,551
SACRAMENTO RIVER											
SHASTA	SHA	4,552,000	1,040.12	3,795,766	-15,353	83	3,526,006	108	21,345	13,714	3,580,973
KESWICK	KES	23,772	583.18	21,392	-286	90	21,747	98	24,238	24,096	20,247
FEATHER RIVER											
OROVILLE	ORO	3,537,577	839.03	2,663,871	8,269	75	2,591,900	103	6,110	10,315	1,610,515
ANTELOPE	ANT	22,566	4,996.70	17,938	82	79	18,895	95	---	---	18,447
FRENCHMAN	FRD	55,477	5,582.14	46,697	114	84	38,776	120	---	---	45,793
LAKE DAVIS	DAV	83,000	5,770.89	68,692	-108	83	62,240	110	---	---	70,984
YUBA RIVER											
BULLARDS BAR	BUL	966,000	1,918.31	796,117	-465	82	667,032	119	3,296	3,067	821,528
ENGLEBRIGHT	ENG	70,000	527.96	70,748	-42	101	66,463	106	---	5,499	70,395
AMERICAN RIVER											
FOLSOM	FOL	977,000	432.12	632,743	2,357	65	589,729	107	5,990	7,308	625,869
UNION VALLEY	UNV	266,369	4,844.73	199,453	907	75	155,860	128	---	---	182,585
LOON LAKE	LON	69,306	6,383.85	37,365	-565	54	29,871	125	---	---	40,555
ICE HOUSE	ICH	43,496	5,408.88	20,021	57	46	22,278	90	---	38	29,127
NIMBUS	NAT	9,000	122.68	7,647	-186	85	8,028	95	5,893	5,805	7,847
CACHE CREEK											
INDIAN VALLEY	INV	300,000	1,471.57	248,852	---	83	195,955	127	12	394	234,128
PUTAH CREEK											
BERRYESSA	BER	1,602,000	441.31	1,576,363	-1,518	98	---	---	---	---	1,398,326
STONY CREEK											
BLACK BUTTE	BLB	143,700	442.35	36,206	1,360	25	74,679	48	1,094	1,790	40,941
CALAVERAS RIVER											
NEW HOGAN	NHG	317,000	680.80	196,424	421	62	161,150	122	297	523	178,374
MOKELUMNE RIVER											
CAMANCHE	CMN	417,120	220.66	313,069	-1,267	75	257,082	122	2,400	1,857	304,220
PARDEE	PAR	203,795	562.10	191,664	-571	94	181,005	106	2,123	---	192,918
STANISLAUS RIVER											
DONNELL'S	DON	64,320	---	8,467	397	13	14,681	58	182	---	14,155
BEARDSLEY	BRD	97,800	---	52,997	-324	54	44,762	118	692	---	33,390
TULLOCH	TUL	67,000	498.91	54,141	-1,390	81	57,138	95	4,758	4,064	57,860
NEW MELONES	NML	2,400,000	1,055.34	2,034,159	-2,013	85	1,490,939	136	3,946	3,003	1,931,686
TUOLUMNE RIVER											
DON PEDRO	DNP	2,030,000	802.75	1,699,313	-4,752	84	1,464,127	116	7,508	4,655	1,701,575
HETCH HETCHY	HTH	360,000	---	285,804	---	79	153,446	186	1,162	---	287,631
CHERRY VALLEY	CHV	273,500	---	208,583	---	76	106,312	196	896	---	70,328
MERCED RIVER											
MC CLURE (EXCHEQUER)	EXC	1,024,600	815.40	704,722	-1,765	69	550,727	128	3,162	1,895	708,894
CHOWCHILLA RIVER											

WATER STORAGE											
Reservoir Name	StaID	Capacity (AF)	Elevation (FT)	Storage (AF)	Storage Change	% of Capacity	Average Storage	% of Average	Outflow (CFS)	Inflow (CFS)	Storage-Year Ago This Date
EASTMAN (BUCHANAN)	BUC	150,000	566.25	115,997	249	77	79,020	147	200	333	94,797
FRESNO RIVER											
HENSLEY (HIDDEN)	HID	90,000	499.88	37,970	379	42	39,236	97	198	395	25,263
SAN JOAQUIN RIVER											
MILLERTON (FRIANT)	MIL	520,500	558.49	429,816	-2,155	83	354,631	121	4,445	3,375	341,931
SAN LUIS CREEK											
SAN LUIS	SNL	2,041,000	542.82	2,025,549	-762	99	1,797,414	113	---	---	1,648,065
KINGS RIVER											
PINE FLAT	PNF	1,000,000	881.89	635,152	-5,259	64	548,791	116	5,416	2,786	551,693
KAWEAH RIVER											
KAWEAH (TERMINUS)	TRM	185,600	633.38	49,376	-741	27	33,219	149	1,469	1,102	41,368
TULE RIVER											
SUCCESS	SCC	82,300	629.13	39,554	-747	48	28,989	136	983	613	21,986
KERN RIVER											
ISABELLA	ISB	568,000	2,564.57	195,964	2,022	35	193,409	101	333	1,392	175,864
TRUCKEE RIVER											
STAMPEDE	STP	226,500	5,938.99	194,484	-121	86	139,794	139	100	131	205,868
INDEPENDENCE LAKE	INP	17,295	6,944.85	14,444	-54	84	14,161	102	---	---	15,188
DONNER LAKE	DNN	9,700	5,928.44	3,452	0	36	4,234	82	---	---	4,839
SANTA YNEZ RIVER											
CACHUMA LAKE	CCH	205,000	735.91	145,158	683	71	169,548	86	32	392	75,694
SOUTH COAST											
PYRAMID	PYM	180,000	2,573.29	163,892	2,422	91	163,442	100	---	---	167,217
CASTAIC	CAS	325,000	1,486.27	263,174	-714	81	287,081	92	---	---	265,361
LAKE PERRIS	PRR	131,452	1,581.89	113,132	22	86	110,591	102	---	---	78,954

AF - Acre Feet CFS - Cubic Feet per Second

Note: Reservoir Flows are daily averages.

| Back

THE WALL STREET JOURNAL.

California's Weather Cycles

The Golden State can't seem to catch a weather break. Drought and horrific wildfires have again given way to catastrophic storms and flooding. Progressives often exploit natural disasters to campaign against fossil fuels, but Californians would be better off if their politicians spent more money preparing for bad weather than fighting climate change that they can't do anything about.

The last couple of months in California have been among the coldest and wettest on record. For the first time in at least 132 years, the temperature didn't hit 70 degrees in downtown Los Angeles in February. Snow powdered the hills of West Hollywood and Malibu two weeks ago not far from where a wildfire raged last November.

Southern Californians who have to bundle up more may get little sympathy from the rest of the country, but residents in the north have been pounded by storms. An avalanche in the Sierra Nevada mountains last week forced the closure of state highways. The Russian River that winds from Mendocino to Sonoma overflowed last week and inundated more than 2,000 structures. One city surrounded by floodwaters turned into an island.

The snowpack in the Sierras, which account for half of the state's surface water storage, last week measured 153% of normal levels compared to 19% last year. "Right now we're not concerned about drought at all," said Pete Fickenscher, a senior hydrologist at the National Oceanic and Atmospheric Administration.

That's the problem. California's political class is only worried about drought when the water runs out. Thus, there isn't enough reservoir capacity in the north—which environmentalists oppose in any event—to store storm runoff during wet years like this one. When droughts come along, Sacramento resorts to rationing. The lack of storage and inadequate levees also raise the risk of flooding. If history is a guide, melting snowpack in the spring could inundate waterways and lead to mudslides that might be especially ferocious since last year's wildfires stripped slopes of vegetation.

Weather and climate aren't the same, even if politicians use wildfires and drought to push their green agenda. California's weather patterns have always been mercurial. Renewable energy, electric cars and high-speed rail won't help Californians escape this immutable climate reality.

ENCLOSURE 27

List of Development and Infrastructure Projects in California that May Contribute to Increased Flood Impacts

1. Lower San Joaquin River Flood Risk Management Project
2. Various State of California water projects affected by SB5
3. City of Manteca and other local partner's currently unresolved storm water and regional waste water discharge and/or drainage projects
4. ACE-forward connection rail link to the Altamont
5. BART rail extension east to Lathrop/Manteca
6. Bullet train rail link connecting San Francisco to Los Angeles
7. Hwy 120 road expansion improvements from Hwy 99 to Hwy 205
8. Airport Way widening (Manteca)
9. Great Wolfe Resort project and related abandonment of regional waste water discharge facilities both at and on adjacent properties to the Great Wolfe project site
10. River Islands' continued expansion and effect on short-term and long-range wastewater collection, treatment, and discharge and/or potable water delivery projects
11. Central Lathrop community facilities district improvements
12. Public access and utilities improvements to serve Lathrop-Manteca Fire District Station #35
13. Public utilities infrastructure relating to South Lathrop Commerce Center benefitting properties outside South Lathrop Specific Plan Area
14. South Lathrop Regional Outfall Structure and Related Facilities
15. Public utilities infrastructure related to South Lathrop Commerce Center benefitting properties within South Lathrop Specific Plan Area
16. Paradise Cut expansion
17. Lower San Joaquin River Flood Risk Management Project
18. RD17 South Manteca dryland levee extension
19. Various other local and highway improvement projects serving the area
20. Central Valley Flood Protection Plan ("CVFPP") 2017 Update and related State of California recommended plan actions as detailed in the CVFPP
21. Possible changes affecting the continued use of the French Camp Outlet Canal ("FCOC")
22. A mutual benefit project between Oakwood Lake Drainage District and the City of Manteca to resolve waste water and storm water treatment and drainage and discharge issues that appear to only get worse as more and more projects come forward for approval
23. Denali, Dutra, and Oakwood Trails projects and related abandonment of regional waste water facilities located on the project site
24. Various shallow groundwater pump and associated San Joaquin River discharge projects to lower groundwater elevations in the developing areas
25. Manteca Regional Wastewater Facility in association with local partners, NPDES and waste water Master Plan update and related projects

Additional Projects to consider as provided in the Manteca City Progress Report, March 19, 2019 (As provided to the public in the agenda for the 3/19/2019 Manteca City Council Meeting, Agenda Item E.2)

26. General Plan Update
27. General Plan Environmental Impact Report
28. Citywide Track Route Study
29. 2018 PFIP Sewer, Water and Storm Drain Update - RFP/Consultant Selection
30. French Camp Outlet Canal Master Plan Study
31. Daniels Street Extension Project - Improvement Plans & Specifications
32. User Fee Study Update (Planning, Engineering, Building, and Fire Prevention)
33. Great Wolfe Lodge Plan Review and Inspections
34. Daniels Street Extension Project - Construction
35. Economic Development Plan
36. Great Wolfe Lodge
37. Family Entertainment Zone Master Plan, Annexations, and Milo Candini
38. Fire Station No. 5 - Construction
39. Standards of Cover
40. Parks and Recreation Master Plan Implementation
41. Airport - Yosemite to Daniels - Env. Clearance
42. SR120/McKinley Ave Interchange (IC) Project - Design & R/W & Construction
43. Public Works Department Administration Building
44. Well 30-Nile Garden Project Grant Application
45. Well 28 & 29 Equipping Project Construction (CIP 13007)
46. DIP 4 - Digester Improvement Phase III
47. North Manteca Trunk Sewer
48. WQCF SCADA Master Plan
49. Well 28 & 29 Asset Management

Additional projects to consider as brought forward to the Manteca City Council as part of the March 19, 2019 Agenda Items D.1, D.3 & E.1

50. Eckert Cold Storage & related abandonment of currently permitted municipal wastewater discharge facilities located at the City of Manteca wastewater treatment plant to promote development of the city-owned property (See two Manteca Bulletin newspaper articles: 04/14/2012 “Mining gold from sewer land” and 07/15/2013 “Farmland key to Great Wolf”)
51. Grant funding opportunities for statewide and local community park development
52. McKinley Bypass as it extends south of Woodward Ave before heading east to and across Airport Way (See City of Manteca General Plan Update/Draft GPAC Land Use Alternatives Report dated November 2018, page 4-15)
53. Recruited Ireland Dairy Group to reopen Cal specialty cheese plant on Airport Way (and associated waste water effluent discharge effects)

54. Conservation of Villa Ticino residential development to industrial use (with uncertain industrial storm water and waste water effluent discharge effects)
55. Anticipated planned future action to consider approving San Joaquin County Zone Reclassification Application #PA-1700172 as originally scheduled for a December 7, 2017 public hearing as noticed by the San Joaquin County Planning Commission on November 17, 2017 (See the December 12, 2017 email from TLG to the San Joaquin County Planning Commission, with attachments)