MITIGATION MONITORING AND REPORTING PROGRAM
FOR THE

River Islands at Lathrop
Phase 2 Project

State Clearinghouse No. 1993112027

Prepared for:

City of Lathrop
Community Development
Department/Planning Division

May 6, 2021

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Prepared for:

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May 6, 2021

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LIST OF ABBREVIATIONS

AAQA	Ambient Air Quality Analysis
AAQS	Ambient Air Quality Standard
BESD	Banta Elementary School District
BMP	best management practice
BOEP	Burrowing Owl Exclusion Plan
CALGreen	State Building Energy Efficiency Standards
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
City	City of Lathrop
CNEL	community noise equivalent level
CRPR	California Rare Plant Rank
dBA	A-weighted decibel
DTSC	California Department of Toxic Substance Control
ESA	federal Endangered Species Act
ghg	greenhouse gas
HRA	health risk assessment
lb/day	pounds per day
L_{dn}	day-night average noise level
L_{eq}	energy-equivalent noise level
LMFD	Lathrop-Manteca Fire District

MMRP	mitigation monitoring and reporting program
MSDS	Material Safety Data Sheets
$MTCO_2e$	metric tons of carbon dioxide equivalent
NAHC	Native American Heritage Center
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Eliminate System
PCC	Public Contract Code
PRC	Public Resources Code
RID	River Islands Development
RWQCB	regional water quality control board
SJCEHD	San Joaquin County Environmental Health Department
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	storm water pollution prevention plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
Valley CAN	Valley Clean Air Now
VELB	valley elderberry longhorn beetle
VERA	Voluntary Emission Reduction Agreement
ZNE	zero net energy

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1 MITIGATION MONITORING AND REPORTING PROGRAM

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.), the City of Lathrop (City) prepared a supplemental environmental impact report (SEIR) for the River Islands at Lathrop Phase 2 Project (modified Phase 2 Project or project), which includes development of the second phase of the River Islands at Lathrop Project (River Islands Project), a mixed-use, water-oriented master planned community on Stewart Tract and Paradise Cut in Lathrop, CA. The SEIR (State Clearinghouse No. 1993112027) identified significant impacts and mitigation measures that would reduce the identified impacts to less-than-significant levels, where feasible. CEQA (PRC Section 21081.6) and the State CEQA Guidelines (Sections 15091[d] and 15097) require public agencies to "adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment." This mitigation monitoring and reporting program (MMRP) has been prepared for the modified Phase 2 Project because the SEIR identifies significant adverse impacts related to project implementation, and mitigation measures have been identified to reduce or eliminate most of those impacts. Adoption of this MMRP would occur along with approval of the modified Phase 2 Project.

1.1 PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This MMRP has been prepared to ensure that all required mitigation measures are implemented and completed in a satisfactory manner before and during project construction and operation, as applicable.

The MMRP table provided below has been prepared to assist the responsible parties in implementing the mitigation measures applicable to the modified Phase 2 Project. The table identifies the impact; the individual mitigation measures; the specific actions required before, during, and after construction; the implementing party; and mitigation timing. The table also includes a column to confirm implementation of the mitigation measures after project approval. The numbering of mitigation measures follows the numbering sequence found in the SEIR. Mitigation measures that are referenced more than once in the SEIR are not duplicated multiple times in the MMRP table.

1.2 2003 MMRP AND RELATIONSHIP TO THE PHASE 2 MMRP

In 2003, the City of Lathrop approved the River Islands Project, certified the SEIR prepared at that time (State Clearinghouse No. 1993112027), approved various entitlements, and adopted the MMRP (2003 MMRP). Development in the Phase 1 area is in progress and the 2003 MMRP is in use. Various mitigation measures have been implemented successfully during Phase 1 implementation to date and will continue to be implemented as applicable as development and operation of Phase 1 proceeds.

This MMRP is separate from the 2003 MMRP. This MMRP is focused specifically on the modified Phase 2 Project. Where mitigation measures applicable to the modified Phase 2 Project remain the same as those identified in the 2003 MMRP, the title, "Adopted Mitigation Measure," is used as the mitigation measure was "adopted" as part of the 2003 SEIR; where mitigation measures would be modified from those identified in the 2003 SEIR, the title, "Modified Mitigation Measure," is used; and where new mitigation measures were developed for the modified Phase 2 Project, the title, "New Mitigation Measure," is used.

This MMRP only applies to activities associated with implementation of the modified Phase 2 Project. Activities associated with Phase 1 of the River Islands Project will continue to use the 2003 MMRP. In addition, if the modified Phase 2 Project does not proceed, and the project as approved through the 2003 SEIR and subsequent addenda is implemented in the Phase 2 area, the 2003 MMRP would be applied to those activities.

1.3 ROLES AND RESPONSIBILITIES

The City Community Development Department and/or Public Works Department is responsible for overall administration of the MMRP and for verifying that the applicant, builder, construction contractor, or other designated party has completed the necessary actions for each measure. The party responsible for implementing each item will identify the staff members responsible for coordinating with the City on the MMRP.

1.4 MITIGATION MONITORING AND REPORTING PROGRAM TABLE

Table 1, which identifies the mitigation measures applicable to the modified Phase 2 Project, includes the table columns identified and described below:

- **Impact**: This column presents all the impacts disclosed in the SEIR for which mitigation was identified.
- **Mitigation Measure**: This column presents all the mitigation measures identified in the modified Phase 2 Project SEIR, each of which has been adopted and incorporated into the project.
- **Action(s)**: For every mitigation measure, one or more actions are described. The actions delineate the means by which the mitigation measures will be implemented and, in some instances, the criteria for the City to confirm whether a measure has been successfully implemented. Where mitigation measures are particularly detailed, the action may refer back to the measure.
- **Implementing Party**: This column identifies the entity responsible for undertaking the required action.
- **Timing**: Implementation of the action must occur before or during some part of project approval, project design, or project construction or on an ongoing basis. This column identifies the timing for implementation of each mitigation measure.
- **Completion of Implementation**: The City (Community Development Department or Public Works Department or Building Department) is responsible for ensuring that mitigation measures are successfully implemented. The "Completion of Implementation" column is to be used by the City to indicate when implementation of a mitigation measure has been completed. The City, at its discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors.

Table 1 River Islands Phase 2 Project Mitigation Monitoring and Reporting Program

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Traffic and Transportation					
	Adopted[1] Mitigation Measure 4.4-j: Degradation of Level of Service (LOS) at Signalized and Unsignalized Intersections The project applicant shall pay its applicable transportation impact fees to provide the following improvements: ▶ Louise Avenue/Interstate 5 (I-5) Northbound and Southbound Ramps ▶ MacArthur Drive/I-205 Westbound and Eastbound Ramps ▶ MacArthur Drive/Arbor Avenue ▶ River Islands Parkway/Golden Valley Parkway	Pay applicable transportation impact fees	Project applicant (implementation), City Building Services (monitoring)	Before building permit is issued, specific timing based on traffic monitoring program	
	Adopted[1] Mitigation Measure 4.4-k: Vehicle Backups Extending from One Intersection through an Adjacent Intersection The project applicant shall pay its applicable transportation impact fees to provide the following improvements to: ▶ Paradise Road/I-205 Eastbound and Westbound Ramps	Pay applicable transportation impact fees	Project applicant, Caltrans, or appropriate local jurisdiction (implementation); City Public Works Department (monitoring)	Before building permit is issued, specific timing based on traffic monitoring program	
	Adopted[1] Mitigation Measure 4.4-l: Degradation of Freeway Operations The project applicant shall pay its applicable transportation impact fees for its fair share contribution for the additional travel lanes to I-5, State Route (SR) 120, and I-205 as identified in the SEIR.	Pay applicable transportation impact fees	Project applicant (implementation); City Building Services (monitoring)	Before building permit is issued	

[1] Applicable mitigation measure from the 2003 SEIR not required to reach a less-than-significant conclusion in the 2021 SEIR.

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	Adopted[1] Mitigation Measure 4.4-m: Degradation of Freeway Ramp/Freeway Mainline Merge/Diverge Operation The project applicant shall pay its applicable transportation impact fees to provide the following improvements at the following locations: ▶ MacArthur Drive Eastbound Off-Ramp Deceleration Lane from I-205 Adjacent to the Freeway ▶ Mossdale Road Northbound On-Ramp Acceleration Lane to I-5 Adjacent to the Freeway ▶ Mossdale Road Northbound Off-Ramp Deceleration Lane from I-5 Adjacent to the Freeway ▶ Manthey Road Southbound On-Ramp Acceleration Lane to I-5 Adjacent to the Freeway If all added freeway lanes described for Mitigation Measure 4.4-l are in place, the above mitigation would not be required. An annual monitoring program coordinated with Caltrans shall be implemented as part of the City's Transportation Management Program. The applicant shall provide annual traffic reports to the City and Caltrans regarding interchange operations. The reports shall include a projection of the expected interchange volume in two and in four years, based upon anticipated development. Mitigation measures at and beyond the 800 unit peak trip limitation will be required to either limit traffic capacity and movements (such as metering lights or restricting access between Stewart Road and Manthey Road), improve capacity or movements (such as acceleration and/or deceleration lane improvements), or a combination of the two. Such mitigation measures shall be determined by the City in consultation with Caltrans and the applicant. If satisfactory mitigations are not agreed upon, then prior to reaching the 800 unit peak trip cap, the City shall meet with Caltrans to determine subsequent action.	Pay applicable transportation impact fees	Project applicant, Caltrans, or appropriate local jurisdiction (implementation); City Public Works Department (monitoring)	Before building permit is issued, specific timing based on traffic monitoring program	
		Implement annual monitoring program, provide annual traffic reports to the City and Caltrans regarding interchange operations	City Community Development Department, applicable project applicants (implementation); City Public Works Department (monitoring)	During annual traffic monitoring	

[1] Applicable mitigation measure from the 2003 SEIR not required to reach a less-than-significant conclusion in the 2021 SEIR.

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	When the 801st residential occupancy occurs, at least two lanes of traffic on Bradshaw's Crossing Bridge must be open and accessible to the project to allow access to the Louise Avenue/River Islands Parkway interchange with I-5. [This Mitigation Measure was Modified pursuant to Addendum #5 to the RI SEIR 2015.] In addition, the City shall ensure that traffic volumes on the I-5/Manthey/Mossdale interchange are included as part of the Stewart Tract Mitigation Monitoring Program and shall process the encroachment permit to allow ramp meters to be installed when ramp volumes determined by Caltrans to be critical are reached during Phase 1a. Other developments that add traffic to this interchange shall be responsible for paying their pro-rata share of the cost of the ramp meters.				
	Adopted[1] Mitigation Measure 4.4-o: Degradation of Rural Two-Lane Roadway Operation The project applicant shall pay its applicable transportation impact fees to provide the following improvements to the following roadways: ▶ Paradise Road (River Islands Development to Arbor Avenue) ▶ Arbor Avenue (Paradise Road to MacArthur Drive) ▶ Paradise Road (Arbor to I-205) ▶ MacArthur Drive (Arbor Avenue to I-205) ▶ Golden Valley Parkway (Paradise Road to River Islands Parkway)	Pay applicable transportation impact fees	Project applicant, or appropriate local jurisdiction (implementation); City Public Works Department (monitoring)	Before building permit is issued, specific timing based on traffic monitoring program	

[1] Applicable mitigation measure from the 2003 SEIR not required to reach a less-than-significant conclusion in the 2021 SEIR.

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	Adopted[1] Mitigation Measure 4.4-q: Degradation of Manthey Road San Joaquin River Bridge Operation Before traffic on Manthey Road reaches 150 vehicles per hour based on the Stewart Tract Traffic Monitoring Program, one of the following measures would be implemented: 1. Post (and regularly enforce) a 15- to 20-mile-per-hour speed limit on the bridge **–or–** 2. Stripe and sign the bridge for one-way northbound traffic flow. **–or–** 3. Stripe and sign a single travel lane on the Manthey Road bridge crossing the San Joaquin River and have alternating signal-controlled northbound and southbound traffic flow.	Implement one of the following: (1) post (and regularly enforce) a 15- to 20-mile-per-hour speed limit on the bridge, or (2) stripe and sign the bridge for one-way northbound traffic flow, or (3) stripe and sign a single travel lane on the Manthey Road bridge crossing the San Joaquin River and have alternating signal-controlled northbound and southbound traffic flow	Project applicant or appropriate local jurisdiction (implementation); City Public Works Department (monitoring)	Before traffic on Manthey Road reaches 150 vehicles per hour	
	Adopted[1] Mitigation Measure 4.4-t: Onsite Bicycle Circulation The project applicant shall revise the tentative maps to incorporate the following changes: The project applicant shall incorporate the following on the improvement plans: ▶ informational signing along all bicycle routes indicating bicycle riders must obey all traffic laws, including giving the right-of-way to pedestrians and stopping at all stop signs and red signals, ▶ onsite bicycle circulation analysis for all subsequent Phase 2 tentative maps.	Incorporate the following on the improvement plans: informational signing along all bicycle routes indicating bicycle riders must obey all traffic laws, including giving the right-of-way to pedestrians and stopping at all stop signs and red signals, and onsite bicycle circulation analysis for all subsequent Phase 2 tentative maps	Project applicant (implementation); City Public Works Department (monitoring	Before approval of improvement plans	
		Prepare onsite bicycle circulation analysis for all subsequent Phase 2 tentative maps	Project applicant (implementation); City Public Works Department (monitoring)	Before approval of Phase 2 tentative map	

[1] Applicable mitigation measure from the 2003 SEIR not required to reach a less-than-significant conclusion in the 2021 SEIR.

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.4-e: Construction Related Transportation Impacts	**Modified Mitigation Measure 4.4-v: Construction Traffic (2007 Base Case + Project)** Before construction of the Proposed Phase 2 Project begins, the project applicant shall prepare a construction traffic control plan that shall be applied to all Phase 2 construction activities. The plan, at a minimum, shall include the following conditions and address the following topics: ▶ Local roadways will be jointly monitored by the City and project applicant every six months to determine whether project related construction traffic is degrading roadway conditions. Roadways with potential to be damaged by construction traffic and included in the monitoring effort shall be agreed to by the City and the project applicant. All degradation of pavement conditions because of Phase 2 related construction traffic will be fully repaired by the project applicant to the satisfaction of the City of Lathrop. ▶ The construction traffic control plan shall identify standards and methods for the maintenance of emergency vehicle access during construction activities. ▶ The construction traffic control plan shall identify standards and methods to maintain safe conditions for motorists, bicyclists, pedestrians, and transit users during construction activities. Methods such as flag persons; signage; excluding vehicles, bicycles, or pedestrians from hazardous areas (while maintaining emergency vehicle access); will all be addressed.	Prepare construction traffic control plan for Phase 2 construction activities that includes all of the topics and information described in Modified Mitigation Measure 4.4-v.	Project applicant, construction contractor	Before construction	
		Confirm that the construction traffic control plan is incorporated into the construction contract before contract is issued.	City of Lathrop Public Works Department	Before construction	
		Implement measures detailed in traffic control plan.	Project applicant, construction contractor	During construction	
		Perform field-checks to confirm adherence to traffic control plan.	City of Lathrop Public Works Department	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Air Quality					
Impact 4.5-a: Increases in Regional Criteria Pollutants during Construction	**Modified Mitigation Measure 4.5-a: Increases in Regional Criteria Pollutants during Construction** SJVAPCD emphasizes implementation of effective and comprehensive control measures rather than requiring a detailed quantification of construction emissions. SJVAPCD requires that all feasible control measures (dependent on the size of the construction area and the nature of the construction operations) shall be incorporated and implemented. Based on available information, it appears that the application of standard construction mitigation measures for the control of fugitive dust (i.e., the application of water or soil stabilizers) are effective methods of reducing dust-related impacts on agricultural crops. In accordance with SJVAPCD guidelines, the following mitigation, which includes SJVAPCD Basic, Enhanced, and Additional Control Measures, shall be incorporated and implemented (SJVAPCD 2015a). Fugitive dust emissions generated by the project shall be reduced through application of air pollution control measures consistent with SJVAPCD Regulation VIII. In addition to the mitigation measures identified below, construction of the proposed project is required to comply with applicable SJVAPCD rules and regulations; Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations related to off-road construction vehicles and operating practices; and the requirements of a California Occupational Safety and Health Administration-qualified asbestos survey before demolition. ▶ All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, non-toxic chemical or organic stabilizer/suppressant, or vegetative ground cover.	Incorporate the SJVAPCD rules and regulations listed in Modified Mitigation Measure 4.5-a into the construction plan.	Project applicant, construction contractor	Before construction	
		Conduct one time check of the construction contract to confirm that the SJVAPCD rules and regulations listed in Modified Mitigation Measure 4.5-a are incorporated into the construction contract before contract is issued.	City of Lathrop Public Works Department	Before construction contract is executed	
		Perform field-checks, as needed, to confirm adherence to mitigation measures.	City of Lathrop Public Works Department	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ All onsite unpaved construction roads and offsite unpaved construction access roads shall be effectively stabilized of dust emissions using water or non-toxic chemical or organic stabilizer/suppressant. ▶ All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. ▶ During demolition of buildings all exterior surfaces of the building shall be wetted. ▶ Keep bulk materials sufficiently wet when handling and storing. ▶ When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained. ▶ All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.) ▶ Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. ▶ Onsite vehicle speeds on unpaved roads shall be limited to 15 mph. ▶ Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent.				

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	▶ Wheel washers shall be installed for all exiting trucks and equipment, or wheels shall be washed to remove accumulated dirt prior to leaving the site. ▶ Excavation, grading, and demolition activities shall be suspended when winds exceed 20 mph. ▶ The overall area subject to excavation and grading at any one time shall be limited to the fullest extent possible. ▶ Onsite equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. ▶ When not in use, onsite equipment shall not be left idling for more than 5 minutes. ▶ Use existing power sources (e.g., power poles) or clean fuel (e.g., gasoline, biodiesel, natural gas) generators rather than temporary diesel power generators and use electrified equipment when feasible. ▶ Idling of construction-related equipment and construction-related vehicles is not permitted within 1,000 feet of any sensitive receptor (i.e., house, hospital, or school). ▶ Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors. ▶ Install wind breaks at windward side(s) of construction areas. ▶ Limit areas subject to excavation, grading, and other construction activity at any one time. ▶ Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as feasible. Water appropriately until vegetation is established.				
	New Mitigation Measure 4.5-a(2): Preparation of an Ambient Air Quality Analysis SJVACPD recommends that construction and operational emissions that exceed 100 lb/day prepare	Prepare a project-level analysis of emissions for development in the Map area that is subject to SJVAPCD to validate project emissions levels.	Project applicant with oversight from SJVAPCD	Prior to approval of each Final Map, before construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	an AAQA to assess whether a project would violate an AAQS. Prior to the approval of a Final Map, the project applicant shall prepare a project-level analysis of emissions for development in the Map area that is subject to SJVAPCD oversight to confirm whether the particular land use development under the modified Phase 2 Project would result in emissions that exceed this 100 lb/day screening criterion. In cases where project activity would generate emissions above this screening criterion, the project applicant shall prepare an AAQA. Additionally, while this project-level analysis of daily emissions is conducted, the project applicant shall simultaneously produce annual emissions estimates using project-level detail. If, following the preparation of an AAQA, emissions are found to contribute to an exceedance of an AAQS or annual emissions would exceed SJVAPCD's mass emissions thresholds, the project applicant shall either implement additional emission reduction measures as part of the project or, once all feasible on-site reduction measures have been exhausted, engage in regional programs that serve to reduce air pollution in the San Joaquin Valley. An example of a potential program includes the Valley Clean Air Now (Valley CAN) organization, which improves public health through investments in vehicle repair and replacement programs. Emissions reduction programs must demonstrate a quantifiable reduction and must be located within the SJVAB so air pollution reductions are realized in the basin. Alternatively, if regional air pollution reduction programs are unavailable, the project applicant may enter into a Voluntary Emission Reduction Agreement (VERA) with SJVAPCD to reduce emissions to below SJVAPCD's applicable emissions thresholds of significance for any pollutant that exceeds the screening criteria. If conditions warrant participation in a VERA, the VERA shall demonstrate a pound-for-pound reduction in emissions that exceed the applicable emissions threshold through a process that funds and	If it is determined from the project-level analysis that project activity would generate emissions above the 100 lb/day screening criterion, prepare an AAQA.	Project applicant with oversight from SJVAPCD	Prior to approval of each Final Map, before construction	
		If it is determined from the AAQA that emissions would contribute to an exceedance of an AAQS, incorporate additional emission reduction measures into the construction contract. If additional emission reduction measures are not feasible, engage in regional programs that serve to reduce air pollution in the San Joaquin Valley. Regional programs include emission reductions programs such as Valley CAN. VERA is an alternative emission reduction program if no other emission reduction programs are available.	Project applicant with oversight from SJVAPCD	Prior to approval of each Final Map, before construction	
		Perform field-checks, as needed, to confirm adherence to mitigation measures.	City of Lathrop Public Works Department	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	implements emissions reduction projects within the SJVAB. The types of emission reduction projects that could be funded include electrification of stationary internal combustion engines (such as well pumps), replacing old heavy-duty trucks with cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors. If a VERA is found to be required, and the applicant elects to enter into one, the project applicant shall engage in a discussion with SJVAPCD prior to the adoption of the VERA to ensure that feasible mitigation has been identified to reduce emissions to a less-than-significant level.				
Impact 4.5-d: Increases in Mobile Source Toxic Air Contaminants	**New Mitigation Measure 4.5-d: Incorporation of Design Features at Truck Loading/Unloading Areas to Reduce Health-Risk Exposure at Sensitive Receptors** Before Design Review approval, project proponents shall design developments so that truck loading/unloading facilities and sensitive receptors are not located within 1,000 feet of each other, if feasible, considering site design parameters. For the purpose of this mitigation measure, a truck loading/unloading facility is defined as any truck distribution yard, truck loading dock, or truck loading or unloading area that accommodates (i) more than 100 trucks per day, (ii) more than 40 trucks with operating transport refrigeration units per day (TRU), or (iii) where TRU units operations exceed 300 hours per week. Sensitive receptors include residential land uses, campus dormitories and student housing, residential care facilities, hospitals, schools, parks, playgrounds, or daycare facilities. A truck loading/unloading facility and a sensitive receptor can be located within 1,000 feet of each other only if a project proponent prepares a qualified, site-specific HRA showing that the associated level of cancer risk at the sensitive receptors would not exceed 20 in 1 million. The HRA shall be conducted in accordance with guidance from SJVAPCD and shall be approved by the City. If the HRA determines that a	Design developments so that truck loading/unloading facilities and sensitive receptors are not located within 1,000 feet of each other, if feasible, considering site design parameters.	Project applicant	Before Design Review approval, before construction	
		If site design parameters require a truck loading/unloading facility to be within 1,000 feet of sensitive receptors, prepare a site-specific HRA in accordance with guidance from SJVACPD.	Project applicant with oversight from SJVACPD	Before Design Review approval	
		Approve the site-specific HRA, if one is required.	City of Lathrop Public Works Department	Before Design Review approval	
		If the HRA determines that a nearby sensitive receptor would be exposed to an incremental increase in cancer risk greater than 20 in 1 million, incorporate design measures to reduce the level of risk exposure to less than 20 in 1 million.	Project applicant	Before Design Review approval	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	nearby sensitive receptor would be exposed to an incremental increase in cancer risk greater than 20 in 1 million then design measures shall be incorporated to reduce the level of risk exposure to less than 20 in 1 million. Design measures may include, but are not limited to, the following: ▶ Require that all truck loading/unloading facilities be equipped with one 110/208-volt power outlet for every two-truck loading/unloading docks. A minimum 2-foot-by-3-foot sign shall be clearly visible at each loading dock that indicates, "Diesel engine idling limited to a maximum of 5 minutes." The sign shall include instructions for diesel trucks idling for more than 5 minutes to connect to the 110/208-volt power to run any auxiliary equipment. This measure is consistent with measure VT-1 in the California Air Pollution Control Officers Association (CAPCOA) guide *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA 2010:300–303). ▶ Use electric-powered "yard trucks" or forklifts to move truck trailers around a truck yard or truck loading/unloading facility. ▶ Use buildings or walls to shield commercial activity from nearby residences or other sensitive land uses. ▶ Plant and maintain a vegetative buffer between the truck loading/unloading facility and nearby sensitive residences, schools, and daycare facilities.				
Impact 4.5-f: Increases in Long-Term Regional Emissions	**Modified Mitigation Measure 4.5-f: Increases in Long-Term Regional Emissions** The project applicant shall implement the following mitigation measures, where applicable and feasible, as recommended in the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015). Many of these measures are already included in the proposed project design; however, they are repeated here to allow a complete listing of the SJVAPCD guidelines.	Incorporate the measures listed in Modified Mitigation Measure 4.5-f into the project design where applicable and feasible, as recommended in the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015).	Project applicant, construction contractor	Prior to each Final Map and/or Certificate of Occupancy	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ Provide transit enhancing infrastructure that includes transit shelters, benches, street lightening, route signs and displays, and/or bus turnouts/bulbs. ▶ Provide park and ride lots and/or satellite telecommuting centers. ▶ Provide pedestrian enhancing infrastructure that includes sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lightening, and/or pedestrian signalization and signs. ▶ Provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system, secure bicycle parking, and/or employee lockers and showers. ▶ Use solar, low-emissions, central, or tankless water heaters (residential and commercial), increase wall and attic insulation beyond Title 24 requirements (residential and commercial), orient buildings to take advantage of solar heating and natural cooling and use passive solar designs (residential, commercial, and industrial), replace wood-burning stoves and fireplaces with gas-fired fireplaces or inserts. ▶ Include in the original sale of residential units electric and certified Energy Star-certified appliances (including clothes washers, dish washers, fans, and refrigerators, but not including tankless water heaters) to reduce energy demand and indirect emissions of air pollutants. ▶ Install programmable thermostat timers in all residential dwelling units that allow users to easily control when the HVAC system will heat or cool a certain space, thereby saving energy. ▶ Include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ Encourage builders to provide a minimum of one single-port electric vehicle charging station at each new residential unit with a garage that achieves similar or better functionality as a Level 2 charging station (referring to the voltage that the electric vehicle charger uses). The applicant shall also provide Level 2 electric vehicle charging stations at a minimum of 10 percent of parking spaces that serve multi-family residential buildings.				
Noise and Vibration					
Impact 4.6-a: Increase in Short-Term Construction Generated Noise	**Adopted Mitigation Measure 4.6-a: Increases in Short-Term Construction-Generated Noise** Per the City of Lathrop Noise Ordinance, construction activities in, or within 500 feet of a residential zone (i.e., an area containing occupied residences) shall be prohibited between 10 p.m. and 7 a.m. Sunday through Thursday and between 11 p.m. and 9 a.m. on Fridays, Saturdays, and legal holidays. In addition, all construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations. Construction equipment and truck routes shall be arranged to minimize travel adjacent to occupied residences. Stationary construction equipment and staging areas shall be located as far as possible from sensitive receptors, and temporary acoustic barriers may be installed around stationary equipment if necessary.	Prohibit construction activities in, or within 500 feet of a residential zone (i.e., an area containing occupied residences) between 10 p.m. and 7 a.m. Sunday through Thursday and between 11 p.m. and 9 a.m. on Fridays, Saturdays, and legal holidays.	Project applicant, construction contractor	During construction	
		Equip all construction vehicles or equipment, fixed or mobile, with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations	Project applicant, construction contractor	During construction	
		Arrange construction equipment and truck routes to minimize travel adjacent to occupied residences.	Project applicant, construction contractor	During construction	
		Locate stationary construction equipment and staging areas as far as possible from sensitive receptors, and install temporary acoustic barriers around stationary equipment if necessary.	Project applicant, construction contractor	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.6-b: Stationary Source Noise Generated by Onsite Land Uses	**Modified Mitigation Measure 4.6-b: Stationary Source Noise Generated by Onsite Land Uses** As individual facilities, subdivisions, and other project elements are permitted by the City, the City will evaluate the element for compliance with the City's Noise Ordinance and noise policies in the General Plan. Where individual project elements do not clearly comply with noise standards included in these guidelines, mitigation measures shall be required to reduce projected interior and exterior noise levels to within acceptable levels. Mitigation measures include, but are not limited to, the following: ▶ Dual-pane, noise-rated windows, mechanical air systems, exterior wall insulation, and other noise-reducing building materials shall be used. ▶ Mechanical equipment (e.g., air conditioning and ventilation systems) and area source operations (e.g., loading docks, parking lots, recreational use areas) shall be located at the furthest distance from and/or be shielded entirely from nearby existing and future noise-sensitive land uses. In addition, if the planned high school includes an outdoor event space or sports field, a noise study will be required to ensure that noise from large events will be compatible with General Plan and Municipal Code standards at nearby sensitive receptors. In the event that significant noise impacts resulting from school events or sports activities are identified, mitigation measures including construction of noise walls, alterations to site plans including reorientation of any planned amplified sound sources, and scheduling limitations limiting or prohibiting nighttime events may be required. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during the modified Phase 2 Project.	Evaluate project elements for compliance with the City's Noise Ordinance and noise policies in the General Plan.	City of Lathrop Public Works Department	Before Design Review approval	
		If individual project elements do not comply with the noise standards listed in the City's Noise Ordinance and the noise policies in the general plan, implement the measures listed in Modified Mitigation Measure 4.6-b.	Project applicant, construction contractor	Before Design Review approval	
		If the planned high school includes an outdoor event space or sports field, prepare a noise study.	Project applicant	Before construction	
		If significant noise impacts resulting from school events or sports activities are identified in the noise study, implement building design features listed in Modified Mitigation Measure 4.6-b to reduce impacts.	Project applicant, construction contractor	During construction	
		Perform field-checks, as needed, to confirm adherence to mitigation measures.	City of Lathrop Public Works Department	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.6-c: Increases in Existing Traffic Noise Levels	**New Mitigation Measure 4.6-c: Traffic Noise Reduction Measures** For existing residences, noise attenuation techniques such as repaving roadways with a "quiet pavement," replacement or construction of noise barriers, traffic calming, and sound insulation could be implemented to reduce the effects of increased traffic noise generated by project development. However, as these techniques would primarily be undertaken on private property or within the public right-of-way, it may not be within the jurisdiction of the project to utilize these methods. Case studies have shown that the replacement of dense grade asphalt (standard type) with open-grade or rubberized asphalt can reduce traffic noise levels along local roadways by 2 to 3 dBA CNEL. A possible noise reduction of 2 dBA would be expected using conservative engineering assumptions. To be a permanent mitigation, subsequent repaving would also have to use "quieter" pavements. In situations where private outdoor use areas are located adjacent to the roadway, new or larger noise barriers could be constructed to provide the additional necessary noise attenuation in private use areas. Typically, increasing the height of an existing barrier results in approximately one dBA of attenuation per one foot of additional barrier height. The design of such noise barriers would require additional analysis. Traffic calming could also be implemented to reduce noise levels expected with the project. Each five-mph reduction in average speed provides approximately one dBA of noise reduction on an average basis (L_{eq}/CNEL). Traffic calming measures that regulate speed improve the noise environment by smoothing out noise levels. Existing residences could also be provided with sound insulation treatments if further study finds that interior noise levels within the affected residential units would exceed 45 dBA CNEL because of the projected increase in traffic noise.	Implement the traffic noise reduction treatments described in New Mitigation Measure 4.6-c where applicable and feasible.	Project applicant, and potentially City of Lathrop Public Works Department for paving measures	Prior to each Final Map	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	Treatments to the homes may include the replacement of existing windows and doors with sound-rated windows and doors and the provision of a suitable form of forced-air mechanical ventilation to allow the occupants the option of controlling noise by closing the windows. The specific treatments for each affected residential unit would be identified on a case-by-case basis.				
Impact 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels	**Modified Mitigation Measure 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels** As individual facilities, subdivisions, and other project elements are permitted by the City, the City will evaluate the element for compliance with the City's Noise Ordinance and noise policies in the General Plan. Where individual project elements do not clearly comply with interior noise standards included in these guidelines, mitigation measures such as use of dual-pane windows, mechanical air systems, exterior wall insulation, and other noise-reducing building materials and methods shall be required as appropriate to reduce interior noise exposure to the "normally acceptable" levels identified by the City (Exhibit 4.6-1 [reproduced in this document as Table 4.6-3]). Where individual project elements do not clearly comply with exterior noise standards included in the City guidelines (Table 4.6-1 [reproduced in this document as Table 4.6-4]), mitigation measures such as use of sound walls, vegetative screening, buildings for screening, and setbacks between noise sources and receptors, shall be implemented as appropriate to minimize exterior noise levels. When there is a question regarding premitigation or postmitigation noise levels in a particular area, site-specific noise studies may be conducted to determine compliance/noncompliance with City guidelines. Title 24 of the California Code of Regulations requires the preparation of an acoustical analysis for residences that demonstrates how interior noise levels will achieve	Evaluate project elements for compliance with the City's Noise Ordinance and noise policies in the General Plan.	City of Lathrop Public Works Department	Before building permit is issued, as a part of final design	
		Incorporate interior noise-reducing measures, as described in Modified Mitigation Measure 4.6-d, into the building design for project elements that do not comply with noise standards.	Project applicant	Before building permit is issued for residential units within noise analysis area	
		Prepare a Title 24 acoustical analysis for proposed residential dwellings.	Project applicant	Before building permit is issued for residential units	
		Design noise control measures to achieve an interior noise level of 45 dBA CNEL.	Project applicant	Before building permit is issued for residential units	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	a 45 dBA CNEL. As a result, a Title 24 analysis shall be prepared as part of the final design of any proposed residential dwellings. To the extent necessary, noise control measures shall be designed according to the type of building construction and specified sound rating for each building element to achieve an interior noise level of 45 dBA CNEL. This mitigation measure has been implemented successfully during Phase 1 construction and would continue to be implemented, as modified, during the modified Phase 2 Project.				
	New Mitigation Measure 4.6-d(1): Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels The 2019 California Green Building Standards Code establishes exterior sound transmission control standards for new non-residential buildings. Section 5.507.4.2 of the 2019 California Green Building Standards Code requires wall and roof-ceiling assemblies making up the building envelope and exposed to exterior noise be constructed to provide an interior hourly equivalent noise level not exceeding 50 dBA $L_{eq\ (1\text{-}hr)}$ in occupied areas during any hour of operation. To the extent necessary, noise control measures shall be designed according to the type of building construction and specified sound rating for each building element to achieve an interior noise level in non-residential buildings of 50 dBA $L_{eq\ (1\text{-}hr)}$ or below.	Design noise control measures according to the type of building construction and specified sound rating for each building element to achieve an interior noise level in non-residential buildings of 50 dBA $L_{eq\ (1\text{-}hr)}$ or below.	Project applicant	Before building permit is issued for non-residential buildings	
Impact 4.6-e: Generation of Excessive Groundborne Vibration	**New Mitigation Measure 4.6-e: Construction Vibration Reduction** To prevent excessive vibration levels at the nearest sensitive structures in the site vicinity, impact pile driving should not be used as a method of construction within 55 feet of existing structures. If deep piles are necessary within 55 feet of existing structures, vibratory pile driving or augered piles should be used.	Avoid pile driving within 55 feet of existing structure to the extent feasible.	Project applicant, construction contractor	During construction	
		If pile driving must occur within 55 feet of existing structures, use vibratory pile driving or augered piles.	Project applicant, construction contractor	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Geology, Soils, and Mineral Resources					
Impact 4.7-b: Loss, Injury, or Death Resulting from Seismic Hazards	**Modified Mitigation Measure 4.7-b: Ground Shaking** Project facilities shall be designed for maximum horizontal ground surface accelerations of at least 0.46 g (gravity [g] [equivalent to ±46 percent of the earth's normal gravitational strength]). Geotechnical reports completed by ENGEO in 2018 for the River Islands Project (ENGEO 2018a, 2018b) predict that a horizontal ground surface acceleration of 0.46 g at the River Islands site would have a 2% probability of being exceeded in a 50-year project design life. This estimate incorporates the possibility of a seismic event associated with the Great Valley Fault System. A surface acceleration of 0.46 g exceeds the maximum ground surface accelerations previously recorded in the area (estimated at 0.16 g), which occurred during the 1906 San Francisco earthquake. If project facilities are designed to meet minimum safety standards during a seismic event with ground surface accelerations of at least 0.46 g, risks of loss, injury, or death from ground shaking would be substantially reduced.	Design project facilities for maximum horizontal ground surface accelerations of at least 0.46 g.	Project applicant	Before building permits are issued and/or before approval of improvement plans	
Impact 4.7-c: Loss, Injury, or Death Resulting from Liquefaction	**Modified Mitigation Measure 4.7-c: Liquefaction** A design-level geotechnical study shall be completed for each individual project development (e.g., housing subdivision, Employment Center subdivision, school, levee segment) within Phase 2 before a grading permit is issued for that given project, focusing on the liquefaction potential in the area and identifying appropriate means to minimize/avoid damage from liquefaction. Geotechnical design recommendations included in each study shall be implemented during project construction of the specific development. Potential recommendations may include overexcavating and recompacting the area with engineered fill or in-place soil densification. In-place densification measures may include deep dynamic	Prepare a design-level geotechnical study for each individual project development focusing on the liquefaction potential in the area and identifying appropriate means to minimize/avoid damage from liquefaction.	Project applicant	Before grading permit is issued	
		Implement geotechnical design recommendations provided in the geotechnical study.	Project applicant, construction contractor	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	compaction, compaction grouting, vibro-compaction, and the use of nonliquefiable caps. Where existing levee soils cannot be densified, the potential liquefaction-induced settlement shall be accounted for in the final design grades and setbacks for the individual project, or an operation and maintenance plan will be put in place to repair any levee embankments damaged during a seismic event.				
	Adopted[1] Mitigation Measure 4.7-e: Lateral Spreading and Landslide A design-level geotechnical study that addresses lateral spreading and landslide shall be completed for each project development (e.g., housing subdivision, Employment Center subdivision, school, levee segment) before a grading permit is issued. Measures to address slope instability where it may occur shall be implemented during project construction.	Prepare design-level geotechnical study that addresses lateral spreading and landslide for each project development.	Project applicant (implementation); City Public Works Department or City Building Services (monitoring)	Before grading permit is issued	
		Implement measures to address slope instability during construction.	Project applicant, construction contractor (implementation); City Public Works Department or City Building Services (monitoring)	During construction	
Impact 4.7-f: Expansive or Otherwise Unstable Soils	**Adopted Mitigation Measure 4.7-f: Shrink-Swell Potential** A design-level geotechnical study shall be completed for each project development (e.g., housing subdivision, Employment Center subdivision, school, levee segment) before a grading permit is issued. The study shall specifically address whether expansive soils are present in the development area and include measures to address these soils where they occur. Methods to address expansive soils include regrading areas with appropriate soils and adding special design features to foundations and other underground facilities. Measures included in the report will be implemented as appropriate, based on the specific soil conditions and the type of facility being constructed.	Prepare a design-level geotechnical study for each individual project development that specifically addresses whether expansive soils are present in the development area and includes measures to address these soils where they occur.	Project applicant	Before grading permit is issued	
		Implement geotechnical design recommendations.	Project applicant, construction contractor	During construction	

[1] Applicable mitigation measure from the 2003 SEIR not required to reach a less-than-significant conclusion in the 2021 SEIR.

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.7-g: Exposure of Subsurface Facilities to the Effects of Corrosive Soils	**Modified Mitigation Measure 4.7-g: Corrosive Soils** A design-level geotechnical study shall be completed for each project development (e.g., housing subdivision, Employment Center subdivision, school, levee segment) before a grading permit is issued. The study shall specifically address corrosion potential and include measures to address corrosive soils where damage to underground facilities may occur. Potential methods to address corrosive soils include the use of cathodic protection or sacrificial anodes for buried metals, use of concrete with a lower water-to-cement ratio and/or sulfate-resistant concrete, and the use of Type II cement. Appropriate measures identified in each geotechnical study shall be implemented during project construction.	Prepare a design-level geotechnical study for each individual project development that specifically addresses corrosion potential and include measures to address corrosive soils.	Project applicant	Before grading permit is issued for each development area	
		Implement geotechnical design recommendations.	Project applicant, construction contractor	During construction	
Hydrology and Water Quality					
Impact 4.8-a: River Islands Area Construction Sediment and Water Quality Contamination	**Modified Mitigation Measure 4.8-a: RID Area Construction Sediment and Water Quality Contamination** General construction activities within the RID Area could impair existing water bodies. Two key plans will be prepared and implemented: a SWPPP (including an erosion control and construction plan) and an environmental monitoring and mitigation compliance and reporting program. Development and implementation of both plans would be coordinated. The City shall ensure the following measures are completed: ▶ Prepare and implement a SWPPP prior to any construction activities that meets the requirements for the California General Permit for construction projects regulated under the NPDES and includes specific BMPs to avoid and minimize impacts on water quality during construction activities. The goals of the SWPPP will generally be to protect	Prepare a SWPPP, including an erosion control and construction plan, for project elements that meet the requirements for the California General Permit.	Project applicant with oversight from City of Lathrop Public Works Department	Before construction	
		Prepare a comprehensive environmental monitoring and mitigation compliance and reporting program for construction and operations of the entire project.	Project applicant with oversight from City of Lathrop Public Works Department	Before construction	
		Ensure that the SWPPP and comprehensive environmental monitoring and mitigation compliance and reporting program prepared incorporate all applicable measures outlined in Modified Mitigation Measure 4.8-a.	City of Lathrop Public Works Department	Before construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	water quality; establish procedures to minimize accelerated soil erosion; minimize accelerated sedimentation into the internal drainage system, the San Joaquin River, Old River, and Paradise Cut; minimize non-stormwater runoff; and ensure long-term reestablishment of preconstruction site conditions where practical. The SWPPP will include measures to prevent, control, and minimize impacts from a spill of hazardous, toxic, or petroleum substances during construction of the proposed project, as well as a description of potentially hazardous and non-hazardous materials that could be accidentally spilled, potential spill sources, potential spill causes, proper storage and transport methods, spill containment and recovery measures, agency notification, and responsible parties. All water quality, erosion, and sediment control measures included in the SWPPP will be implemented in accordance with the guidelines set forth in the SWPPP. The SWPPP will also identify responsibilities of all parties, contingency measures, agency contacts, and training requirements and documentation for those personnel responsible for installation, inspection, maintenance, and repair of BMPs, as well as those responsible for overseeing, revising, and amending the SWPPP. The SWPPP also will identify construction sites, activities, and schedules; temporary storage and borrow areas; construction materials handling and disposal; dewatering and treatment and disposal of groundwater removed from excavations; discharges; equipment washing; inspection and maintenance measures; final stabilization and clean up; and appropriate use of seeding, mulching, erosion control blankets, and other erosion control measures. The SWPPP would include an erosion control plan. The general goals of this plan would be to minimize runoff from leaving construction sites, remove	Implement the comprehensive environmental monitoring and mitigation compliance and reporting program for construction and operations of the entire project.	Project applicant, construction contractor	During construction and operation	
		Obtain all necessary permits and meet all requirements specified by local, state, or federal agencies in whole or in part responsible for water quality protection prior to conducting any activities within the applicable jurisdiction as described in Modified Mitigation Measure 4.8-a.	Project applicant	Before construction	
		Comply with the spill prevention measures and best management practices described in Modified Mitigation Measure 4.8-a.	Project applicant	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	sediment from onsite runoff before it leaves the site, slow runoff rates across construction sites, and provide soil stabilization during and after construction. ▶ Prepare and implement a comprehensive environmental monitoring and mitigation compliance and reporting program for construction and operations of the entire project. The plan will focus on required mitigation measures and will establish clear standards for environmental compliance, construction inspection and monitoring, environmental awareness training, contractor and agency roles and responsibilities, compliance levels and reporting procedures, variance request and response procedures, and communications protocols. The project proponent would also obtain all necessary permits and meet all requirements specified by local, state, or federal agencies in whole or in part responsible for water quality protection prior to conducting any activities within the applicable jurisdiction, including, but not limited to: ▶ Notification of California Department of Fish and Game Code 1600 Lake and Streambed Alteration Agreement ▶ RWQCB Section 401 certification and/or waiver of Waste Discharge Requirements (WDRs) ▶ NPDES Storm Water Pollution Prevention Permit for General Construction ▶ Clean Water Act Section 404 and Rivers and Harbors Act Section 10 compliance through the USACE ▶ Incidental take authorization from the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding endangered species ▶ California State Lands Use Lease Permit (Public Trust)				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ Central Valley Flood Protection Board (CVFPB) Encroachment Permit Spills from construction equipment could release contaminates to waterways. To avoid contamination, the project applicant shall comply with the measures mentioned above, at a minimum, and implement the following best management practices: ▶ Ensure proper storage and handling of hazardous materials, chemicals, fuels, and oils during construction. No storage of such materials will be permitted within 150 feet of any drainage, wetland, water supply well, spring, or other water feature. ▶ No fueling of mobile construction equipment will be performed within 150 feet of any drainage, wetland, water supply well, spring, or other water feature. Stationary equipment (e.g., directional drilling rigs) may be refueled at the site of operation using proper BMPs and containment measures. ▶ Make efforts to store only enough product necessary to complete the job. ▶ Store onsite hazardous materials within double-containment per RCRA requirements in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure to provide secondary containment. ▶ Keep products in their original containers with the original manufacturer's label. ▶ Do not mix substances with one another unless recommended by the manufacturer. ▶ Do not dispose of containers with residual hazardous materials without proper sealing. ▶ Follow manufacturer's recommendations for proper use and disposal of a product. All pertinent information can be found on the Material Safety Data Sheets (MSDS) for each product. The MSDS sheets should be kept with each product container.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ If surplus product must be disposed of, the manufacturer-recommended or the local- and state-recommended methods for proper disposal will be followed. ▶ Dispose of all hazardous and non-hazardous products (fuels and petroleum products, fertilizers, chemicals, sanitary wastes, etc.) in a proper manner offsite and not within the RID Area. ▶ Onsite vehicles will be monitored for fluid leaks and receive regular maintenance to reduce the chance of leakage. Drip pans for construction equipment will be used. ▶ Bulk storage tanks having a capacity of more than 55 gallons will have secondary containment (a prefabricated temporary containment mat, a temporary earthen berm, or other measure can provide containment). After any rainfall, the contractor will inspect the contents of any secondary containment area. If there is no visible sheen on collected water, it can be pumped onto the ground in a manner that does not cause scouring. If sheen is present, it must be cleaned up prior to discharge of the water.				
Impact 4.8-c: Earth Moving in or Adjacent to Water Bodies	**Adopted Mitigation Measure 4.8-c: Earth Moving in or Adjacent to Water Bodies** Levee breaching and earth moving adjacent to the San Joaquin River, Old River, and Paradise Cut could increase short-term turbidity and release small quantities of construction-related contaminants within the local disturbance area. To reduce turbidity impacts, the project proponent shall, to the extent possible: ▶ Perform breaching operations and all other in-river work, or work immediately adjacent to the rivers, during low tide and during low flows. ▶ Work in Paradise Cut only when floodwaters from the San Joaquin River are not present in the cut and	If construction requires levee breaching and earth moving adjacent to the San Joaquin River, Old River, and Paradise Cut, implement the measures listed in Adopted Mitigation Measure 4.8-c.	Project applicant, construction contractor	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	there is no immediate threat of floodwaters overtopping the Paradise Weir. ▶ Perform all interior dredging, grading, and construction of in-water facilities (e.g., dock installation) in the back bays and the widened Paradise Cut channel before breaching levees to the adjacent water body. Soils that will be inundated after breaching will be stabilized to the extent possible to minimize erosion and sediment backwash as these constructed water bodies initially fill. ▶ Adhere to all local, state, and federal regulations regarding turbidity reduction measures applicable to this activity, including developing and implementing a SWPPP. ▶ Adhere to applicable requirements in Modified Mitigation Measure 4.8-a.				
Impact 4.8-d: In-Water Project Features	**Adopted Mitigation Measure 4.8-d: In-Water Project Features** Implementation of Mitigation Measures 4.8-a and 4.8-c would reduce potential sedimentation/water quality impacts associated with constructing bridges and docks on the San Joaquin River, Old River, and/or Paradise Cut to less-than-significant levels.	See Modified Mitigation Measure 4.8-a and Adopted Mitigation Measure 4.8-c, above	See Modified Mitigation Measure 4.8-a and Adopted Mitigation Measure 4.8-c, above	See Modified Mitigation Measure 4.8-a and Adopted Mitigation Measure 4.8-c, above	
Impact 4.8-o: Groundwater Quality During Construction	**Adopted Mitigation Measure 4.8-o: Groundwater Quality During Construction** The SWPPP developed and implemented as part of Mitigation Measure 4.8-a must specifically include measures to prevent/minimize sediment and contaminant releases into groundwater during excavations and methods to clean up releases if they do occur. These may include using temporary berms or dikes to isolate portions of central lake construction activities; using vacuum trucks to capture contaminant releases; and maintaining floating booms, absorbent pads, and other containment and cleanup materials onsite to allow an immediate response to contaminant releases if they occur.	If a SWPPP is required as detailed in Mitigation Measure 4.8-a, include measures to prevent/minimize sediment and contaminant releases into groundwater during excavations and methods to clean up releases if they do occur.	Project applicant, construction contractor	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Hazardous Materials and Public Health					
Impact 4.9-b: Hazardous Materials Sites	**Modified Mitigation Measure 4.9-b: Exposure of Construction Workers, Residents, and Others to Hazardous Materials** ▶ After the Phase 2 site is mass graded and prior to construction of vertical infrastructure, a limited agricultural assessment shall be conducted for individual development projects prior to grading to determine the potential impacts for that project's site for agricultural chemicals. If the results indicate that contamination exists at levels above regulatory action standards, SJCEHD shall be notified and the site shall be remediated in accordance with recommendations made by SJCEHD, RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies. The agencies involved would be dependent on the type and extent of contamination.	For projects requiring construction of vertical infrastructure, conduct a limited agricultural assessment to determine the potential impacts for that project's site for agricultural chemicals.	Project applicant	After mass grading and before construction of vertical infrastructure	
		If the agricultural assessment results indicate that contamination of agricultural chemicals is present, notify SJCEHD and remediate the site in accordance with the recommendations made by SJCEHD, RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies.	Project applicant in consultation with SJCEHD and other appropriate federal, state, or local regulatory agencies.	After mass grading and before construction of vertical infrastructure	
	▶ Before demolition of any structures associated with past and current farming operations (e.g., buildings, ASTs, USTs), the project applicant shall investigate the extent to which soil and/or groundwater has been contaminated from these operations, including the potential for lead and termiticide. This investigation would include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. If the results indicate that contamination exists at levels above regulatory action standards, then the SJCEHD shall be notified and the site shall be remediated in accordance with recommendations made by SJCEHD; RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies. The agencies involved would be dependent on the type and extent of contamination.	Investigate the extent to which soil and/or groundwater has been contaminated from farming operations for structures planned for demolition that are associated with past and current farming operations. The investigation shall include an analysis of soil and/or groundwater samples taken at or near the potential contamination sites.	Project applicant	Before demolition of any structures associated with past and current farming operations	
		If results from the soil and/or groundwater investigation indicate that contamination exists above regulatory action standards, notify SJCEHD and remediate the site in accordance	Project applicant in consultation with SJCEHD and other appropriate federal, state, or local regulatory agencies.	Before demolition of any structures associated with past and current farming operations	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ If evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation and dewatering activities, the SJCEHD shall be notified. Any contaminated areas shall be remediated in accordance with recommendations made by SJCEHD; RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies.	with the recommendations made by SJCEHD; RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies.			
		Notify the SJCEHD if evidence of previously undiscovered soil or groundwater contamination is encountered.	Project applicant, construction contractor	During excavation and/or dewatering activities	
	▶ Before demolition of any on-site buildings, the project applicant shall have a qualified consultant investigate whether any of these buildings contain asbestos-containing materials and lead that could become friable or mobile during demolition activities. If found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with EPA and California Occupational Safety and Health Administration (Cal/OSHA) standards. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards. The asbestos-containing materials and lead shall be properly disposed of at an appropriate off-site disposal facility.	A qualified consultant shall investigate buildings planned for demolition for asbestos-containing materials and lead that could become friable or mobile during demolition activities.	Project applicant, qualified consultant	Before demolition of any on-site buildings	
		If asbestos-containing materials and lead are found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with Cal/OSHA standards.	Project applicant	Before demolition of any on-site buildings	
		If asbestos-containing materials and lead are found, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal/OSHA asbestos and lead worker construction standards.	Project applicant, construction contractor	During demolition of any on-site buildings and construction	
		Any asbestos-containing materials and lead found on the Project site shall be properly disposed of at an appropriate off-site disposal facility.	Project applicant, construction contractor	During demolition of any on-site buildings and construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Public Services					
Impact 4.10-a: Obstruction of Roadways during Construction	**Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction** Per City requirements, the applicant/contractor shall prepare and implement traffic control plans for construction activities that may affect road rights-of-way. The traffic control plans must follow California Department of Transportation standards and be signed by a professional engineer. Measures typically used in traffic control plans include advertising of planned lane closures, warning signage, flagmen to direct traffic flows when needed, and methods to ensure continued access by emergency vehicles. During project construction, access to existing land uses shall be maintained at all times, with detours being utilized as necessary during road closures.	Prepare a traffic control plan for construction activities that may affect road rights-of-way.	Project applicant	Before approval of final plans	
		Implement the traffic control plan.	Project applicant, construction contractor	During construction	
		Maintain access to existing land uses at all times. Detours may be utilized as necessary during road closures.	Project applicant, construction contractor	During construction	
Impact 4.10-b: Increased Demand for Fire Protection Facilities and Services	**Modified Mitigation Measure 4.10-b: Increased Demand for Fire Protection Facilities and Services** The City shall not authorize the occupancy of any structures in Phase 1a of the proposed project until the proposed interim fire station is in service. As development proceeds through Phase 1 and Phase 2 of the proposed project, the City shall authorize occupancy of new structures only if confirmation of 3- to 4-minute emergency response times to these structures can be provided using LMFD methodologies. At some currently undetermined point during Phase 2, the new permanent fire station (tentatively planned in the Employment Center Fire Station 36), tentatively planned in the Woodlands District near River Islands Parkway, would need to be constructed and brought into service to meet the response time requirement. Similarly, at some point during Phase 2, one or more additional fire stations would need to be constructed to meet the response time requirements. LMFD would build and equip necessary fire stations, as needed, on	Authorize occupancy of new structures only if 3- to 4- minute fire protection emergency response times are confirmed using LMFD methodologies.	City of Lathrop Public Works Department, LMFD	Before occupancy of new structures	
		Pay to the City all applicable fire service fees and assessments required to pay for its share of fire district facilities and services required to serve the River Islands Project or alternatively, as noted, agree to fund and construct Fire Station 36 as a credit/reimbursement against LMFD fees and/or assessments in accordance with the existing mitigation agreement.	Project applicant, LMFD	Before building permit is issued	
		Only permit the construction of structures greater than 50 feet in height or four stories or more if	City of Lathrop Public Works Department, LMFD	Before building permit is issued	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	land dedicated by the project applicant. Construction of Fire Station 36 will occur as required by LMFD staff. The existing mitigation agreement will govern the planning, design, funding, and construction of Station 36 when needed. LMFD would equip the station, as needed. The applicant shall pay to the City all applicable fire service fees and assessments required to pay for its share of fire district facilities and services required to serve the River Islands Project or alternatively, as noted, agree to fund and construct Fire Station 36 as a credit/reimbursement against LMFD fees and/or assessments in accordance with the existing mitigation agreement. Construction of structures greater than 50 feet in height or four stories will not be permitted by the City until LMFD possesses appropriate equipment (e.g., aerial trucks) to provide fire suppression and emergency services to the upper stories of these buildings. The applicant shall pay to the City all applicable fire service fees and assessments required to pay for its fair share of this equipment. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.	LMFD possesses the appropriate equipment to provide fire suppression and emergency services to the upper stories of these buildings.			
		If the project requires construction of structures greater than 50 feet in height or four stories or more, pay all applicable fire service fees and assessments needed to fund the fire suppression equipment and emergency services needed for the upper stories of these buildings.	Project applicant, LMFD	Before building permit is issued for structure taller than 50 feet	
Impact 4.10-d: Increased Demand for Fire Flow	**Adopted Mitigation Measure 4.10-d: Increased Demand for Fire Flow** The City shall not authorize the occupancy of any structures until the applicant has confirmed provision of adequate minimum fire flows as required by the LMFD and the California Fire Code.	Authorize occupancy of structures only when the project applicant has confirmed provision of adequate minimum fire flows as required by the LMFD and the California Fire Code.	City of Lathrop Public Works Department, LMFD	Before occupancy of any structures	
Impact 4.10-e: Increased Demand for Police Protection Facilities and Services	**Modified Mitigation Measure 4.10-e: Increased Demand for Police Protection Facilities and Services** The project applicant shall mitigate for the need for sworn police officers at the ratio of 1 sworn officers per	Pay the startup and equipment costs incurred in the hiring and training of new police officers to maintain a ratio of 1 sworn officer per 1,000 residents.	Project applicant, City Police Services	As established by the Development Agreement, Annual Fiscal Review, as amended or replaced	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	1,000 residents of the Project regardless of "daytime" population versus "nighttime" population or any other calculation of Project population or need for services. Population shall be determined based on current average population per household, modified from time to time to reflect actual household populations, as necessary. The project applicant shall further mitigate impacts for staffing and equipping necessary sworn officers in accordance with the Third and Fourth Amendments to the River Islands Development Agreement. As part of the Spray Field Lease Agreement (See First Amendment to the Development Agreement, July 2005, page 2, Subsection E through G), the Mossdale developer is responsible for funding 0.5 sworn officers per 1,000 residents, bringing the total ratio of 1.5 sworn officers per 1,000 project residents. The project applicant shall also ensure the use of 3M Addressable Opticom Traffic Control Pre-emption devices and detectors/reflectors (or equivalent based on Police Department standards) in all traffic lights for which the project is responsible and the City has jurisdiction. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.	For development within the Mossdale area, pay the startup and equipment costs incurred in the hiring and training of new police officers to maintain a ratio of 1.5 sworn officer per 1,000 residents.	Project applicant, City Police Services	As established by the Development Agreement, Annual Fiscal Review, as amended or replaced	
		Ensure the use of 3M Addressable Opticom Traffic Control Pre-emption devices and detectors/reflectors (or equivalent based on Police Department standards) in all traffic lights for which the project is responsible and the City has jurisdiction.	Project applicant, City Police Services	Before approval of improvement plans	
Impact 4.10-f: Increased Demand for Animal Control Facilities and Services	**Modified Mitigation Measure 4.10-f: Increased Demand for Animal Control Facilities and Services** The project applicant and City of Lathrop shall continue to implement the annual fiscal year impact analysis required to quantify the impacts of the River Islands Project for all public services, including animal control, in accordance with the Third and Fourth Amendments to the River Islands Development Agreement. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.	Implement the annual fiscal year impact analysis.	Project applicant, City of Lathrop Public Works Department	As established by the Development Agreement, Annual Fiscal Review, as amended or replaced	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.10-g: Increased Demand for Public School Facilities and Services	**Modified Mitigation Measure 4.10-g: Increased Demand for Public School Facilities and Services** The City shall not allow occupancy of any project residences until the project applicant and school districts ensure that its existing mitigation agreements are adhered to for the provision of school services for the proposed project or payment of the state-mandated school impact fee City. The BESD is considering becoming a unified school district and providing high school facilities to grade 9-12 students. If this occurs, and the BESD provides all K-12 school services to the project site, then a revised mitigation agreement with BESD only would meet this requirement. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.	Authorize occupancy of structures only if the project applicant and school districts ensure that its existing mitigation agreements are adhered to or payment of the state-mandated school impact fee City.	Project applicant, City of Lathrop Public Works Department, BESD	Before occupancy of any structure	Per the second paragraph of the Mitigation Measure, BESD is becoming a unified school district and a revised mitigation agreement with BESD has been executed to provide K-12 school services.
Public Utilities					
Impact 4.11-a: Demand for Potable Water	**Adopted Mitigation Measure 4.11-a: Demand for Potable Water at Buildout** No portion of the proposed project shall be occupied until sufficient multi-drought year water supply is available to serve that portion of the project site being developed and water infrastructure (e.g., pipelines) to serve the area is complete.	Authorize occupancy of structures after sufficient multi-drought year water supply is available to serve that portion of the project site being developed and water infrastructure (e.g., pipelines) to serve the area is complete.	City of Lathrop Public Works Department	Before occupancy	Completed
Impact 4.11-d: Demand for Wastewater Treatment Capacity for Phase 2	**Adopted Mitigation Measure 4.11-d: Demand for Wastewater Treatment Capacity for Phase 2** Elements of Phase 2 Project development that would generate demand for wastewater treatment capacity shall not commence until both adequate wastewater treatment capacity and tertiary treatment to Title 22 standards for unrestricted use are available to serve the particular development area. It is expected that the necessary treatment capacity would require additional expansion of WRP #1 and/or construction of WRP #2 or #3.	Only commence development activities that would generate demand for wastewater treatment capacity after adequate wastewater treatment capacity and tertiary treatment to Title 22 standards for unrestricted use are available to serve the particular development area.	Project applicant	Before issuance of Building Permits	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.11-g: Demand for Recycled Water Storage and Disposal Capacity for Phase 2	**Adopted Mitigation Measure 4.11-g: Demand for Recycled Water Storage and Disposal Capacity for Phase 2** Elements of Phase 2 project development that would generate recycled water shall not commence until storage and disposal capacity is provided to address the incremental increase in recycled water generation associated with Phase 2 development. The additional disposal capacity may be provided through either land disposal or discharge to the San Joaquin River. If land disposal is selected, buildout shall not commence until: ▶ sufficient acreage of storage ponds and spray fields is found for the disposal of the additional recycled water generated by the particular development area, ▶ infrastructure is developed to convey this additional recycled water to the storage and disposal areas, ▶ the storage ponds are lined, ▶ the application occurs at agronomic rates, and ▶ the off-site disposal system is operational. If river disposal is selected, buildout shall not commence until river discharges of recycled water are permitted for expanded and/or new WRPs under the Master Plan.	Only commence development activities that would generate recycled water after storage and disposal capacity is provided to address the incremental increase in recycled water generation.	Project applicant	Prior to approval of each Final Map	
		If land disposal is selected, buildout shall not commence until sufficient acreage of storage ponds and spray fields is found; infrastructure is developed to convey this additional recycled water to the storage and disposal areas; the storage ponds are lined; the application occurs at agronomic rates; and the off-site disposal system is operational.	Project applicant	Prior to approval of each Final Map	
		If river disposal is selected, buildout shall not commence until river discharges of recycled water are permitted for expanded and/or new WRPs under the Master Plan.	Project applicant	Prior to approval of each Final Map	
Agricultural Resources					
Impact 4.13-a: Conversion of Important Farmland	**Modified Mitigation Measure 4.13-a: Conversion of Important Farmland** The City of Lathrop would participate in the SJMSCP. Fees would be paid to the San Joaquin Council of Governments (SJCOG) on a per-acre basis for lost agricultural land during development of both Phase 1 and Phase 2 of the proposed project. The SJCOG uses these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity (in the Central Index Zone identified in the SJMSCP). The	Participate in the SJMSCP and pay fees to the San Joaquin Council of Governments (SJCOG) on a per-acre basis for lost agricultural land.	Project applicant, City Community Development Department	Before issuance of building permit for construction	
		Pay fees to the California Farmland Trust in accordance with the settlement agreement between applicant, City of	Project applicant, City Community Development Department	Before issuance of building permit for construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	preservation in perpetuity of agricultural lands through the SJMSCP, a portion of which would consist of Prime Farmland and Farmland of Statewide Importance, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts. However, because easements are purchased for land exhibiting benefits to wildlife, including a combination of habitat, open space, and agricultural lands, the overall compensation provided by the fee contribution for the proposed project would result in less than a 1: 1 ratio of compensation specifically for agricultural land. In addition, no new farmland would be made available, and the productivity of existing farmland would not be improved as a result of SJMSCP implementation. In addition, fees paid by the applicant to the California Farmland Trust partially mitigates conversion by providing funds towards the protection of off-site farmlands. However, full compensation for losses of Important Farmland could not be achieved. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. River Islands has paid fees for all acreage that has been graded so far and would continue to do so for lands further urbanized in Phase 2. The applicant will also continue to pay mitigation fees in accordance with its settlement agreement.	Lathrop, Sierra Club, and Eric Parfrey.			
Impact 4.13-b: Potential Williamson Act Contract Cancellations (only if Paradise Road Widening triggers a cancellation)	**Modified Mitigation Measure 4.13-b: Williamson Act Contract Cancellations** Potential Williamson Act cancellations are limited to Phase 1a and Phase 1 of the River Islands Project and have the potential to be triggered by the widening and improvement of Paradise Road. The project applicant shall continue to allow/promote farming operations as long as possible on Phase 1a and Phase 1 as development proceeds. The entity implementing the Paradise Road widening, if they use this SEIR to provide	Continue to allow/promote farming operations as long as development proceeds.	Project applicant	During construction and operation	
		Participate in the SJMSCP and pay fees to the San Joaquin Council of Governments (SJCOG) on a per-acre basis for lost agricultural land.	Project applicant, City Community Development Department	Before construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	CEQA compliance, shall continue to allow/promote farming operations as long as possible as roadway design and construction proceeds. These actions would minimize the level of contract cancellations required in the Phase 1a and Phase 1 areas, and could also minimize the level of contract cancellations for the Paradise Road widening and improvement, if contract cancellations for Paradise Road or needed. However, if Williamson Act cancellations are not needed for the Paradise Road widening and improvement, this action would still minimize adverse effects on agricultural resources by delaying the conversion of agricultural land to another use. The River Islands at Lathrop project applicant would participate in the SJMSCP. The entity implementing the Paradise Road widening, if they use this SEIR to provide CEQA compliance, shall participate in the SJMSCP. As part of participation in the SJMSCP, -fees would be paid to the SJCOG on a per-acre basis for lost agricultural lands. The SJCOG uses these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity (within the Central Zone identified in the SJMSCP). Participation in the SJMSCP would assist in compensating for Williamson Act contract cancellations by placing farmlands in conservation easements, requiring conservation of agricultural lands in perpetuity. These easements provide much more stringent and longer lasting protections than Williamson Act contracts. This mitigation measure has been implemented successfully during Phase 1 of the River Islands Project and would be similarly feasible and effective for the Paradise Road widening.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.13-c: Adjacent Landowner/User Conflicts	**Adopted Mitigation Measure 4.13-c: Adjacent Landowner/User Conflicts** The following actions are consistent with those included in the WLSP EIR to address this impact. The project applicant would phase the development of agricultural lands in the RID Area (during both Phase 1 and Phase 2) to avoid the fracturing or fragmentation of continuing agricultural operations. As development occurs in the RID Area, fencing, walls, or other suitable barriers such as watercourses shall be established at the interface between development and adjacent agricultural lands. In addition, a buffer zone of at least 150 feet shall be provided between the edge of residential or commercial development and the adjacent agricultural land. The City shall include the buffer as a condition of development approval, with the buffer being maintained until the next phase of development over the adjacent agricultural land is approved. Growers cultivating lands near or adjacent to urban development in the RID and PCC Areas shall comply with all necessary federal, state, and local restrictions regarding buffers between pesticide/herbicide applications and sensitive areas, such as schools, residences, and parks. Required buffer distances may vary depending on the type of chemicals used and the method of application. Residents and other individuals purchasing property near agricultural lands shall be provided information on the types of conflicts that may occur and appropriate means to address these conflicts, consistent with the City of Lathrop's Right-to-Farm Ordinance.	Phase the development of agricultural lands in the RID Area to avoid the fracturing or fragmentation of continuing agricultural operations.	Project applicant, City Community Development Department	During construction	
		Establish fencing, walls, or other suitable barriers such as watercourses at the interface between development and adjacent agricultural lands.	Project applicant	During construction	
		Provide a buffer zone of at least 150 feet between the edge of residential or commercial development and the adjacent agricultural land.	Project applicant, adjacent agricultural operators	During construction	
		Include the buffer as a condition of development approval, with the buffer being maintained until the next phase of development over the adjacent agricultural land is approved.	City of Lathrop Public Works Department	Before approval of the building permit	
		Provide information on the types of conflicts that may occur and appropriate means to address these conflicts, consistent with the City of Lathrop's Right-to-Farm Ordinance to residents and other individuals purchasing property near agricultural lands.	Project applicant	During construction and operation, and as soon as practicable before transfer of title	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Terrestrial Biology					
Impact 4.14-b: Special-Status Plants	**Modified Mitigation Measure 4.14-b: Terrestrial Special-Status Plants** The project applicant will implement SJMSCP incidental take avoidance and minimization measures for special-status plants. The following is a summary and clarification of those measures: ▶ Before project implementation, surveys for special-status plants shall be conducted by a qualified botanist at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. Because all of the target special-status plants are associated with wetland and riparian habitats, the survey can focus on these habitats. ▶ If no special-status plants are found during focused surveys, the findings shall be documented in a letter report to SJCOG, and no further mitigation will be required. ▶ If SJMCP covered special-status plants are found, the following measures shall be implemented for SJMSCP covered species: ▪ **Sanford's arrowhead, Delta button-celery, and Slough thistle:** The SJMSCP requires complete avoidance of Sanford's arrowhead (CRPR 1B.2), Delta button-celery (CESA Endangered), and slough thistle (CRPR 1B.1); therefore, potential impacts on these species are not covered through participation in the plan. If these species are present in the project area and cannot be avoided, a separate consultation with the regulatory agencies would be required. This consultation shall determine the scope of effects and appropriate avoidance and minimization measures for any populations affected by the project, such as creation of offsite populations	Implement SJMSCP incidental take avoidance and minimization measures for special-status plants.	Project applicant	Before ground disturbance, before and during construction	
		A qualified botanist shall conduct special-status plant surveys within wetland and riparian habitats at the appropriate time of year when the target species is in flower or otherwise clearly identifiable.	Project applicant, qualified botanist	Before ground disturbance, before construction	
		If no special-status plants species are found during the focused surveys, the qualified botanist shall document the findings in a letter report to SJCOG, and no further mitigation will be required.	Project applicant, qualified botanist	Before ground disturbance, before construction	
		If Sanford's arrowhead, Delta button-celery, and/or Slough thistle are found during the focused surveys and cannot be avoided, initiate a separate consultation with the regulatory agencies. All avoidance, minimization, and mitigation measures determined necessary during this consultation shall be implemented in accordance with the NPPA and CESA as applicable.	Project applicant	Before ground disturbance, during construction	
		If Mason's lilaeopsis, rose mallow, Suisun marsh aster, Delta mudwort, and/or Delta tule pea are found during the	Project applicant	Before ground disturbance	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	through seed collection or transplanting, preserving and enhancing existing populations, or restoring or creating suitable habitat in sufficient quantities to compensate for the impact. All avoidance, minimization, and mitigation measures determined necessary during this consultation shall be implemented by the project proponent in accordance with the NPPA and CESA as applicable. ▪ **Mason's lilaeopsis, rose mallow, Suisun marsh aster, Delta mudwort, and Delta tule pea:** The SJMSCP considers Mason's lilaeopsis (CRPR 1B.1), woolly rose mallow (CRPR 1B.2), Suisun marsh aster (CRPR 1B.2), Delta mudwort (CRPR 2B.1), and Delta tule pea (CRPR 1B.2). Dedication of conservation easements is the preferred option for mitigation. If these species are found in the project area and a conservation easement is not an option, payment of SJMSCP development fees may be used to compensate for impacts on these species, with the MSCP fees applied to the establishment and preservation of conservation area properties. ▪ **Wright's trichocoronis and bristly sedge:** The SJMSCP considers Wright's trichocoronis (CRPR 2B.1) and bristly sedge (CRPR 2B.1) narrowly distributed species, and dedication of conservation easements is the preferred option of mitigation. If this species is found in the project area and the dedication of a conservation easement is not an option, the SJMSCP requires a consultation with the permitting agency representatives on the Technical Advisory Committee to confirm the appropriate mitigation measures. These may include seed collection or other measures and would be determined on a population basis, taking into account the species type, relative health, and abundance. The project	focused surveys, dedication of conservation easements is the preferred option for mitigation. If these species are found in the project area and a conservation easement is not an option, payment of SJMSCP development fees may be used to compensate for impacts on these species, with the MSCP fees applied to the establishment and preservation of conservation area properties.			
		If Wright's trichocoronis and bristly sedge are found during the focused surveys, dedication of conservation easements is the preferred option for mitigation. If the dedication of a conservation easement is not an option, consult with the permitting agency representatives on the Technical Advisory Committee to confirm the appropriate mitigation measures. Implement the appropriate mitigation confirmed by the Technical Advisory Committee.	Project applicant	Before ground disturbance, during construction	
		If Marsh skullcap is found during the focused surveys within 50 feet of ground disturbing activities, the area within 10 feet of plants will be flagged by a qualified botanist, fenced off before the start of ground disturbing activities, and	Project applicant	Before ground disturbance, during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	sponsor shall implement the appropriate mitigation confirmed by the Technical Advisory Committee. ▶ Marsh skullcap is not a SJSSCP covered species. If marsh skullcap (CRPR 2B.2) is found while special-status plant surveys listed above are conducted, the following measure shall be implemented: ■ If marsh skullcap is discovered within 50 feet of ground disturbing activities, the area within 10 feet of plants will be flagged by a qualified botanist, fenced off before the start of ground disturbing activities, and completely avoided when feasible. ■ If marsh skullcap cannot be avoided during construction, the applicant will consult with CDFW to determine the appropriate actions to address impacts that could occur as a result of project construction and will implement the agreed-upon actions to achieve no net loss of occupied habitat or individuals. Actions to achieve this performance criteria may include enhancing existing populations on site, creation of populations on site through seed collection or transplantation, and/or restoring or creating suitable habitat in sufficient quantities. The applicant will provide the City documentation of compliance with these incidental take avoidance and minimization measures. Mitigation Measure 4.14-b, as identified in the 2003 SEIR, has been implemented successfully during Phase 1 and would continue to be implemented with equal success during Phase 2 with modifications included above to address additional special-status plant species.	completely avoided when feasible. If marsh skullcap cannot be avoided during construction, consult with CDFW to determine the appropriate actions to address impacts that could occur as a result of project construction and will implement the agreed-upon actions to achieve no net loss of occupied habitat or individuals.			
		Provide the City documentation of compliance with these incidental take avoidance and minimization measures for special-status plants.	Project applicant	Before ground disturbance, during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.14-c: Valley Elderberry Longhorn Beetle	**Modified Mitigation Measure 4.14-c: Valley Elderberry Longhorn Beetle** The project applicant will implement SJMSCP incidental take avoidance and minimization measures for valley elderberry longhorn beetle (VELB). The following is a summary and clarification of those measures: ▶ Before project construction, a survey for elderberry shrubs shall be conducted where elderberries could occur within 50 feet of construction areas, including the banks of the San Joaquin River, the PCIP Area and the PCC Area. ▶ For all shrubs that are to be retained on the project site, a setback of 20 feet from the dripline of each elderberry bush found during the survey shall be established. ▶ Brightly colored flags or fencing shall be used to demarcate the 20-foot setback area and shall be maintained until project construction in the vicinity is complete. ▶ For all shrubs without evidence of VELB exit holes that cannot be retained on the project site, all stems of 1 inch or greater in diameter at ground level shall be counted. Compensation for removal of these stems shall be provided in SJMSCP preserves as provided in SJMSCP Section 5.5.4(B). ▶ All shrubs with evidence of VELB exit holes or other evidence of VELB occupation that cannot be retained in the project area shall be transplanted to VELB mitigation sites during the dormant period for elderberry shrubs (November 1 to February 15). For elderberry shrubs displaying evidence of VELB occupation that cannot be transplanted, compensation for removal of shrubs shall be as provided, in accordance with SJMSCP Section 5.5.4(C).	Implement SJMSCP incidental take avoidance and minimization measures for VELB.	Project applicant	Before ground disturbance, before and during construction	
		Conduct a survey for elderberry shrubs where elderberries could occur within 50 feet of construction areas.	Project applicant	Before ground disturbance, before construction in area within 50 feet of elderberry bush	
		Maintain a setback of 20 feet from the dripline of each elderberry bush to be retained on the project site.	Project applicant	During construction	
		Use brightly colored flags or fencing to demarcate the 20-foot setback area. Maintain these markers until project construction in the vicinity is complete.	Project applicant	Before and during construction	
		For all shrubs without evidence of VELB exit holes that cannot be retained on the project site, all stems of 1 inch or greater in diameter at ground level shall be counted. Compensation for removal of these stems shall be provided in SJMSCP preserves as provided in SJMSCP Section 5.5.4(B).	Project applicant	Before ground disturbance, during construction	
		All shrubs with evidence of VELB exit holes or other evidence of VELB occupation that cannot be retained in the project area shall be transplanted to VELB mitigation sites during the dormant period for elderberry shrubs (November 1 to February 15). For elderberry shrubs	Project applicant	Before ground disturbance, during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	The applicant will provide the City documentation of compliance with these incidental take avoidance and minimization measures. This mitigation measure has been implemented successfully during Phase 1 of project implementation and would continue to be implemented, as modified, with equal success during Phase 2.	displaying evidence of VELB occupation that cannot be transplanted, compensation for removal of shrubs shall be as provided, in accordance with SJMSCP Section 5.5.4(C).			
		Provide the City documentation of compliance with these incidental take avoidance and minimization measures for VELB.	Project applicant	Before and during construction	
Impact 4.14-d: Giant Garter Snake	**Modified Mitigation Measure 4.14-d: Giant Garter Snake** The project applicant will implement SJMSCP incidental take avoidance and minimization measures for giant garter snake. The SJMSCP requires full avoidance of known occupied giant garter snake habitat. Based on the lack of evidence during previous focused surveys, the giant garter snake is not expected to be present on the project site. However, if the giant garter snake is discovered on the project site, a separate consultation with USFWS under the ESA and CDFW under the CESA may be required. A Biological Assessment has been written for this consultation (Ascent Environmental and Roberson-Bryan 2016). The following is a summary of SJMSCP and USFWS incidental take avoidance and minimization measures for the giant garter snake: ▶ Preconstruction surveys for the giant garter snake shall occur within 24 hours of ground disturbance. ▶ Construction within 200 feet of suitable aquatic habitat for giant garter snake shall occur during the active period for the snake, between May 1 and October 1. Between October 2 and April 30, the Joint Powers Authority, with the concurrence of the Permitting Agencies' representatives on the Technical Advisory Committee, shall determine whether additional measures (e.g., daily	Implement SJMSCP incidental take avoidance and minimization measures for giant garter snake.	Project applicant	Before ground disturbance, before and during construction	
		If giant garter snake is discovered on the project site, determine if a separate consultation with USFWS under the ESA and CDFW under the CESA is required. If separate consultation is required, initiate consultation with USFWS.	Project applicant in consultation with USFWS and/or CDFW	Before and during construction	
		Conduct preconstruction surveys for giant garter snake.	Project applicant	Within 24 hours of ground disturbance	
		Construction within 200 feet of suitable aquatic habitat for giant garter snake shall occur during the active period for the snake, between May 1 and October 1. If construction must occur within 200 feet of suitable aquatic habitat for giant garter snake between October 2 and April 30, consult with the Joint Powers Authority, with the concurrence of the Permitting Agencies'	Project applicant in consultation with the Joint Powers Authority, with the concurrence of the Permitting Agencies' representatives on the Technical Advisory Committee	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	presence/absence surveys, exclusion fencing) are necessary to minimize and avoid take. ▶ Limit vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat to the minimal area necessary. ▶ Confine the movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat to existing roadways to minimize habitat disturbance. ▶ Before ground disturbance, all onsite construction personnel shall be given instruction regarding the presence of the giant garter snake and the importance of avoiding impacts on this species and its habitats. ▶ In areas where wetlands, irrigation ditches, or other potential giant garter snake habitats are being retained on the site and are within 200 feet of an active construction area: ▪ install temporary fencing around potential garter snake habitat; ▪ restrict working areas, spoils and equipment storage, and other project activities to areas outside of potential garter snake habitat; and ▪ maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. ▶ Other provisions of the USFWS Standard Avoidance and Minimization Measures during Construction Activities in Giant Garter Snake Habitat shall be implemented (excluding programmatic mitigation ratios, which are superseded by the SJMSCP's mitigation ratios). The applicant will provide the City documentation of compliance with these incidental take avoidance and minimization measures.	representatives on the Technical Advisory Committee to determine whether additional measures are necessary to minimize and avoid take. Implement any additional measures required by the Joint Powers Authority.			
		Limit vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat to the minimal area necessary.	Project applicant	During construction	
		Confine the movement of heavy equipment within 200 feet of the banks of potential giant garter snake aquatic habitat to existing roadways to minimize habitat disturbance.	Project applicant	During construction	
		Before ground disturbance, provide instruction to all onsite construction personnel regarding the presence of giant garter snake and the importance of avoiding impacts on this species and its habitats.	Project applicant	Before ground disturbance	
		In areas where wetlands, irrigation ditches, or other potential giant garter snake habitats are being retained on the site and are within 200 feet of an active construction area install temporary fencing around potential garter snake habitat; restrict working areas, spoils and equipment storage, and other project activities to areas outside of potential garter snake	Project applicant	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	Mitigation Measure 4.14-d has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	habitat; and maintain water quality and limit construction runoff into wetland areas through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents.			
		Implement all other provisions of the USFWS Standard Avoidance and Minimization Measures during Construction Activities in Giant Garter Snake Habitat.	Project applicant	Before and during construction	
		Provide the City documentation of compliance with these incidental take avoidance and minimization measures for giant garter snake.	Project applicant	Before and during construction	
Impact 4.14-e: Western Pond Turtle	**Modified Mitigation Measure 4.14-e: Western Pond Turtle** The project applicant will implement the following measures designed to minimize potential loss of western pond turtles and include the avoidance and minimization measures in the SJMSCP: ▶ Prior to construction or vegetation clearing activities in suitable nesting habitat located within 400 feet of the pond or aquatic habitat in Paradise Cut, a qualified biologist shall conduct focused surveys for western pond turtles and nests. If no pond turtles or nests are observed, no further mitigation is necessary. ▶ When nesting areas for pond turtles are identified within the Phase 2 area, a buffer area of 300 feet shall be established between the nesting site (which may be immediately adjacent to wetlands or extend up to 400 feet away from wetland areas in uplands)	Implement the SJMSCP avoidance and minimization measures for western pond turtles.	Project applicant	Before vegetation clearing activities, during construction	
		Conduct focused surveys for western pond turtles and nests in suitable nesting habitat located within 400 feet of the pond or aquatic habitat in Paradise Cut.	Project applicant, qualified biologist	Before construction and/or vegetation clearing activities	
		If nesting areas for pond turtles are identified during the focused surveys, a buffer area of 300 feet shall be established between the nesting site (which may be immediately adjacent to wetlands or extend up to 400 feet away from wetland areas in	Project applicant	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	and the wetland located near the nesting site. These buffers shall indicated by temporary fencing if construction has or will begin before nesting periods are ended (the period from egg laying to emergence of hatchlings is normally April to November). ▶ If individual pond turtles are found, they shall be relocated by the biologist to the nearest suitable aquatic habitat in Paradise Cut. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. Mitigation Measure 4.14-e has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	uplands) and the wetland located near the nesting site. Mark these buffer areas with temporary fencing if construction has or will begin before nesting periods are ended (the period from egg laying to emergence of hatchlings is normally April to November).			
		If individual pond turtles are found, they shall be relocated by the qualified biologist to the nearest suitable aquatic habitat in Paradise Cut.	Project applicant, qualified biologist	Before and during construction	
		Provide the City documentation of compliance with these avoidance and minimization measures for western pond turtle.	Project applicant	Before and during construction	
Impact 4.14-f: Swainson's Hawk	**Modified Mitigation Measure 4.14-f: Swainson's Hawk** The project proponent will implement the minimization measures within the SJMCP to reduce impacts to Swainson's hawk in addition to payment of development fees required by the SJMSCP for funding of the establishment of habitat conservation areas. The following minimization measures are a summary and clarification of those set forth in the SJMSCP. ▶ If project activity would occur during the Swainson's hawk nesting season (March 1 to August 15), preconstruction surveys shall be conducted during the nesting season in areas with suitable nest trees in and immediately adjacent to the construction area. The survey shall be conducted within 1 week before the beginning of construction.	Implement SJMSCP minimization measures for Swainson's hawk.	Project applicant	Before and during construction	
		Pay development fees required by the SJMSCP for funding of the establishment of habitat conservation areas.	Project applicant	Before construction	
		Conduct preconstruction surveys in areas with suitable nest trees in and immediately adjacent to the construction area.	Project applicant	During the Swainson's hawk nesting season (March 1 to August 15), within 1 week before the beginning of construction	
		If an active Swainson's hawk nest is found, all construction activities shall remain a distance	Project applicant	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ If an active nest is found, all construction activities shall remain a distance of two times the dripline of the tree, measured from the nest. A setback of this distance shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests which are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing. ▶ If the project proponent elects to remove a nest tree, then nest trees shall be removed between September 1 and February 15, when the nests are unoccupied. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	of two times the dripline of the tree, measured from the nest. Establish and maintain a setback of this distance during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest. Mark setbacks with brightly colored temporary fencing.			
		If the project proponent elects to remove a nest tree, then nest trees shall be removed between September 1 and February 15, when the nests are unoccupied.	Project applicant	During construction	
		Provide the City documentation of compliance with these minimization measures for Swainson's hawk.	Project applicant	Before and during construction	
Impact 4.14-h: Burrowing Owl	**Modified Mitigation Measure 4.14-h: Burrowing Owl** The project applicant will implement the incidental take avoidance and minimization measures for burrowing owl in the SJMSCP. The following is a summary and clarification of those measures as revised in 2013: ▶ Burrowing owls may be discouraged from entering or occupying construction areas by discouraging the presence of ground squirrels. To accomplish this, the project proponent could prevent ground squirrels from occupying the project site by employing one of several methods outlined in Section 5.2.4.15 of the SJMSCP. These include retention of tall vegetation, regular disking of the site, or use of chemicals or traps to kill ground squirrels.	Implement SJMSCP incidental take avoidance and minimization measures for burrowing owl.	Project applicant	During construction	
		Discourage burrowing owls from entering or occupying construction areas by discouraging the presence of ground squirrels.	Project applicant	During construction	
		Conduct pre-construction surveys for burrowing owls within 75 meters of areas of project activity following the Staff Report on Burrowing Owls (CDFW 2012).	Project applicant	No less than 14 days prior and again within 24-hours before the beginning of construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ If burrowing owls are known to occupy the project site, during the breeding season preconstruction surveys for burrowing owls shall be conducted within 75 meters of areas of project activity following the Staff Report on Burrowing Owls (CDFW 2012). The survey shall be conducted no less than 14 days prior and again within 24-hours before the beginning of construction. If burrowing owls are found, the following measures shall be implemented: ▪ During the nonbreeding season (September 1 through January 31), burrowing owls occupying the project site may be evicted from the project site by passive relocation after a Burrowing Owl Exclusion Plan (BOEP) is developed and approved by the applicable CDFW representative and SJMSCP and habitat is mitigated as described in the CDFW's Staff Report on Burrowing Owls (CDFW 2012). ▪ During the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer until and unless the Technical Advisory Committee, with the concurrence of the permitting agencies' representatives on the Technical Advisory Committee, or a qualified biologist approved by the permitting agencies, verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, a BOEP developed and approved by the applicable CDFW representative and SJMSCP, and habitat is mitigated as described in the CDFW's Staff Report on Burrowing Owls (CDFW 2012), the burrow can be	If burrowing owls are found during the nonbreeding season (September 1 through January 31) that must be evicted from the project site by passive relocation, develop a BOEP. The BOEP must be approved by the applicable CDFW representative and SJMSCP before passive relocation of burrowing owls. Additionally, habitat shall be mitigated as described in the CDFW's Staff Report on Burrowing Owls (CDFW 2012).	Project applicant in consultation with the applicable CDFW representative and SJMSCP	Before and during construction, during the burrowing owl nonbreeding season (September 1 through January 31)	
		If burrowing owls are found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer. Burrows may only be disturbed if Technical Advisory Committee, with the concurrence of the permitting agencies' representatives on the Technical Advisory Committee, or a qualified biologist approved by the permitting agencies, verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Once the fledglings are capable of independent survival, a BOEP	Project applicant in consultation with if Technical Advisory Committee, with the concurrence of the permitting agencies' representatives on the Technical Advisory Committee, or a qualified biologist approved by the permitting agencies	Before and during construction, during the burrowing owl breeding season (February 1 through August 31)	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	destroyed. After burrows are destroyed, pre-construction surveys are required 24-hours prior to construction to ensure owls do not re-colonize the area. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. Mitigation Measure 4.14-h has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	developed and approved by the applicable CDFW representative and SJMSCP, and habitat is mitigated as described in the CDFW's Staff Report on Burrowing Owls (CDFW 2012), the burrow can be destroyed. After burrows are destroyed, pre-construction surveys shall be conducted 24-hours prior to construction to ensure owls do not re-colonize the area.			
		Provide the City documentation of compliance with these incidental take avoidance and minimization measures for burrowing owl.	Project applicant	Before and during construction	
Impact 4.14-j: Ground-Nesting or Streamside/Lakeside-Nesting Birds	**Modified Mitigation Measure 4.14-j: Ground-Nesting or Streamside/Lakeside-Nesting Birds** The project applicant will implement incidental take avoidance and minimization measures for the northern harrier and short-eared owl found in the SJMSCP. The following is a summary and clarification of those measures: ▶ If project activity would occur during the nesting season for northern harrier and short-eared owl (March 15 through September 15), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 500 feet of areas of project activity. Suitable habitat is currently limited to Paradise Cut Area but also could include fallow fields if they are allowed to develop herbaceous cover. The survey shall be conducted within 1 week before the beginning of construction. ▶ If northern harrier or short-eared owl nests are found, a setback of 500 feet from nesting areas shall	Implement incidental take avoidance and minimization measures for the northern harrier and short-eared owl found in the SJMSCP.	Project applicant	Before and during construction	
		Conduct preconstruction surveys for northern harrier and short-eared owl in suitable nesting habitat within 500 feet of areas of project activity.	Project applicant	During the nesting season for northern harrier and short-eared owl (March 15 through September 15), within 1 week before the beginning of construction	
		If northern harrier or short-eared owl nests are found, establish and maintain a setback of 500 feet from nesting areas during the nesting season for the period encompassing nest building and continuing until fledglings leave nests.	Project applicant	During the nesting season for northern harrier and short-eared owl (March 15 through September 15), before and during ground disturbing and construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests which are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing. The following measures would avoid and minimize the loss of yellow-headed blackbird nests: ▶ If project activity would occur during the nesting season for yellow-headed blackbird (April 15 through July 31) (CWHR 2008), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Suitable habitat is currently limited to marsh areas in Paradise Cut Area and around the RID Area pond. The survey shall be conducted within 1 week before the beginning of construction. ▶ If yellow-headed blackbird nests are found, a setback of 100 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests which are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. Mitigation Measure 4.14-j has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	Mark setbacks with brightly colored temporary fencing.			
		Conduct preconstruction surveys for yellow-headed blackbird in suitable nesting habitat within 100 feet of areas of project activity.	Project applicant	During the nesting season for yellow-headed blackbird (April 15 through July 31), within 1 week before the beginning of construction	
		If yellow-headed blackbird nests are found, establish and maintain a setback of 100 feet from nesting areas for the period encompassing nest building and continuing until fledglings leave nests. Mark setbacks with brightly colored temporary fencing.	Project applicant	During the nesting season for yellow-headed blackbird (April 15 through July 31), before and during ground disturbing and construction	
		Provide the City documentation of compliance with these measures to avoid and minimize the loss of northern harrier, short-eared owl, and yellow-headed blackbird nests.	Project applicant	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.14-k: Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat	**Modified Mitigation Measure 4.14-k: Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat** ▶ If project activity would occur during the loggerhead shrike nesting season (March 1 through August 31), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Suitable nesting habitat includes areas with natural vegetation of shrubs and small trees, including the UPRR tracks west of I-5, the PCIP Area, and the PCC Area. The survey shall be conducted within 1 week before the beginning of construction. ▶ A setback of 100 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. Mitigation Measure 4.14-k has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	Conduct pre-construction surveys for loggerhead shrike in suitable nesting habitat within 100 feet areas of project activity.	Project applicant	During the loggerhead shrike nesting season (March 1 through August 31), within 1 week before the beginning of construction	
		Establish and maintain a setback of 100 feet from nesting areas for the period encompassing nest building and continuing until fledglings leave nests. Mark setbacks with brightly colored temporary fencing.	Project applicant	During the loggerhead shrike nesting season (March 1 through August 31), before and during construction	
		Provide the City documentation of compliance with these avoidance and minimization measures for loggerhead shrike.	Project applicant	Before and during construction	
Impact 4.14-l: Birds Nesting along Riparian Corridors	**Modified Mitigation Measure 4.14-l: Birds Nesting along Riparian Corridors** The project applicant will implement the following is a summary and clarification of SJMSCP incidental take avoidance and minimization measures within the SJMSCP for white-tailed kite and Cooper's hawk. The following is a summary and clarification of those measures:	Conduct raptor pre-construction surveys in suitable nesting habitat within 100 feet areas of project activity.	Project applicant	During the raptor nesting season (February 15 through September 15), within 1 week before the beginning of construction or tree removal.	
		Establish and maintain a setback of 100 feet from nesting areas for the period encompassing	Project applicant	During the raptor nesting season (February 15 through	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ If project activity would occur during the raptor nesting season (February 15 through September 15), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Suitable nesting habitat for both species is present in the PCIP Area and in riparian patches adjacent to the San Joaquin River and in the PCC Area. The survey shall be conducted within 1 week before the beginning of construction or tree removal. ▶ A setback of 100 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented with equal success during Phase 2.	nest building and continuing until fledglings leave nests. Mark setbacks with brightly colored temporary fencing.		September 15), before and during construction	
		Provide the City documentation of compliance with these measures for white-tailed kite and Cooper's hawk.	Project applicant	Before and during construction	
Impact 4.14-o: Common Tree-Nesting Raptors	**Modified Mitigation Measure 4.14-o: Common Tree-Nesting Raptors** The following measures are designed to avoid loss of common tree-nesting raptors: ▶ If project activity would occur during the raptor nesting season (February 15 through September 15), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Large trees	Conduct raptor pre-construction surveys in suitable nesting habitat within 100 feet areas of project activity.	Project applicant	During the raptor nesting season (February 15 through September 15), within 1 week before the beginning of construction or tree removal.	
		Establish and maintain a setback of 100 feet from nesting areas for the period encompassing nest building and continuing until fledglings leave nests.	Project applicant	During the raptor nesting season (February 15 through September 15), before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	throughout the project area provide suitable habitat. The survey shall be conducted within 1 week before the beginning of construction or tree removal. ▶ A setback of 100 feet from nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.	Mark setbacks with brightly colored temporary fencing.			
		Provide the City documentation of compliance with these measures for common tree-nesting raptors.	Project applicant	Before and during construction	
Impact 4.14-q: Riparian Brush Rabbit	**Modified Mitigation Measure 4.14-q: Riparian Brush Rabbit** The project applicant will implement the incidental take and avoidance measures in the SJMCSP for riparian brush rabbit. The SJMSCP requires full avoidance of riparian brush rabbit habitat in Paradise Cut and along the former SPRR right-of-way, because it is known occupied habitat. No conversion of occupied habitat or mortality to individual riparian brush rabbits is allowed under the SJMSCP. For the proposed project to qualify for coverage under the SJMSCP for riparian brush rabbit, a permanent setback of 300 feet from the outer edge of the dripline of riparian vegetation would be required. Because maintenance of such setbacks is not feasible, a separate Section 7 consultation with USFWS under the ESA would be required, and incidental take authorization from CDFW under CESA. Under CESA, the project would require a Section 2081(b), and an Incidental Take Permit. Specific avoidance and	Implement incidental take avoidance and minimization measures for the riparian brush rabbit found in the SJMSCP.	Project applicant	Before and during construction	
		Participate in Section 7 consultation with USFWS under the ESA and obtain incidental take authorization from CDFW under CESA. Implement specific avoidance and minimization would be developed during the consultation process.	Project applicant in consultation with USFWS and CDFW	Before and during construction	
		Provide the City documentation of compliance with these avoidance and minimization measures.	Project applicant	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	minimization would be developed during the consultation process. Potential take avoidance and minimization measures may include, but would not be limited to, conducting preconstruction surveys, conducting daily surveys of construction areas, installing construction fencing to prevent brush rabbits from entering construction areas, a trapping program to remove feral animals and rats from Paradise Cut, allowing access to conduct research, and coordination to assist with the USFWS captive breeding program. Compensation for loss of habitat and other potential impacts would include enhancement of existing habitat and creation of additional habitat in Paradise Cut. New high ground areas would be created in the PCIP Area, and the existing Paradise Cut levee would provide new high ground after construction of the setback levee. Suitable vegetation would be planted in those areas. Compensation for any potential adverse effects to riparian brush rabbit resulting from habitat enhancement and restoration efforts in Paradise Cut will be addressed in the ESA consultation. Avoidance and minimization measures to address mortality of individual riparian brush rabbit will also be addressed through the ESA consultation. The applicant will provide the City documentation of compliance with these avoidance and minimization measures. Applicable elements of this mitigation measure have been implemented successfully during Phase 1 and would continue to be implemented with equal success during Phase 2.				
Impact 4.14-r: Jurisdictional Waters of the United States and Riparian Habitat	**Modified Mitigation Measure 4.14-r: Jurisdictional Waters of the United States and Riparian Habitat** The following measures are designed to minimize and mitigate impacts on jurisdictional waters of the United States and riparian habitat:	Complete a determination of waters of the United States, including jurisdictional wetlands and riparian habitat, that would be affected by the proposed project through the formal	Project applicant, qualified biologist in consultation USACE	Before construction that could affect waters of the United States and riparian habitat	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	▶ Before implementation of project elements that could affect waters of the United States and riparian habitat, a determination of waters of the United States, including jurisdictional wetlands and riparian habitat, that would be affected by the proposed project shall be made by qualified biologists through the formal Section 404 wetland delineation process. ▶ The fill or discharge of dredged material into the agricultural ditch and pond or other alteration of waters of the United States will be subject to a USACE Section 404 permit. ▶ A CDFW Streambed Alteration Agreement is also expected to be required for modification to the bed, bank or channel of any streams or drainages including potential work along the San Joaquin River, Old River, and Paradise Cut. ▶ The acreage of jurisdictional habitat removed shall be replaced or restored/enhanced on a "no-net-loss" basis in accordance with USACE and CDFW regulations. Habitat restoration, enhancement, and/or replacement shall be at a location and by methods agreeable to USACE and CDFW. It is anticipated that restoration and enhancement activities in Paradise Cut and creation of the proposed back bays would be sufficient to replace lost habitat associated with Phase 2 Project activities. ▶ Measures to minimize erosion and runoff into drainage channels shall be included in all drainage plans. Appropriate runoff controls such as berms, storm gates, detention basins, overflow collection areas, filtration systems, and sediment traps shall be implemented to control siltation and the potential discharge of pollutants. The applicant will provide the City documentation of compliance with these measures.	Section 404 wetland delineation process.			
		Obtain a USACE Section 404 permit for fill or discharge of dredged material into the agricultural ditch and pond or other alteration of waters of the United States.	Project applicant in consultation USACE	Before and during construction	
		Obtain a CDFW Streambed Alteration Agreement for modification to the bed, bank or channel of any streams or drainages.	Project applicant in consultation CDFW	Before and during construction	
		Replace or restore/enhance the acreage of jurisdictional habitat removed on a "no-net-loss" basis in accordance with USACE and CDFW regulations.	Project applicant in consultation USACE and CDFW	Before and during construction	
		Include measures to minimize erosion and runoff into drainage channels in all drainage plans. Implement appropriate runoff controls such as berms, storm gates, detention basins, overflow collection areas, filtration systems, and sediment traps to control siltation and the potential discharge of pollutants.	Project applicant	Before and during construction	
		Provide the City documentation of compliance with these measures.	Project applicant	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.14-t: Biological Resources Associated with Offsite Facilities	**Adopted Mitigation Measure 4.14-t: Biological Resources Associated with Offsite Facilities** Biological resources potentially occurring at or near off site project facilities and potential impact mechanisms would be the same as those identified for the RID, PCC, and PCIP Areas. Therefore, the mitigation approach described for the primary project area also would function for offsite facilities. The project applicant would participate in the SJMSCP for the offsite facilities and implement Mitigation Measures 4.14-b, -c, -d, -e, -f, -h, -j, -k, and -l (measures summarizing SJMSCP minimization measures) as appropriate based on the resources present. Mitigation Measures 4.14-o, -q, and -r also would be implemented as appropriate based on the resources present. A determination of habitat types and resources that might be present in each offsite facility area shall be made by a qualified biologist once the facility footprint is established and access for a reconnaissance-level survey is available. A wetland delineation consistent with USACE methodology also shall be completed. These data, combined with resource identification surveys completed by the SJCOG as part of the SJMSCP, shall be used to determine the appropriate mitigation measures for each site. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented with equal success during Phase 2.	Participate in the SJMSCP for the offsite facilities and implement Mitigation Measures 4.14-b, -c, -d, -e, -f, -h, -j, -k, and -l (measures summarizing SJMSCP minimization measures) as appropriate based on the resources present. Implement Mitigation Measures 4.14-o, -q, and -r as appropriate based on the resources present.	Project applicant	Before and during construction	
		A determination of habitat types and resources that might be present in each offsite facility area shall be made by a qualified biologist.	Project applicant, qualified biologist	Once the facility footprint is established and access for a reconnaissance-level survey is available, before construction	
		Complete a wetland delineation for portions of the offsite facility area that could affect waters of the United States consistent with USACE methodology.	Project applicant in consultation with USACE	Once the facility footprint is established and access for a wetland delineation is available, before construction	
		Prepare appropriate mitigation measures based on the data from the reconnaissance-level survey and wetland delineation combined with resource identification surveys completed by the SJCOG as part of the SJMSCP for each offsite facility area.	Project applicant	Once the facility footprint is established and after the reconnaissance-level survey and wetland delineation, before construction	
Fisheries					
Impact 4.15-b: Levee Breeching	**Modified Mitigation Measure 4.15-b: Levee Breaching** The City shall ensure that a SWPPP is prepared and implemented during construction activities and that all water quality requirements included in various agency	Ensure that a SWPPP is prepared and implemented during construction activities and that all water quality requirements included in various agency	City of Lathrop Public Works Department	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	permits are adhered to. In addition, in-water work shall be restricted to periods when potential impacts on special-status fish species would be minimized. The City shall ensure that as project development proceeds, SWPPPs are prepared and implemented during construction. Goals of the SWPPPs shall include establishing procedures to minimize accelerated soil erosion, minimizing accelerated sedimentation in drainages and other receiving waters, minimizing or eliminating runoff, avoiding contaminant releases, and ensuring long-term stabilization of project soils. Also see Mitigation Measures 4.8-a and 4.8-c in section 4.8, "Hydrology and Water Quality." The City shall also ensure that all water quality requirements imposed by regulatory agencies (e.g., NMFS, USFWS, RWQCB, USACE) are implemented during project construction. In-water work shall be avoided and/or minimized during months when fish species are more susceptible to disturbance, particularly chinook salmon and Sacramento splittail. In-water construction activities in Paradise Cut should be conducted to the extent practical from July 1 through December 31. The highest priority months to avoid and/or minimize in-water work in Paradise Cut are March, April, and May, with January, February, and June being the second highest priority to avoid. In addition, all construction activities in Paradise Cut and associated levees must be completed during non-flood flows, when the San Joaquin River is not overtopping the Paradise Weir and there is no immediate threat of the river overtopping the weir. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.	permits are adhered to. Ensure that in-water work is restricted to periods when potential impacts on special-status fish species would be minimized.			
		Ensure that all water quality requirements imposed by regulatory agencies (e.g., NMFS, USFWS, RWQCB, USACE) are implemented.	City of Lathrop Public Works Department	During construction	
		Avoid and/or minimize in-water work during months when fish species are more susceptible to disturbance, particularly chinook salmon and Sacramento splittail. Conduct in-water construction activities in Paradise Cut to the extent practical from July 1 through December 31.	Project applicant, construction contractor	During construction	
		Complete all construction activities in Paradise Cut and associated levees during non-flood flows, when the San Joaquin River is not overtopping the Paradise Weir and there is no immediate threat of the river overtopping the weir.	Project applicant, construction contractor	During construction	
Impact 4.15-c: Bridge and Utility Crossings	**Modified Mitigation Measure 4.15-c: Bridge and Utility Crossings** The City shall ensure that a SWPPP is prepared and implemented during construction activities and that all	Ensure that a SWPPP is prepared and implemented during construction activities and that all water quality requirements included in various agency	City of Lathrop Public Works Department	Before and during construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	water quality requirements included in various agency permits are adhered to. In addition, in-water work shall be restricted to periods when potential impacts on special-status fish species would be minimized. The City shall ensure that as project development proceeds, SWPPPs are prepared and implemented during construction. Goals of the SWPPPs shall include establishing procedures to minimize accelerated soil erosion, minimizing accelerated sedimentation in drainages and other receiving waters, minimizing or eliminating nonstormwater runoff, avoiding contaminant releases, and ensuring long-term stabilization of project soils. Also see Modified Mitigation Measures 4.8-a and Adopted Mitigation Measure 4.8-c in Section 4.8, "Hydrology and Water Quality." The City shall also ensure that all water quality requirements imposed by regulatory agencies (e.g., NMFS, USFWS, RWQCB, USACE) are implemented during project construction. In-water construction activities in the San Joaquin River should be further restricted to avoid the primary adult fall-run chinook salmon upstream migration in August, September, and October. As much of the in-water work in the San Joaquin River as possible should be conducted between July 1 and August 31. If a longer construction period is required, the months of January, February, and June should be considered first; September and October should be considered next; and March, April, and May should be considered last. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.	permits are adhered to. Restrict in-water work to periods when potential impacts on special-status fish species would be minimized.			
		Restrict in-water construction activities in the San Joaquin River to avoid the primary adult fall-run chinook salmon upstream migration in August, September, and October. Conduct as much of the in-water work in the San Joaquin River as possible between July 1 and August 31. If a longer construction period is required, the months of January, February, and June should be considered first; September and October should be considered next; and March, April, and May should be considered last.	Project applicant, construction contractor	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
Impact 4.15-d: Paradise Cut Bridge	**Adopted Mitigation Measure 4.15-d: Paradise Cut Bridge** The project applicant shall implement all measures identified for Mitigation Measures 4.15-b and 4.15-c. All construction activities in Paradise Cut must be completed during non-flood flows, when the San Joaquin River is not overtopping the Paradise Weir and there is no immediate threat of the river overtopping the weir.	See Modified Mitigation Measures 4.15-b and 4.15-c, above	See Modified Mitigation Measures 4.15-b and 4.15-c, above	See Modified Mitigation Measures 4.15-b and 4.15-c, above	
		Complete all construction activities in Paradise Cut during non-flood flows, when the San Joaquin River is not overtopping the Paradise Weir and there is no immediate threat of the river overtopping the weir.	Project applicant, construction contractor	During construction	
Cultural and Tribal Cultural Resources					
Impact 4.16-a: Cause a Substantial Adverse Change in the Significance of a Listed Archaeological Site	**Adopted Mitigation Measure 4.16-a: Listed Archaeological Sites** Before project implementation, the City of Lathrop shall retain an architectural historian to completely record the railroad drawbridge associated with site RI-2 (also called RI-13H) (P-39-00002) within the project area. This shall be completed to the standards of a Historic American Engineering Record. Recordation of the site would result in permanent documentation of the architectural, visual, and historic context of the site and would give historians and others access to documentation on pre-project conditions. This is a standard mitigation practice for cultural resources and historic properties. In addition, as the project is developed, a public interpretive feature such as a plaque or sign shall be installed in a public space on the project site (e.g., park, trail), describing the history and significance of the railroad bridge. The bridge must be visible from the location of the interpretive feature. This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as applicable, during Phase 2.	Retain an architectural historian to completely record the railroad drawbridge associated with site RI-2 (also called RI-13H) (P-39-00002) within the project area.	City of Lathrop Public Works Department	Before construction	
		Install a public interpretive feature such as a plaque or sign in a public space on the project site (e.g., park, trail), describing the history and significance of the railroad bridge.	Project applicant	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	Adopted[1] Mitigation Measure 4.16-c: Historic Properties The City of Lathrop shall retain an architectural historian to completely record sites RI-10H and RI-12H (historic grain silos). In addition, as the project is developed, a public interpretive feature such as a plaque or sign shall be installed in a public space on the project site (e.g., park, trail) or on the shoulder of Manthey Road near the silos.	Retain an architectural historian to completely record sites RI-10H and RI-12H (historic grain silos), install a public interpretive feature on the project site	Project applicant (implementation); City Community Development Department, City Public Works Department (monitoring)	Before construction starts, during operation	Completed
Impact 4.16-d: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources	**Modified Mitigation Measure 4.16-d: Undiscovered/Unrecorded Archaeological Sites** Before the initiation of construction or ground-disturbing activities associated with the proposed project, all construction personnel shall be alerted to the possibility of buried cultural resources. Standard procedures and points of contact for addressing unanticipated finds shall be identified and conveyed to construction personnel prior to initiating Phase 2 construction. Construction personnel shall also be notified of requirements for confidentiality and culturally appropriate treatment of any discovery significant to Native Americans.	Alert all construction personnel to the possibility of buried cultural resources. Standard procedures and points of contact for addressing unanticipated finds shall be identified and conveyed to construction personnel. Construction personnel shall also be notified of requirements for confidentiality and culturally appropriate treatment of any discovery significant to Native Americans.	Project applicant, construction contactor	Before ground disturbance	
	During AB 52 consultation, the Northern Valley Yokut identified four areas of particular interest in the Phase 2 project site. One of these areas was graded in support of project development in 2018 and construction activity has continued since that time. No further ground disturbance is anticipated for this site in question. As for the remaining three areas identified, either all or a portion is planned for resource conservation or covered with fill as part of flood protection improvements, or is planned to be covered with fill as part of future flood protection improvements. None of the identified sensitive areas	If excavation or grading is undertaken in any part of the four Northern Valley Yokut identified sites by (other than further movement of imported fill), the Northern Valley Yokut shall be notified of the planned activity, at least seven days prior to beginning the earthwork. Provide representatives of the Northern Valley Yokut the	Project applicant and construction contractor in consultation with Northern Valley Yokut	During ground disturbance and construction	

[1] Applicable mitigation measure from the 2003 SEIR not required to reach a less-than-significant conclusion in the 2021 SEIR.

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	are planned for future excavation below the native soil elevation. If excavation or grading is undertaken in any part of these identified sites (other than further movement of imported fill), the Northern Valley Yokut will be notified of the planned activity, at least seven days prior to beginning the earthwork. Representatives of the Northern Valley Yokut will be provided the opportunity to inspect excavated/graded sites in these sensitive areas during non-work hours (e.g., weekdays after construction activity has ceased and/or weekends). These inspections would be performed by non-paid monitors and would be provided only as a courtesy to the Northern Valley Yokut. If artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, or discovered during inspections by Tribal representatives, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the City of Lathrop Community Development Department/Planning Division shall be immediately contacted. At that time, the City shall retain a professional archaeological consultant. If the archeologist determines that the material may be of Native American origin, the City shall notify a representative from the Northern Valley Yokut, the Buena Vista Rancheria, and the California Valley Miwok. The archaeologist shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The City shall implement the mitigation prior to the resumption of construction activities at the construction site. Mitigation Measure 4.16-d has been implemented successfully during Phase 1 and would continue to be	opportunity to inspect excavated/graded sites in these sensitive areas during non-work hours (e.g., weekdays after construction activity has ceased and/or weekends).			
		If artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, or discovered during inspections by Tribal representatives, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the City of Lathrop Community Development Department/Planning Division shall be immediately contacted.	Project applicant, construction contractor	During ground disturbance and construction	
		If contacted by the project applicant regarding discovered artifacts or unusual amounts of stone, bone, or shell, retain a professional archaeological consultant to conduct a field investigation. The archaeologist shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or	City of Lathrop Public Works Department, professional archaeological consultant, in consultation with Northern Valley Yokut, the Buena Vista Rancheria, and the California Valley Miwok, as necessary	During ground disturbance and construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	implemented during Phase 2. However, as a result of the AB 52 consultation conducted as part of this SEIR CEQA process, some clarifications and refinements to the text of Mitigation Measure 4.16-d are reflected above and will be applied during Phase 2 implementation.	potentially significant resources as defined by CEQA. If the archeologist determines that the material may be of Native American origin, notify a representative from the Northern Valley Yokut, the Buena Vista Rancheria, and the California Valley Miwok.			
		Implement the mitigation developed by the archaeologist to protect or recover any cultural resources prior to resuming construction activities at the construction site.	Project applicant, construction contractor	During construction	
	Modified Mitigation Measure 4.16-d: Undiscovered/Unrecorded Archaeological Sites Before the initiation of construction or ground-disturbing activities associated with the proposed project, all construction personnel shall be alerted to the possibility of buried cultural resources. Standard procedures and points of contact for addressing unanticipated finds shall be identified and conveyed to construction personnel prior to initiating Phase 2 construction. Construction personnel shall also be notified of requirements for confidentiality and culturally appropriate treatment of any discovery significant to Native Americans. During AB 52 consultation, the Northern Valley Yokut identified four areas of particular interest in the Phase 2 project site. One of these areas was graded in support of project development in 2018 and construction activity has continued since that time. No further ground disturbance is anticipated for this site in question. As for the remaining three areas identified, either all or a portion is planned for resource				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	conservation or covered with fill as part of flood protection improvements, or is planned to be covered with fill as part of future flood protection improvements. None of the identified sensitive areas are planned for future excavation below the native soil elevation. If excavation or grading is undertaken in any part of these identified sites (other than further movement of imported fill), the Northern Valley Yokut will be notified of the planned activity, at least seven days prior to beginning the earthwork. Representatives of the Northern Valley Yokut will be provided the opportunity to inspect excavated/graded sites in these sensitive areas during non-work hours (e.g., weekdays after construction activity has ceased and/or weekends). These inspections would be performed by non-paid monitors and would be provided only as a courtesy to the Northern Valley Yokut. If artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, or discovered during inspections by Tribal representatives, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the City of Lathrop Community Development Department/Planning Division shall be immediately contacted. At that time, the City shall retain a professional archaeological consultant. If the archeologist determines that the material may be of Native American origin, the City shall notify a representative from the Northern Valley Yokut, the Buena Vista Rancheria, and the California Valley Miwok. The archaeologist shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The City shall implement the mitigation prior to the resumption of construction activities at the construction site.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	Mitigation Measure 4.16-d has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of the AB 52 consultation conducted as part of this SEIR CEQA process, some clarifications and refinements to the text of Mitigation Measure 4.16-d are reflected above and will be applied during Phase 2 implementation.				
Impact 4.16-e: Disturb Human Remains	**Adopted Mitigation Measure 4.16-e: Undiscovered/Unrecorded Human Remains.** If human remains are discovered at any project construction sites during any phase of construction, work within 50 feet of the remains shall be suspended immediately, and the City of Lathrop Community Development Department/Planning Division and the county coroner shall be immediately notified. If the remains are determined by the county coroner to be Native American, NAHC shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The City of Lathrop shall also retain a professional archaeological consultant. The archaeologist shall conduct a field investigation of the specific site and consult with the Most Likely Descendant identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the Most Likely Descendant including the excavation and removal of the human remains. The City shall implement any mitigation prior to the resumption of activities at the site where the remains were discovered.	If human remains are discovered at any project construction sites during any phase of construction, immediately suspend work within 50 feet of the remains, and immediately notify the City of Lathrop Community Development Department/Planning Division and the county coroner.	Project applicant, construction contractor	During ground disturbance and construction	
		If the remains are determined by the county coroner to be Native American, notify NAHC within 24 hours, and adhere to the guidelines of the NAHC in the treatment and disposition of the remains.	City of Lathrop Public Works Department in consultation with the county coroner	During construction	
		Retain a professional archaeological consultant. The archaeologist shall conduct a field investigation of the specific site and consult with the Most Likely Descendant identified by the NAHC. As necessary, the archaeological consultant may provide professional assistance to the Most Likely Descendant including the excavation and removal of the human remains.	City of Lathrop Public Works Department in consultation with the professional archaeological consultant	During construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
		Implement any mitigation prior to the resumption of activities at the site where the remains were discovered.	Project applicant, construction contractor	During construction	
Impact 4.16-f: Cause a Substantial Adverse Change in Offsite Resources	**Adopted Mitigation Measure 4.16-f: Offsite Resources.** Once disturbance areas for offsite project elements are sufficiently defined and property access is available, the City shall retain a professional archaeological consultant to review the results of existing records searches and conduct field surveys, as needed, for these facilities. If cultural resources are found in the potential disturbance area, Mitigation Measures 4.16-a through 4.16-c shall be implemented as appropriate. If discoveries are made during construction, Mitigation Measures 4.16-d and 4.16-e shall be implemented.	Retain a professional archaeological consultant to review the results of existing records searches and conduct field surveys, as needed, for offsite facilities.	City of Lathrop Public Works Department in consultation with a professional archaeological consultant	Once disturbance areas for offsite project elements are sufficiently defined and property access is available, before construction	
		If cultural resources are found in the potential disturbance area, implement Mitigation Measures 4.16-a through 4.16-c, as appropriate.	Project applicant, construction contractor	During construction	
		If discoveries are made during construction, implement Mitigation Measures 4.16-d and 4.16-e.	Project applicant, construction contractor	During construction	
Impact 4.16-g: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource	**New Mitigation Measure 4.16-g: Undiscovered/Unrecorded Tribal Cultural Resources** Implement Modified Mitigation Measure 4.16-d.	See Modified Mitigation Measure 4.16-d, above	See Modified Mitigation Measure 4.16-d, above	See Modified Mitigation Measure 4.16-d, above	
Aesthetics					
Impact 4.17-f: Design and Function of Walls and Fences/Consistency with the WLSP	**Adopted Mitigation Measure 4.17-f: Design and Function of Walls and Fences/Consistency with the WLSP** Before approval of any residential development that would be located adjacent to an existing or planned future arterial road, proposed walls and fences shall be included in the architectural and design review. Any proposed gaps or openings in walls along the arterial road shall be evaluated as part of the design review for their potential to permit light and glare from the	Include proposed walls and fences in the architectural and design review for any residential development that would be located adjacent to an existing or planned future arterial road.	Project applicant, City of Lathrop Public Works Department	Before final plan approval, during architectural and design review	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	roadway to enter the residential development. Gaps or other openings shall not be permitted where light or glare may pass through the gap and inadvertently affect homes or other residences.				
Greenhouse Gas Emissions and Climate Change					
Impact 4.19-a: Project-Generated GHG Emissions	**New Mitigation Measure 4.19-a(1): Implement All Feasible On-Site Greenhouse Gas Reduction Measures** The project applicant shall implement all feasible measures to reduce GHG emissions associated with the modified Phase 2 Project, including, but not limited to, the construction- and operation-related measures listed below. A mitigation measure may be deemed infeasible if the project applicant may provide rationale, based on substantial evidence, to the City that substantiates why the measure is infeasible. The GHG reductions achieved by the implementation of measures listed below shall be estimated by a qualified third-party selected by the City. All GHG reduction estimates shall be supported by substantial evidence. Mitigation Measures should be implemented even if it is reasonable that their implementation would result in a GHG reduction but a reliable quantification of the reduction cannot be substantiated. The project applicant shall incorporate on-site design measures into the modified Phase 2 Project and submit verification to the City prior to issuance of building permits. Many of these measures are identical to, or consistent with, the measures listed in Appendix B of the 2017 Scoping Plan (CARB 2017:B-7 to B-8). Notably, as the Title 24 California Building Code, particularly Parts 6 (California Energy Code) and 11 (California Green Building Standards Code), continues to be updated, some of these measures may become	Implement all feasible measures to reduce GHG emissions associated with the modified Phase 2 Project, including, but not limited to, the construction- and operation-related measures listed in New Mitigation Measure 4.19-a(1).	Project applicant	City of Lathrop to validate incorporation of feasible measures prior to issuance of building permit. Implement measures during construction, during operation	
		The GHG reductions achieved by the implementation of measures listed in New Mitigation Measure 4.19-a(1) shall be estimated by a qualified third-party selected by the City.	City of Lathrop Public Works Department in consultation with a qualified third-party	Before construction	
		Incorporate on-site design measures into the modified Phase 2 Project and submit verification to the City prior to issuance of building permits.	Project applicant	Prior to issuance of building permits	
		Ensure that the construction-related GHG reduction measures listed in New Mitigation Measure 4.19-a(1) are incorporated into the construction plan and identified in the project improvement and site design plans.	Project applicant, construction contractor	Before construction	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	mandatory requirements for future residential and nonresidential buildings. a. Construction-related GHG Reduction Measures. Implementation of these measures shall be required in the contract the project applicant establishes with its construction contractors and identified in the project improvement and site design plans. i. The project applicant shall require its contractors to enforce idling of on- and off-road diesel equipment for no more than 5 minutes while on site. ii. The project applicant shall implement waste, disposal, and recycling strategies in accordance with Sections 4.408 and 5.408 of the 2016 California Green Building Standards Code (CALGreen Code), or in accordance with any update to these requirements in future iterations of the CALGreen Code in place at the time of project construction. iii. Project construction shall achieve or exceed the enhanced Tier 2 targets for recycling or reusing construction waste of 75 percent for residential land uses as contained in Sections A4.408 and A5.408 of the CALGreen Code. iv. All diesel-powered, off-road construction equipment shall meet EPA's Tier 4 emissions standards as defined in 40 Code of Federal Regulation (CFR) 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. v. The project applicant shall implement a program that incentivizes construction workers to carpool, use public transit, or EVs to commute to and from the project site.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	b. Operational GHG Reduction Measures i. The project applicant shall achieve as many residential zero net energy (ZNE) buildings as feasible. Prior to the issuance of building permits the project developer or its designee shall submit a Zero Net Energy Confirmation Report (ZNE Report) prepared by a qualified building energy efficiency and design consultant to the city for review and approval. The ZNE Report shall demonstrate that development within the project area subject to application of the California Energy Code has been designed and shall be constructed to achieve ZNE, as defined by CEC in its 2015 Integrated Energy Policy Report, or otherwise achieve an equivalent level of energy efficiency, renewable energy generation, or GHG emissions savings. ii. All buildings shall include rooftop solar photovoltaic systems to supply electricity to the buildings. Alternatively, solar photovoltaic systems can be installed on canopies that also shade parking areas. The project applicant shall provide pre-wired solar for residential garage/parking structures as a design feature. iii. Any household appliances included in the original sale of the residential units shall be electric and certified Energy Star-certified (including clothes washers, dish washers, fans, and refrigerators, but not including tankless water heaters). iv. The project applicant shall install programmable thermostat timers in all residential dwelling units that allow users to easily control when the HVAC system will heat or cool a certain space, thereby saving energy. v. All buildings shall be designed to include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	vi. All buildings shall be designed to comply with requirements for water efficiency and conservation as established in the CALGreen Code. vii. If natural gas service is provided to the project site then the project applicant shall install natural gas connections in all residential backyards and within the common outdoor activity areas of multi-family residential land uses. This measure is not required if natural gas connections are not provided to the project site. viii. Electrical outlets shall be included on every exterior wall of all buildings. These exterior outlets will enable the use of electric-powered landscape maintenance equipment thereby providing an alternative to using fossil fuel-powered generators. ix. Outdoor parking lots for the proposed park shall include trees and/or solar canopies designed to provide a minimum 50 percent shading of parking lot surface areas. x. The project applicant shall provide a minimum of one single-port electric vehicle charging station at each new single-family housing unit that achieves similar or better functionality as a Level 2 charging station (referring to the voltage that the electric vehicle charger uses). The project applicant shall also provide Level 2 electric vehicle charging stations at a minimum of 10 percent of parking spaces that serve multi-family residential buildings. xi. Parking lots serving non-residential buildings shall have at least 12.5 percent of parking spaces served by electric vehicle charging stations that achieves similar or better functionality as a Level 2 charging station.				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	xii. The project applicant shall create safe paths of travel to building and park access points, connecting to existing bicycle and pedestrian facilities.				
	New Mitigation Measure 4.19-a(2): Purchase Real, Quantifiable, Permanent, Verifiable, Enforceable, and Additional Carbon Offsets If, following the application of all feasible on-site GHG reduction measures listed under Mitigation Measure 4.19-a(1), the modified Phase 2 Project would continue to generate GHG emissions exceeding 2.12 $MTCO_2e$/year/SP, the project applicant shall offset the remaining GHG emissions to meet 2.12 $MTCO_2e$/year/SP in 2040 by funding activities that directly reduce or sequester GHG emissions or by purchasing and retiring carbon credits. To the degree that a project relies on GHG mitigation measures, the City of Lathrop, SJVAPCD, and CARB recommend that lead agencies prioritize on-site design features, such as those listed under Mitigation Measure 4.19-a(1), and direct investments in GHG reductions within the vicinity of the project site to provide potential air quality and economic co-benefits locally. While emissions of GHGs and their contribution to climate change is a global problem, emissions of air pollutants, which have an adverse localized effect, are often emitted from similar activities that generate GHG emissions (i.e., mobile, energy, and area sources). For example, direct investment in a local building retrofit program could pay for cool roofs, solar panels, solar water heaters, smart meters, energy efficient lighting, energy efficient appliances, energy efficient windows, insulation, and water conservation measures for homes within the geographic area of the modified Phase 2 Project. Other examples of local direct investments include financing installation of regional electric vehicle charging stations, paying for electrification of public school buses, and	If required, fund activities that directly reduce or sequester GHG emissions or by purchasing and retiring carbon credits.	Project applicant	Before construction	
		Confirm that the project developer or its designee has fully offset the project's remaining GHG emissions by relying upon the compliance options, or a combination of the compliance options listed in New Mitigation Measure 4.19-a(2).	City of Lathrop Public Works Department	Prior to the issuance of building permits	

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	investing in local urban forests. These investments would not only achieve GHG reductions, but would also directly improve regional and local ambient air quality. However, to adequately mitigate GHG emissions to 2.12 $MTCO_2e$/year/SP, it is critical that any such investments in actions to reduce GHG emissions meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional, consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). Such credits shall be based on protocols approved by the California Air Resources Board (CARB), consistent with Section 95972 of Title 17 of the California Code of Regulations. River Islands shall not use offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the City of Lathrop or SJVAPCD. Such credits must be purchased through one of the following: (i) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; (ii) any registry approved by CARB to act as a registry under the California Cap and Trade program; or (iii) through the California Air Pollution Control Officers Association's (CAPCOA's) GHG Rx and SJVAPCD. Prior to issuing building permits for project development in Phase 2, the City shall confirm that the project developer or its designee has fully offset the project's remaining (i.e., post implementation of GHG reduction measures pursuant to Mitigation Measure 4.19-a[1]) GHG emissions by relying upon one of the following compliance options, or a combination thereof: ▶ demonstrate that the project developer has directly undertaken or funded activities that reduce or sequester GHG emissions that are estimated to result in GHG reduction credits (if such programs are available), and retire such GHG reduction credits				

Impact	Mitigation Measure	Action(s)	Implementing Party	Timing	Completion of Implementation
	in a quantity equal to the project's remaining GHG emissions; ▶ provide a guarantee that it shall retire carbon credits issued in connection with direct investments (if such programs exist at the time of building permit issuance) in a quantity equal to the modified Phase 2 Project's remaining GHG emissions; ▶ undertake or fund direct investments (if such programs exist at the time of building permit issuance) and retire the associated carbon credits in a quantity equal to the modified Phase 2 Project's remaining GHG emissions; or ▶ if it is impracticable to fully offset the modified Phase 2 Project's GHG emissions through direct investments or quantifiable and verifiable programs do not exist, the project developer or its designee may purchase and retire carbon credits that have been issued by a recognized and reputable, accredited carbon registry in a quantity equal to the modified Phase 2 Project's remaining GHG Emissions.				
Wildfire					
Impact 4.20-a: Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan	**Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction** Implement Adopted Mitigation Measure 4.10-a in Section 4.10, "Public Services."	See Adopted Mitigation Measure 4.10-a, above	See Adopted Mitigation Measure 4.10-a, above	See Adopted Mitigation Measure 4.10-a, above	

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