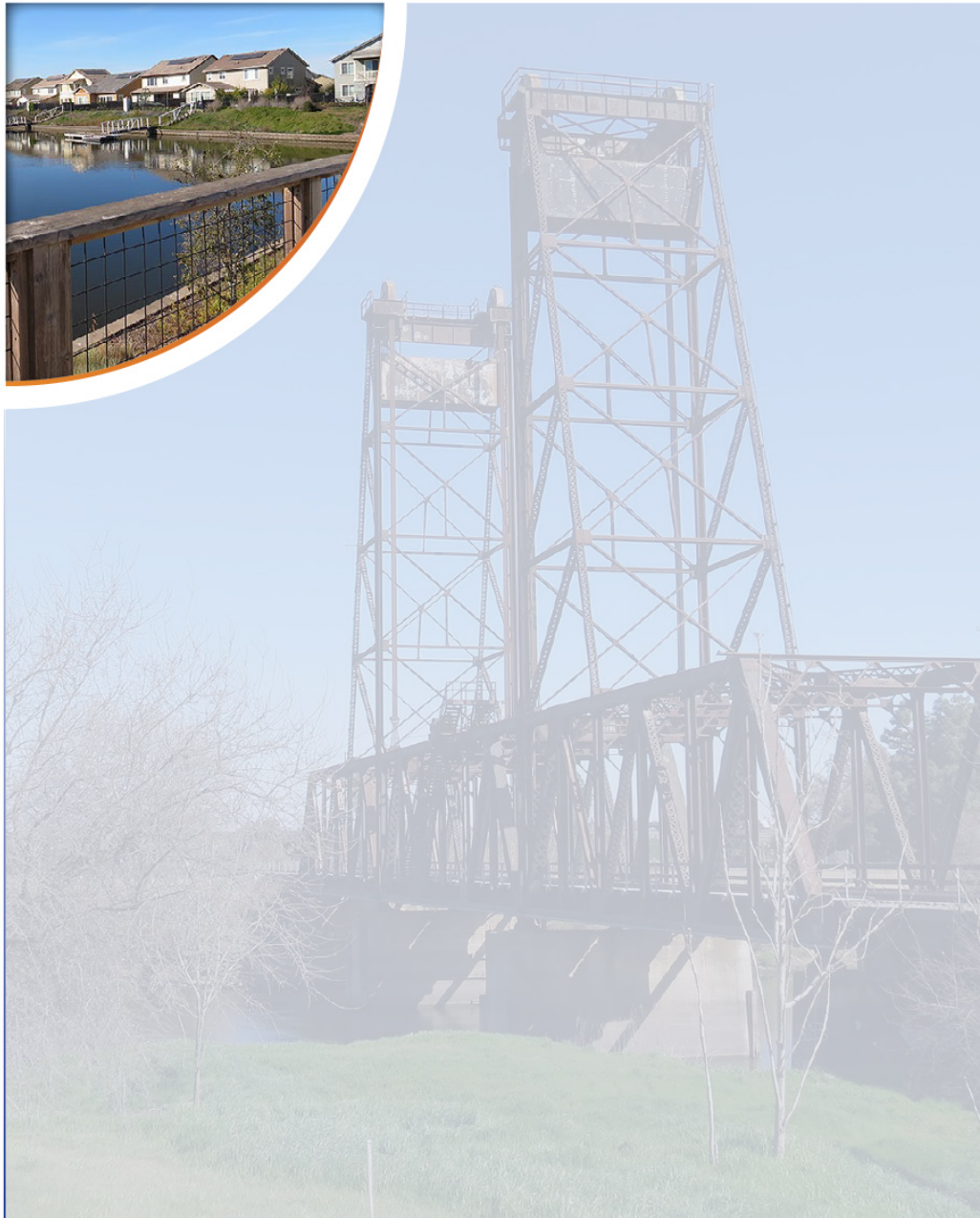


DRAFT SUBSEQUENT  
ENVIRONMENTAL IMPACT REPORT FOR THE

# River Islands at Lathrop Phase 2 Project

State Clearinghouse No. 1993112027



Prepared for:



City of Lathrop  
Community Development  
Department/Planning Division

February 12, 2021

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Prepared for:

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February 12, 2021

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# LIST OF ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
2017 Scoping Plan	<i>California's 2017 Climate Change Scoping Plan</i>
AAQS	ambient air quality standard
AB 939	California Integrated Waste Management Act of 1989
AB	Assembly Bill
ACE	Altamont Corridor Express
ADT	average daily traffic
ADWF	average dry weather flow
AEP	Annual Exceedance Probability
af	acre-feet
afy	acre-feet per year
BESD	Banta Elementary School District
BMP	best management practice
BOEP	Burrowing Owl Exclusion Plan
CA SDWA	California Safe Drinking Water Act
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
Cal-ARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalGEM	Conservation, Geologic Energy Management
CALGreen	State Building Energy Efficiency Standards
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cf	cubic feet



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CFC	California Code of Regulations
CFF	Capital Facility Fee
CFR	Code of Federal Regulations
cfs	cubic feet per second
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CI	carbon intensity
City	City of Lathrop
CLSP	Central Lathrop Specific Plan
CNDDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
COC	constituents of concern
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTR	California Toxics Rule
CUPA	Certified Unified Program Agencies
CVFPB	Central Valley Flood Protection Board
CVP	Central Valley Project
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	decibels
DGWTP	DeGroot Water Treatment Plant
diesel PM	exhaust from diesel engines
DOC	Department of Conservation
DOF	Department of Finance
DOGGR	Division of Oil, Gas, and Geothermal Resources
DOT	U.S. Department of Transportation
DPS	distinct population segment
Draft SEIR	Draft Subsequent Environmental Impact Report
DSA	State Division of the State Architect
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EGU	electric generating unit
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 1992
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ESA	Endangered Species Act

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ESA	Environmental Site Assessment
ESU	Evolutionarily Significant Unit
EV	electric vehicle
FEMA	Federal Emergency Management Agency
FHSZ	fire hazard severity zone
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FRAP	Fire and Resource Assessment Program
FSZ	Farmland Security Zone
ft bgs	feet below ground surface
FTA	Federal Transit Administration
GBV	Ground-Borne Vibration
GHG	greenhouse gas
gpd	gallon per day
gpm	gallons per minute
GSA	groundwater sustainability agency
GSP	groundwater sustainability plan
GWP	global warming potential
HAP	hazardous air pollutant
HCD	Housing and Community Development Department
HCP	habitat conservation plan
HMP	Hazardous Materials Business Plan
HOV	High Occupancy Vehicle
HRI	heat rate improvement
HSC	Health and Safety Code
HSI	HSI Hydrologic Systems
HVAC	heating, ventilation and air conditioning
Hz	hertz
I-205	Interstate 205
I-5	Interstate 5
IEPR	Integrated Energy Policy Report
in/sec	inches per second
IPCC	Intergovernmental Panel on Climate Change
ISR	Indirect Source Rule
ITMM	Incidental Take Minimization Measure
IWRMP	Integrated Water Resources Master Plan
kV	kilovolt
kWh/day	kilowatt hours per day
LAWTF	Louise Avenue Water Treatment Facility
lb/day	pounds per day
LCFS	Low Carbon Fuel Standard

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LCTF	Lathrop Consolidated Treatment Facility
LDIGR	Land Development and Intergovernmental Review
L <sub>dn</sub>	Day-Night Level
LEED	Leadership in Energy and Environmental Design
L <sub>eq</sub>	Equivalent Continuous Sound Level
LID	Lathrop Irrigation District
L <sub>max</sub>	Maximum Sound Level
LMFD	Lathrop-Manteca Fire District
LOS	level of service
LPS	Lathrop Police Services
LRA	local responsibility area
LRSP	Local Roadway Safety Plan
LSNFH	Livingston Stone National Fish Hatchery
LUST	leaking underground storage tank
L <sub>x</sub>	Exceeded Sound Level
MAF	million acre-feet
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
mg/l	milligrams per liter
mgd	million gallons per day
MMTCO <sub>2e</sub>	million metric tons of carbon dioxide equivalent
modified Phase 2 Project or project	River Islands at Lathrop Phase 2 Project
mPa	micro-Pascals
mpg	miles per gallon
MPN	Most Probable Number
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSDS	Material Safety Data Sheets
MTCO <sub>2e</sub>	metric tons of carbon dioxide equivalent
MTCO <sub>2e</sub> /year/SP	MTCO <sub>2e</sub> per year per service population
MVA	mega-volt ampere
MWQCF	Manteca Wastewater Quality Control Facility
NAAQS	national ambient air quality standards
NCCP	Natural Community Conservation Plan
NCCPA	Natural Community Conservation Planning Act
NDP	Neighborhood Development Plans
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act

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NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NOP	notice of preparation
NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NSR	New Source Review
NTR	National Toxics Rule
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OID	Oakdale Irrigation District
OITC	Outdoor-Indoor Transmission Class
OPR	Office of Planning and Research
OPSC	Office of Public School Construction
OSHA	Occupational Safety and Health Administration
PCC	Public Contract Code
PDP	Planned Development Plan
PFAS	polyfluoroalkyl substances
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM <sub>10</sub>	respirable particulate matter with an aerodynamic diameter of 10 microns or less
PM <sub>2.5</sub>	fine particulate matter with an aerodynamic diameter of 2.5 or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1970
POTW	Publicly Owned Treatment Works
PPH	persons per household
ppm	parts per million
ppt	parts per thousand
PPV	peak particle velocity
PRC	Public Resource Code
project applicant	Califia, LLC
PSD	Power Systems Design
RCRA	Resource Conservation and Recovery Act
RD	Reclamation District
REC	recognized environmental concern
RHNA	Regional Housing Needs Assessment
RID Area	River Islands Development Area
RID	River Islands Development
River Islands Project	River Islands at Lathrop Project
RMS	root mean square
ROG	reactive organic gas
RTIF	Regional Transportation Improvement Fee

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RTP	regional transportation plan
RTP/SCS	Regional Transportation Plan and Sustainable Communities Strategy
RWQCB	regional water quality control board
RWSMP	Recycled Water System Master Plan
SAFE Rule	Safer Affordable Fuel-Efficient Vehicles Rule
San Joaquin RTD	San Joaquin Regional Transit District
SB	Senate Bill
SCS	Sustainable Communities Strategy
SCWSP	South County Water Supply Program
SFPD	School Facilities Planning Division
SGMA	Sustainable Groundwater Management Act
SGMP	Sustainable Groundwater Management Plan
SHS	State Highway System
SIP	State implementation plan
SJCDEH	San Joaquin County Department of Environmental Health
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJOA	San Joaquin Operational Area
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SMARA	Surface Mining and Reclamation Act
SMUD	Sacramento Municipal Utility District
SO <sub>2</sub>	sulfur dioxide
SP	service population
SPA	Sub-Plan Areas
SPCC	Spill Prevention, Control, and Countermeasure
SPFC	State Plan of Flood Control
SPL	sound pressure level
SR 120	State Route 120
SRA	State Responsibility Area
SSAR	Systemic Safety Analysis Reports
SSJID	South San Joaquin Irrigation District
STC	Sound Transmission Class
SWP	State Water Project
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
SWRCB-DDW	State Water Resources Control Board Division of Drinking Water
TAC	toxic air contaminant
TAZ	Transportation Analysis Zone
TCR	tribal cultural resource
TDS	total dissolved solids

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TISG	Transportation Impact Study Guide
TMDL	total maximum daily load
TOC	total organic carbon
TOD	transit-oriented development
TPA	transit priority area
TPY	tons per year
TUSD	Tracy Unified School District
UDC	Urban Design Concept
UPRR	Union Pacific Railroad
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
VdB	vibration decibels
VELB	valley elderberry longhorn beetle
VERA	Voluntary Emission Reduction Agreement
VMT	vehicle miles traveled
WDR	Waste Discharge Requirement
WLSP	West Lathrop Specific Plan
WQO	Water Quality Objective
WRCC	Western Regional Climate Center
WSA	water supply assessment
WSDA	Water Supply Development Agreement
WWMP	Wastewater Master Plan
ZEV	zero-emission vehicle
ZNE	Zero Net Energy

# 1 INTRODUCTION

## 1.1 PROJECT REQUIRING ENVIRONMENTAL ANALYSIS

Califia, LLC (project applicant) is proposing changes to 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 proposed changes to the approved Phase 2 Project would include densification of the Phase 2 area with additional multi-family units as well as more attached single-family units, creation of a “town center” mixed-use area at Paradise Road (Paradise Cut Village Center), addition of a mixed-use Transit Oriented Development (TOD) area to complement the future planned Valley Link transit station, and changes in the circulation pattern. The modified Phase 2 Project also includes an amendment to the existing 2002 West Lathrop Specific Plan (WLSP) and 2004 City of Lathrop General Plan to reflect these land use changes. Finally, the project includes the potential expansion and improvement of the off-site segment of Paradise Road to accommodate vehicle trips generated by the River Islands Project.

This Draft Subsequent Environmental Impact Report (Draft SEIR) evaluates the potential environmental impacts associated with implementation of proposed changes to the approved Phase 2 Project. The City of Lathrop is serving as the lead agency under the California Environmental Quality Act (CEQA) per Public Resources Code (PRC) (Sections 21000-21177) and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Division 6, Chapter 3, Sections 15000-15387).

## 1.2 TYPE AND PURPOSE OF THIS DRAFT SUBSEQUENT EIR

Pursuant to Section 15162, an SEIR should be prepared if an EIR has been certified for a project, but one or more of the following conditions are met.

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
  - A. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
  - B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - C. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative;
  - D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

In 2003, the City of Lathrop approved the River Islands Project, certified the SEIR (State Clearinghouse No. 1993112027), and approved various entitlements, including amendments to the General Plan, WLSP, a Vesting Tentative Map for Phase 1, and an Amended and Restated Development Agreement.

Since certification of the SEIR in 2003, the City has prepared and adopted various addenda to evaluate modifications to the River Islands Project. Each addendum evaluated the modifications and confirmed they were covered by the SEIR and that there would be no new significant or substantially more severe environmental impacts compared to the impacts evaluated in the 2003 SEIR. Addenda were prepared in 2005, 2007, 2012, 2014, 2015, and 2018. A summary of these documents is provided in Section 3.3, "Previous CEQA Documents," of this Draft SEIR.

Most recently, the applicant has applied to the City for a number of related project-level entitlements that will update the land use program for Phase 2. The City has determined that the preparation of a SEIR is the appropriate environmental review document for the project, per the requirements of State CEQA Guidelines Section 15162, for the following reasons:

- ▶ The modified Phase 2 Project has become substantially larger, with 4,000 more housing units than previously approved, including more multi-family units; a "town center" mixed-use area at Paradise Road (Paradise Cut Village Center); a mixed-use TOD area adjacent to the Employment Center to complement the future planned Valley Link transit station; and changes in the circulation pattern.
- ▶ The physical environmental conditions in effect when the 2003 SEIR was certified may have substantially changed with respect to certain issues, such as traffic, hydrology and water quality, flood protection, biological resources, and public services and utilities.
- ▶ The regulatory conditions, including the State CEQA Guidelines, in effect when the 2003 SEIR was certified may have substantially changed with respect to certain issues, such as energy, greenhouse gas emissions and climate change, wildfire, and transportation and traffic (specifically, the use of vehicles miles traveled rather than level of service in traffic impact analyses).
- ▶ Features associated with project development, such as recycled water storage and disposal, require additional evaluation to determine whether new environmental impacts could occur.

## 1.2.1 Program- and Project-Level Environmental Review

This SEIR is both a project level EIR and a program EIR. The degree of specificity in an EIR corresponds to the degree of specificity in the underlying activity described in the EIR (State CEQA Guidelines Section 15146). For this reason, an EIR for a specific project (where the precise location of development is known), will be more detailed than an EIR that addresses a larger scale plan or projects with elements that have not been precisely designed. A project EIR is prepared for projects where the development footprint is known and a program EIR is typically prepared on large-scale plans or a series of related actions. A program EIR need not be as detailed as a project-level EIR and may more broadly discuss the types of impacts that may occur, as well as a range of mitigation strategies based on the potential for impacts to occur. This EIR evaluates the proposed Phase 2 Project modifications at a project level in this SEIR because overall planning and design of the modified Phase 2 Project has been developed with considerable detail. One potential element of the project—Paradise Road expansion and improvement—has not been designed and is therefore evaluated at a program level in this SEIR for the reasons described below.

Traffic modelling (described in more detail in Section 4.4, "Traffic and Transportation") indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. Once leaving the project site and entering unincorporated San Joaquin County, Paradise Road would be improved from a two-lane rural road to a four-lane arterial up to the connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7 in Chapter 3, "Description of the Proposed Project"). Between the intersection with Golden Valley Parkway and Interstate 205 (I-205), six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. Although the potential need to eventually widen and improve Paradise Road is



foreseeable, the likelihood that traffic volumes in an amount to trigger the need for the improvement will be generated will not occur for more than a decade in the future. No agency or entity has initiated design, engineering, planning, or similar steps for the project. No agency has been identified to implement the project. Therefore, information on the widening and improvement of Paradise Road is currently in the conceptual stage.

Due to the lack of detailed design information, in accordance with State CEQA Guidelines Section 15168, this document is a program EIR for the potential expansion and improvement of Paradise Road. A program EIR enables a lead agency to examine the overall effects (direct, indirect, and cumulative) of a proposed project or course of action and to consider broad policy alternatives and program-wide mitigation measures at an early time in the decision-making process, when the agency has greater flexibility. A program EIR under the provisions of the State CEQA Guidelines Section 15168 evaluates the impacts of a series of actions that can be characterized as one large project and are:

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

The analysis (presented at the end of each environmental impact analysis in Chapter 4, "Affected Environment, Environmental Consequences, and Mitigation Measures") assesses and documents the range of potential environmental effects of the potential roadway expansion and improvement and provides mitigation of significant effects where it is feasible to do so. If the expansion is needed in the future, and if the CEQA lead agency for the project intends to use this SEIR to support CEQA compliance for the project, in accordance with CEQA Guidelines Section 15168(c), an environmental checklist would be used to determine if there are any significant effects associated with the expansion that are not addressed within the scope of this SEIR. Any subsequent CEQA documentation would focus on any potential environmental effects not considered in this SEIR, within a supplemental or subsequent EIR or mitigated negative declaration, as appropriate.

Therefore, with the exception of the potential expansion of Paradise Road, the modified Phase 2 Project, with its greater level of detail and certainty with regard to the nature and degree of proposed land uses, is evaluated in this SEIR at a project level. After a project-level EIR is certified, no further CEQA analysis is required for that project before construction.

### 1.3 INTENDED USE OF THIS DRAFT SUBSEQUENT EIR

An EIR is a public informational document used in the planning and decision-making process. The EIR assesses the environmental effects related to the planning, construction, and operation of a project and indicates ways to reduce or avoid significant environmental impacts. The EIR also discloses significant environmental impacts that cannot be avoided; any growth-inducing impacts of a project; effects found not to be significant; and significant cumulative impacts of past, present, and reasonably foreseeable future projects in combination with the impacts of the project, and alternatives that may avoid or reduce significant effects.

Mitigation has been recommended where feasible to reduce or avoid the project's significant impacts. As an informational document for decision makers, an EIR is not intended to recommend either approval or denial of a project. CEQA requires the decision makers to balance the benefits of a project against its unavoidable environmental impacts. If environmental impacts are identified as significant and unavoidable (i.e., no feasible mitigation is available to reduce the impact to a less-than-significant level), the Lathrop City Council may still approve the project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. The Lathrop City Council would then be required to make findings and state, in writing, the specific reasons for approving the project, based on

information in the EIR and other information in the administrative record. In accordance with Section 15093 of the State CEQA Guidelines, the document containing such reasons is called a “statement of overriding considerations.”

## 1.4 SCOPE OF THIS DRAFT SUBSEQUENT EIR

Pursuant to CEQA and the State CEQA Guidelines, a lead agency shall focus the EIR’s discussion on significant environmental effects and may limit discussion on other effects to brief explanations about why they are not significant (PRC Section 21002.1, CCR Section 15128). Potentially significant impacts were identified based on review of comments received as part of the public scoping process (see Appendix A) and additional research and analysis of relevant project data during preparation of this Draft SEIR.

The City has determined that the project has the potential to result in significant environmental impacts on the following resources, which are addressed in detail in this Draft SEIR:

- ▶ Land Use
- ▶ Population, Employment, and Housing
- ▶ Traffic and Transportation
- ▶ Air Quality
- ▶ Noise and Vibration
- ▶ Geology, Soils, and Mineral Resources
- ▶ Hydrology and Water Quality
- ▶ Hazardous Materials and Public Health
- ▶ Public Services
- ▶ Public Utilities
- ▶ Recreation
- ▶ Agricultural Resources
- ▶ Terrestrial Biology
- ▶ Fisheries
- ▶ Cultural and Tribal Cultural Resources
- ▶ Aesthetics
- ▶ Energy
- ▶ Greenhouse Gas Emissions and Climate Change
- ▶ Wildfire

This SEIR acknowledges and incorporates the previous analysis and adopted mitigation measures from previous CEQA documents (see Section 3.3 of this Draft SEIR). Previously adopted mitigation measures, which would mitigate potential impacts associated with the project through continued implementation, are identified where appropriate.

## 1.5 AGENCY ROLES AND RESPONSIBILITIES

This SEIR will be used by the City and CEQA responsible and trustee agencies to ensure that they have met their requirements under CEQA before deciding whether to approve the proposed project or, as a responsible agency, permit project elements over which they have jurisdiction. The SEIR may also be used by other federal, state, and local agencies that may have an interest in resources that could be affected by the project, or that have jurisdiction over portions of the project.

### 1.5.1 Lead Agency

Under CEQA, the lead agency is the public agency with principal responsibility for carrying out or approving a project. In accordance with CEQA Guidelines Section 15051, the CEQA lead agency for the proposed project is the City of Lathrop. The City has coordinated with responsible and trustee agencies as appropriate. As lead agency under CEQA, the City is principally responsible for conducting the environmental review process, including scoping, preparing appropriate environmental documentation, and obtaining required permits and other regulatory approvals. Following completion of the Final SEIR, the Lathrop City Council will decide whether to certify the Final SEIR and whether to approve the project.

The City will also be responsible for approval of the City of Lathrop General Plan amendments for land use and circulation, WLSP amendment, zoning map and text amendment, Urban Design Concept, vesting tentative map, and potential development agreement amendment between the applicant and the City.

## 1.5.2 Responsible and Trustee Agencies

Under CEQA, responsible agencies are state and local public agencies other than the lead agency that have the authority to carry out or approve a project, or that are required to approve a portion of the project for which a lead agency is preparing or has prepared an EIR. Trustee agencies are state agencies with legal jurisdiction over natural resources affected by a project that are held in trust for the people of the State of California.

The following agencies may have responsibility for or jurisdiction over implementation of elements of the project. The list is not intended to be exhaustive, as there may be additional agencies may rely on this SEIR and/or require permits/approvals associated with the project. The following list also identifies potential permits and other approval actions that may be required before implementation of certain project elements for those agencies identified at this time.

### STATE

- ▶ California Department of Transportation (Caltrans): Review of mitigation measures related to Manthey Road/Mossdale Road Interchange and the closure of Stewart Road, as well as any impacts to the overall State highway system.
- ▶ California Department of Education: Approval of site acquisition and construction plans for proposed non-charter school facilities. Such approvals may also include review by the State Division of the State Architect (DSA) and State Office of Public School Construction (OPSC).
- ▶ Central Valley Regional Water Quality Control Board (RWQCB): Clean Water Act Section 401 water quality certification; construction activity stormwater permit; possible National Pollutant Discharge Elimination System (NPDES) permit. It should be noted that the project lies within the City of Lathrop and is currently governed by the City's coverage under the State of California's Phase II Small Municipal Separate Storm Sewer System (MS4) Program.

### REGIONAL AND LOCAL

- ▶ San Joaquin County: Approval of an encroachment permit for the widening of Paradise Road from the Lathrop City limits (project boundary) to the Paradise Road/Chrisman Road Interchange with I-205.
- ▶ Banta Elementary School District: Approval of site acquisition and construction plans for proposed K-8 school facilities and possibly the proposed high school facilities should Banta Elementary School District's (BESD) bid for unification be approved.
- ▶ Tracy Unified School District: Approval of site acquisition and construction plans for proposed high school facilities if the proposed unification of BESD does not take place.
- ▶ Tri-Valley - San Joaquin Valley Regional Rail Authority (Valley Link): Approval of proposed Valley Link transit station facility (northern portion).

## 1.6 PUBLIC REVIEW PROCESS

### 1.6.1 Public Review

In accordance with PRC Section 21092 and CCR Section 15082, a Notice of Preparation (NOP) was prepared and circulated on March 6, 2020 for a minimum 30-day period of public and agency comment that ended on April 8, 2020 (total circulation period of 34 days). The NOP was submitted to the State Clearinghouse and posted at the City's website (<https://www.ci.lathrop.ca.us/com-dev/page/public-review-documents>). A copy of the NOP and comments received on the NOP are included in this SEIR (Appendix A). Due to California State Executive Orders limiting public gatherings to control the spread of COVID-19, but still allowing hearings, the scoping meeting was conducted by the City on April 1, 2020 via video; no public comments were provided.

This Draft SEIR is being circulated for a 45-day period of review and comment by the public and other interested parties, agencies, and organizations that begins on **February 12, 2021** and concludes on **March 29, 2021**.

A public meeting for the Draft SEIR will be hosted online via WebEx on **March 16, 2021** from 5:30 p.m. to 6:30 p.m. at the following web address:

<https://cityoflathrop.webex.com/cityoflathrop/onstage/g.php?MTID=ebe3e50d36db838d6010d0fafbb450069>

Event number (access code): 187 334 0561

Event password: 7290

The purpose of the public meeting is to present the findings of the environmental analysis and receive comments on the Draft SEIR.

A copy of the Draft SEIR is available online at the City's website (<https://www.ci.lathrop.ca.us/com-dev/page/public-review-documents>). To prevent the spread of COVID-19, printed copies of the Draft SEIR will not be available for review at public buildings or libraries. Individuals that are unable to access the Draft SEIR at the website listed above or would require a computer disk or thumb drive containing a copy of the document should contact Mark Meissner at [planning@ci.lathrop.ca.us](mailto:planning@ci.lathrop.ca.us) or 209-941-7290 to obtain a copy.

All comments on the Draft SEIR should be addressed to:

City of Lathrop  
Attn: Mark Meissner, Director of Community Development  
390 Towne Centre Drive  
Lathrop, CA 95330  
Email: [planning@ci.lathrop.ca.us](mailto:planning@ci.lathrop.ca.us)

After close of the public comment period, responses to written and oral comments raising environmental issues will be prepared. Commenting responsible and trustee agencies will be provided a minimum of 10 days to review the proposed responses to their comments before any action is taken on certification of the Final SEIR (in accordance with CCR Section 15090) and approval of the project. The Final SEIR will consist of this Draft SEIR and the Response to Comments document.

### 1.6.2 CEQA Findings and Mitigation Monitoring

CEQA requires that when a public agency makes findings based on an EIR, the public agency must adopt a reporting or monitoring program for those measures it has adopted or made a condition of the project approval to mitigate or avoid significant adverse effects on the environment. The reporting or monitoring program must be designed to ensure compliance during project implementation.

The Mitigation Monitoring and Reporting Program for the project will be prepared and considered by the City in conjunction with the Final SEIR.

## 1.7 DRAFT SUBSEQUENT EIR ORGANIZATION

This SEIR is organized as follows:

- ▶ Chapter 1, "Introduction," provides an introduction and overview describing the intended use of the SEIR and the environmental review and certification process.
- ▶ Chapter 2, "Executive Summary," summarizes the potential environmental impacts that would result from implementation of the project, describes recommended mitigation measures, and indicates the level of significance of impacts after mitigation.
- ▶ Chapter 3, "Description of the Proposed Project," describes the project, including location, background and need, objectives of the project, existing and approved development, and proposed changes to the approved development.
- ▶ Chapter 4, "Affected Environment, Environmental Consequences, and Mitigation Measures," contains an analysis of the reasonably foreseeable and potentially significant adverse environmental impacts of the project on the physical environment. Each subsection introduces and describes the existing regulatory and environmental setting for the resource issue, methodology used to evaluate impacts, thresholds of significance, issues not discussed further, a description of project impacts, and recommendations of appropriate mitigation measures for potentially significant impacts.
- ▶ Chapter 5, "Cumulative Impacts," discusses the potential cumulative impacts that would result from implementation of the project together with other past, present, and probable future projects including whether the project's incremental increase to an already significant impact is cumulatively considerable.
- ▶ Chapter 6, "Growth-Inducing Impacts," includes a discussion of the project's potential growth-inducing impacts.
- ▶ Chapter 7, "Significant and Unavoidable Impacts," identifies the project's unavoidable significant impacts that cannot be mitigated to less-than-significant levels as well as the significant irreversible environmental changes that would be caused by the project.
- ▶ Chapter 8, "Alternatives Analysis," describes a range of potentially feasible alternatives to the project, their ability to avoid or lessen the significant impacts of the project, and their associated environmental effects; and identifies the environmentally superior alternative.
- ▶ Chapter 9, "References," lists the sources of information cited throughout this SEIR.
- ▶ Chapter 10, "Report Preparers," identifies the SEIR preparers and those consulted during its preparation.

## 1.8 STANDARD TERMINOLOGY

This Draft SEIR includes the following terminology regarding the significance of environmental impacts of the project and alternatives:

- ▶ No Impact: Implementing the project would not result in an adverse effect.
- ▶ Less-than-Significant Impact: The impact would be adverse but would not exceed the defined standard or threshold of significance. Less-than-significant impacts do not require mitigation.
- ▶ Significant Impact: The impact would exceed the defined standard or threshold of significance and would or could cause a substantial adverse change in the environment. Potentially feasible mitigation measures or alternatives are recommended to eliminate the impact, reduce it to a less-than-significant level, or reduce it to the degree feasible.
- ▶ Potentially Significant Impact: The impact may be or is likely to be significant. Because information is limited, the conclusion is not definitive. For purposes of the EIR analysis, a potentially significant impact is treated the same as a significant impact and requires feasible mitigation measures or alternatives.

- ▶ Significant and Unavoidable Impact: The substantial adverse effect on the environment cannot be feasibly mitigated to a less-than-significant level or reduced to a less-than-significant level by adoption of a feasible alternative.
- ▶ Mitigation Measure: The measure could feasibly avoid, minimize, or compensate for a significant impact. Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. Compliance with City of Lathrop codes, state and federal laws, or other regulations, including potential actions to achieve such compliance, may be sufficient mitigation in instances in which compliance would be reasonably expected to avoid, minimize, or compensate for the environmental impact.

## 1.9 INCORPORATION BY REFERENCE

In accordance with Section 15150 of the State CEQA Guidelines, this Draft SEIR incorporates the following documents by reference:

- ▶ City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- ▶ City of Lathrop. 2003 (January 22). *Final Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- ▶ City of Lathrop. 2005 (July 1). *Addendum to the Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- ▶ City of Lathrop. 2007 (February). *Second Addendum to the Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW | AECOM, Sacramento, CA.
- ▶ City of Lathrop. 2012 (March). *Third Addendum to the Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by AECOM, Sacramento, CA.
- ▶ City of Lathrop. 2014 (April). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.
- ▶ City of Lathrop. 2015 (May). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum V*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.
- ▶ City of Lathrop. 2018 (March). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum VI*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.

These documents are referenced, and elements are discussed and summarized throughout this Draft SEIR. Copies of each of these documents are available online at the City's website (<https://www.ci.lathrop.ca.us/planning/page/river-islands-lathrop>).

## 2 EXECUTIVE SUMMARY

### 2.1 INTRODUCTION

This executive summary is provided in accordance with the State CEQA Guidelines Section 15123. As stated in Section 15123(a), “an EIR [environmental impact report] shall contain a brief summary of the proposed action and its consequences. The language of the summary should be as clear and simple as reasonably practical.” As required by the State CEQA Guidelines, this chapter includes (1) a summary description of the previously approved River Islands Project and the modified Phase 2 Project, (2) a synopsis of environmental impacts and recommended mitigation measures (Table 2-1), (3) identification of the alternatives evaluated and of the environmentally superior alternative, and (4) a discussion of the areas of controversy associated with the project.

### 2.2 SUMMARY DESCRIPTION OF THE PROJECT

#### 2.2.1 Project Location

The project is located in the city of Lathrop, San Joaquin County, California. Lathrop is situated in the San Joaquin Valley, at the junction of Interstate 5 (I-5), I-205, and State Route 120 (SR 120), approximately 65 miles east of San Francisco and 55 miles south of Sacramento.

Development of the approved River Islands Project is split among two primary development phases—Phase 1 and Phase 2. The project site is the Phase 2 area of the River Islands Project (Phase 2 area), located on Stewart Tract and Paradise Cut within the West Lathrop Specific Plan (WLSP) in the city of Lathrop. The Phase 2 area includes approximately 3,434 acres of land and open space, with 2,730 acres located on Stewart Tract (an inland island bounded by Paradise Cut, the San Joaquin River, and Old River) and 704 acres located in Paradise Cut (a flood control bypass that receives water from the San Joaquin River when there are sufficient flows and connects downstream to Old River). Local access is currently provided by River Islands Parkway, Paradise Road (reopening after levee construction activities), and Manthey Road.

The project site is mostly undeveloped and/or agricultural land. The exception is the Old River District (also known as “Stage 2B”), which is an area originally slated for development within the Phase 1 area, where extension of utilities and the Phase 1 roadway network has been completed under Phase 1 Project approvals. Development of single family and multi-family units in the Old River District requires the City’s approval of the proposed Phase 2 modifications. For the balance of the project area, a few single-family residences, a horse ranch, and related agriculture-related buildings are located in discrete portions of the Phase 2 development area. The project site also contains the Central Drainage Ditch (also known as “Stewart Canal”), a long agricultural ditch that bisects Stewart Tract, along with a small pond located on Stewart Tract near Paradise Cut. Both areas are designated as waters of the U.S. by the U.S. Army Corps of Engineers (USACE). As development occurs within the Phase 2 area, these waters of the U.S. will be avoided. Flood protection improvements consisting of levees surrounding both the Phase 1 area and Phase 2 development area have been completed, consistent with plans and entitlements.

#### 2.2.2 Background and Need for the Project

The River Islands Project is a mixed-use, water-oriented master planned community, on approximately 4,905 acres on Stewart Tract and Paradise Cut. Project construction is split among two primary development phases, following an approximately 20-year buildout schedule. Phase 1, currently under construction, includes 4,284 residential dwelling units, a Town Center, a portion of a Business Park (Employment Center), lakes, parks, schools, and other open space. Much of the Phase 1 area has already been completed, as discussed above. As evaluated in the 2003 SEIR (State

Clearinghouse No. 1993112027, City of Lathrop 2003), Phase 2 includes 6,716 dwelling units, the balance of the Business Park, a neighborhood commercial area, lakes, parks, golf courses, schools, and additional open space areas.

In 2003, the City certified the SEIR for the River Islands Project and approved various entitlements, including amendments to the General Plan, WLSP, a Vesting Tentative Map for Phase 1, and an Amended and Restated Development Agreement.

The 2003 SEIR included a project-level analysis for Phase 1 as well as a project-level analysis for Phase 2 with the exception of the issue of recycled water storage and disposal during Phase 2, which was evaluated at a program-level. Since certification of the SEIR in 2003, the City has prepared various addenda to evaluate modifications to the River Islands project and confirm that the modifications were covered by the SEIR and that there would be no new significant or substantially more severe environmental impacts under CEQA resulting from the project modifications. These addenda and the modifications they evaluate are described further below.

The project applicant (Califia, LLC) proposes to modify the approved project by densifying proposed residential development within the Phase 2 area, including additional retail and commercial development, and adding a mixed-use Transit Oriented Development (TOD) area to an area north of a site proposed for a Valley Link commuter rail station in the Employment Center District. The project modifications will include these changes, as well as other project refinements and updates proposed to accommodate changes in the transportation and circulation system, changes in school construction, and other similar issues. The overall project boundary of the River Islands Project would not change from that analyzed in the 2003 SEIR.

The applicant has applied to the City for a number of related project-level entitlements that will update the land use program for Phase 2, including the following:

- ▶ City of Lathrop General Plan Amendments for Land Use and Circulation,
- ▶ West Lathrop Specific Plan (WLSP) Amendment,
- ▶ Zoning Map and Text Amendment,
- ▶ Urban Design Concept,
- ▶ Vesting Tentative Map, and
- ▶ Potential Development Agreement Amendment.

### 2.2.3 Previous CEQA Documentation

The overall River Islands Project, first approved in 2003, has been updated and amended for Phase 1 development in particular, in 2005, 2007, 2012, 2014, 2015, and 2018. The 2012 and 2018 updates also included changes to Phase 2. A summary of these documents is provided in Chapter 3, "Description of the Proposed Project," in this Draft SEIR and they are incorporated by reference into this SEIR, consistent with State CEQA Guidelines Section 15150 (see Section 1.9, "Incorporation by Reference").

### 2.2.4 Project Objectives

The overall objective of the River Islands Project is the orderly and systematic development of an integrated, mixed-use community in the City of Lathrop generally consistent with goals and policies of the City's adopted General Plan and the WLSP. The specific project objectives for the modified Phase 2 Project, listed below, borrow from, and update the objectives originally identified in the 2003 SEIR:

- ▶ Provide to Lathrop (and the surrounding region) long-term community benefits, including generation of substantial permanent employment opportunities.
- ▶ Reinforce and enhance the City's positive image.
- ▶ Contribute a new variety of mixed-use/commercial land uses that could become a citywide and regional focal point.



- ▶ Continue to create a community that is consistent with many of the original goals of the Lathrop General Plan and WLSF including employment generation.
- ▶ Develop a well-integrated and harmonious pattern of resident-oriented and visitor-oriented land uses in West Lathrop that provides local jobs, homes, and revenue-generating uses that complement other Lathrop development.
- ▶ Arrange phases of development to allow ongoing agricultural operations in the plan area to continue as long as feasible while allowing initial phases to act as catalysts for subsequent development.
- ▶ Incorporate water in its many forms throughout the project area to reinforce the area's Delta setting.
- ▶ Phase the provision of habitat preservation areas with overall development phases.
- ▶ Provide a wide range of housing types that could accommodate most income levels.
- ▶ Provide a variety of recreational opportunities focused on outdoor uses.
- ▶ Provide a high-density Transit Oriented Development in the vicinity of the planned Valley Link commuter rail station on the project site.

## 2.2.5 Project Characteristics and Changes to the Previously Approved Phase 2 Project

### APPROVED RIVER ISLANDS PROJECT

In 2003, the City approved the River Islands Project, which included a Town Center, an Employment Center, residential areas, lakes and water features, schools, and parks and trails. It also included various flood management elements; construction of channels and other water features; biological habitat restoration/creation; and retention of natural lands. Proposed offsite project elements included an electrical transmission line, a natural gas pipeline, and a road extension to I-205. The project was anticipated to be developed in two phases, with buildout planned for 2025.

Of the planned 4,284 total residential units at Phase 1 completion, approximately 2,000 have been constructed and 1,600 of those are currently occupied. Of the planned 156 acres of employment center, 95 acres of Town Center, two schools, 13 lakes, and 98.6 acres of parks, the following has been constructed to date: a fire station (Fire Station 35) in the Employment Center, Islander's Field, and a Lathrop Police Station (expected to be operational by early 2021) in the Town Center. Phase 1 infrastructure has largely been constructed. This includes the first two lanes of Bradshaw's Crossing bridge, major utilities, levees, and electrical infrastructure (e.g., substation and radial underground conduits). The second part of Bradshaw's Crossing bridge, a separate two-lane bridge paralleling the current bridge, and the Golden Valley Parkway bridge over the San Joaquin River and Paradise Cut, are the major segments of infrastructure left remaining for Phase 1. No development has occurred in the Phase 2 area, the subject of this SEIR.

#### Approved Development

Specific elements of the approved project (both Phases 1 and 2) include an approximately 305-acre Employment Center; a roughly 45-acre Town Center; approximately 2,060 acres of residential development; two golf courses; more than 260 acres of parkland; over 600 acres of lakes; more than 600 acres of open space; and necessary public facilities and infrastructure to support the project.

The approved project includes a mix of housing types in all phases of the development. Residential districts were anticipated to support housing, parks, water features, and schools, as well as limited commercial and employment development. Up to 11,000 residences were approved, ranging from single-family-detached homes to condominiums, townhouses, apartments, and active adult (senior-oriented) housing. At buildout, the River Islands Project was expected to include an estimated 31,680 residents and 16,751 jobs.

## Lakes and Water

The water elements incorporated into the River Islands Project are made up of an internal system that includes a number of man-made lakes in the RID Area and an external system that consists of various elements outside the Stewart Tract levee system: the San Joaquin River, Old River, and Paradise Cut. Nearly 600 docks in the internal water system would accommodate up to 604 boats. Docks along the exterior water system identified in the original project design were largely removed as part of project modifications evaluated in the 2012 third Addendum. Interior and exterior water features authorized by current City of Lathrop approvals would not be altered by the modified Phase 2 Project.

## Schools

The River Islands Project is located within two different school district boundaries: the Banta Elementary School District (BESD), which currently serves grades K-8, and the Tracy Unified School District (TUSD), which serves grades 9-12. The project applicant proposed to implement a nontraditional school program on the project site to serve the approximately 5,600 grade K-8 students and 1,350 grade 9-12 students that the project was anticipated to generate at full buildout. Three schools/campuses were proposed that would each house approximately 2,000-2,400 students and provide facilities on each campus for grades K-8 and grades 9-12 students. The plan for schools was modified with amendments to Phase 1 and is further altered by the modified Phase 2 Project. BESD is also in the process of unification, which would serve all public grade school children K-12 if approved and TUSD would no longer serve the project.

## Fire and Police Protection

Fire protection services are, and would continue to be, provided by the Lathrop-Manteca Fire Protection District (LMFD). The approved River Islands Project includes an existing, operating fire station (Fire Station 35) in the Phase 1 area and a proposed site (Fire Station 36) in the Phase 2 area adjacent to River Islands Parkway. Fire Station 35 also contains the administrative offices for LMFD and is located at 19050 Golden Valley Parkway. The modified Phase 2 Project provides an approximately 3.5-acre site for Fire Station 36, which is located in the Woodlands District near River Islands Parkway.

Police services are, and would continue to be provided, by Lathrop Police Services, which is contractually provided by the San Joaquin County Sheriff's Office. Lathrop Police Services is currently located at the Sheriff's Office at 7000 Michael Canlis Boulevard, French Camp, CA. A new Lathrop Police Station is under construction in the Phase 1 area near Bradshaw's Crossing bridge at 940 River Islands Parkway, Lathrop. The new Police Station is expected to be operational by early 2021.

## Parks and Trails

Four primary categories of parks were originally proposed as part of the River Islands Project: community parks, river vista parks, lakefront parks, and neighborhood parks. A total of 265.3 acres of parks was proposed, with 98.6 acres of parkland proposed to be developed as part of Phase 1 and the remaining acreage proposed to be developed as part of Phase 2. The Phase 1 parks program was modified with City amendments to the Phase 1 entitlements in 2007 and 2015. Community parks, pocket parks, and neighborhoods parks are now proposed, with other open space and recreational facilities provided by RD 2062. The plan for parks is further altered by the modified Phase 2 Project and detailed in the *River Islands Phase 2 Parks and Open Space Master Plan* (River Islands 2020) under consideration by the City of Lathrop.

The approved River Islands Project trail system consists of an interconnected, hierarchical system of trails for pedestrians and bicyclists that provides access to the project neighborhoods and districts. The trail system would connect to existing and planned trails in Lathrop and surrounding areas via pedestrian/bicycle lanes incorporated into project bridges over the San Joaquin River. The two main components of the trail system are the levee system, along both non-project and project levee segments and the internal trails along Dell'Osso Drive, the Central Drainage Ditch, and other areas that interface with internal bike lanes, paths, and routes within the interior of the overall project site. The modified Phase 2 Project expands and builds upon the existing plans.

## Flood Protection

The entire River Islands project site was in the 100-year floodplain at the time of project approval in 2003. To provide flood protection, various measures have been incorporated into the project design, primarily consisting of constructing

and reconstructing levees, along with some high-ground corridors along the San Joaquin River. Levees sufficient to provide 200-year flood protection as defined by State law, currently surround the RID Area. The modified Phase 2 Project does not include any changes to the levee system that would affect urban flood protection. The project applicant, in concert with RD 2062, may pursue improvements that would connect project and non-project interior levees, along Old River in particular, that would create new shaded riverine aquatic habitat along the water's edge by placing fill between the project and non-project (urban) levee system. This would be accomplished by degrading the existing project levees (agricultural or 50-year levee protection) to an elevation at or around mean high tide (ordinary high tide mark) so that normal river flows are unaffected by the improvements. The fill created by the degrading of the project levee segments would be placed between the two levees, creating a bench that can be vegetated with riparian plantings that provide the shaded riverine aquatic (SRA) habitat along the Old River and Paradise Cut systems that currently do not support this habitat. This improvement would entail Federal approvals outside the scope of this SEIR.

## Traffic and Vehicular Access

There are two primary elements to the traffic network for the River Islands Project: an internal circulation network and external traffic features that connect the project site to highways, regional roads, and other local streets. Bridges crossing the San Joaquin River and Paradise Cut to allow vehicles to enter the project site are considered part of the internal circulation system.

## Utilities

An irrigation district—the Lathrop Irrigation District (LID)—was formed with the authority to provide irrigation water, electricity, telecommunications, potable water, and wastewater services.

Potable water for the River Islands Project currently is provided, and will continue to be provided, by a combination of groundwater and treated surface water by the City of Lathrop, in accordance with the *City of Lathrop Water System Master Plan* (EKI 2019a). Groundwater is provided by City of Lathrop wells and treated surface water is delivered from the South County Surface Water Supply Project to the City of Lathrop, and then to River Islands via pipelines that feed several water tanks located in the Phase 1 portion of the Employment Center.

Wastewater from the River Islands Project is, and will continue to be, collected, treated to a tertiary level, and disposed of in accordance with the *City of Lathrop Wastewater System Master Plan* (EKI 2019b) and *City of Lathrop Recycled Water System Master Plan* (EKI 2019c), with modifications currently under proposed consideration by the City.

The River Islands Project includes a storm drain system that includes pipelines and storm inlets in the City's street system that feed bio-retention basins, grassy swales and other features throughout the project to clean stormwater as it moves through the site, and a system of lakes interconnected by underground pipes that hold stormwater and allow it to percolate into the soil or be eventually discharged to Paradise Cut via existing outfalls. Such discharges are approved by the City's current MS4 permit with the State. The lake system and related facilities will be owned and operated by RD 2062 and existing agreements between the City and RD 2062 will govern the cleaning and discharge of stormwaters in the entire RID area, including Phase 2.

Electricity is provided to the River Islands Project by LID. LID has constructed regional infrastructure in the last five years to interconnect its system to the state grid, including a new switchyard that connects to the existing 115-kilovolt (kV) Manteca-Kasson regional transmission line. A transmission line from the interconnection transverses I-5 through the southeast portion of Stewart Tract into the Employment Center in Phase 1. A new substation was constructed in the Employment Center that can be enlarged on the same site over time as project development continues to serve the buildout of the entire River Islands Project, including Phase 2.

The Pacific Gas and Electric Company (PG&E) currently provides, and is expected to provide in the future, natural gas to the River Islands Project via connections to several existing natural gas pipelines and distribution systems in Lathrop and the surrounding area. Natural gas is currently provided to the project site through two pipelines: an 8-inch-high pressure transmission line across Bradshaw's Crossing Bridge via River Islands Parkway and a 6-inch distribution line that crosses the San Joaquin River via the San Joaquin Pedestrian/Bicycle Bridge in a 10-inch casing and enters the southeastern end of the project site via Stewart Road.

## Habitat Restoration and Creation

Natural lands planned as part of the project would provide a variety of functions, including flood control, recreation, and habitat for sensitive species. Habitat restoration/enhancement would also be conducted in many of the natural land areas. The primary natural land areas associated with the project are Paradise Cut, the riverbanks, and the cross levee paralleling the western Union Pacific Railroad right-of-way. The modified Phase 2 Project does not include any modifications to planned habitat restoration activities, with the exception of the shaded riverine aquatic habitat that may be constructed in the future.

## MODIFIED PHASE 2 PROJECT

The proposed modifications to the Phase 2 Project would densify the Phase 2 area by including additional multi-family dwellings (e.g., condominiums, apartments) as well as more attached single-family residences similar to units already constructed as part of Phase 1. The proposed modified development would also create a smaller “town center” mixed-use area at Paradise Road (at the west entry to the project area – Paradise Cut Village Center) and a mixed-use TOD area as part of the Employment Center District that would complement the future planned Valley Link transit station.

Table 2-1 shows the existing and proposed land use program for the modified Phase 2 Project, along with a comparison of the changes.

**Table 2-1 River Islands Modified Phase 2 Project Development Summary**

General Plan Designation/Land Use		Approved Phase 2 Project			Modified Phase 2 Project			Difference		
		Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)	Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)	Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)
MU-RI	Mixed Use - (Paradise Cut Village Center)	0.0	0	0	154.8	2,439	360,000	154.8	2,439	360,000
CR-RI	Regional Commercial - (Employment Center)	125.0	0	1,800,000	61.9	0	1,035,000	(63.1)	0	(765,000)
TOD-RI	Transit Oriented Development <sup>2</sup>	0.0	0	0	120.9	1,821	442,500	120.9	1,821	442,500
CN-RI	Neighborhood Commercial	17.7	0	180,000	0	0	0	(17.7)	0	(180,000)
RL-RI	Residential - Low	1,486.3	4,916	0	789.6	4,003	0	(696.7)	(913)	0
RM-RI	Residential - Medium	70.4	1,200	0	172.2	1,895	0	101.8	695	0
RH-RI	Residential - High	34.9	600	0	36.4	568	0	1.5	(32)	0
RCO/ OS-RI	Resource Conservation - Open Space	703.8	0	0	703.8	0	0	0.0	0	0
—	Parks	155.4	0	0	234.2	0	0	78.8	0	0
—	Lakes	235.0	0	0	195.5	0	0	(39.5)	0	0
—	Schools	106.4	0	0	108.6	0	0	2.2	0	0
—	Streets	382.3	0	0	198.6	0	0	(183.7)	0	0
—	Other Open Space/ Public Uses <sup>3</sup>	127.7	0	0	657.6	0	0	529.9	0	0
Total Land Use Parcels		3,444.9	6,716	1,980,000	3,434.1	10,726	1,837,500	(10.8)	4,010	(142,500)

Notes: Non-Res. = non-residential; s.f. = square feet

<sup>1</sup> The acreage shown includes Paradise Cut and adjacent waterways that may not be evaluated in the SEIR.

<sup>2</sup> This area was identified as “transit village” in the 2003 SEIR project description. The new title as shown should be used to be consistent with the Valley Link Transit Project.

<sup>3</sup> The acreage estimated includes public uses such as fire stations and other City facilities, as well as open space areas not included with other land use designations.

<sup>4</sup> Dwelling units tabulated are shown as per the City’s existing and proposed land use categories and not in their physical location (e.g., districts).

Source: Provided by River Islands in 2021

Among the entitlements evaluated in the SEIR, the adopted WLSP and City of Lathrop General Plan would be amended to reflect the modified Phase 2 Project development unit projections.

Other proposed Phase 2 modifications include changes in the circulation pattern from the adopted WLSP and General Plan, with River Islands Parkway, Lakeside Drive, and Paradise Road shifting locations to the updated land use pattern. Other land use shifts include the Old River District, currently part of the Phase 1 development boundary, being included as proposed development within Phase 2. Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the current plan. An additional arterial from the existing terminus of Golden Valley Parkway in the Employment Center would continue into the Phase 2 area for internal circulation.

### **Proposed Development Modifications**

The approved River Islands Project includes a mix of housing types, ranging from single-family-detached homes to condominiums, townhouses, apartments, and active adult (senior-oriented) housing, for a total of 11,000 residences. These same housing types are retained in the modified Phase 2 Project, but with 4,010 units added to the Phase 2 area, resulting in 15,010 total housing units.

At buildout, the River Islands Project was expected to include an estimated 31,680 residents and 16,751 jobs as currently approved. With the proposed Phase 2 modifications, the River Islands Project is expected to generate a total (Phase 1 and 2) of 44,963 residents and 22,162 jobs.

### **Schools**

The approved Phase 2 Project included 106.4 acres of schools. The proposed modifications to the Phase 2 Project would add 2.2 acres of schools for a total of 108.6 acres of schools in the Phase 2 area. Specifically, four schools are proposed to serve grades K-8 students and one high school is proposed to serve grades 9-12 students. The project applicant is working with both school districts regarding the location and design of the proposed high school and K-8 schools. It is anticipated that development of the modified Phase 2 Project would generate 6,380 students in grades K-8 and 1,653 students in grades 9-12.

### **Parks and Trails**

The approved Phase 2 Project included 166.7 acres of parkland. The proposed modifications to the Phase 2 Project would add 64.45 acres of parkland for a total of 231.15 acres of parkland in the Phase 2 area.

### **Traffic and Vehicular Access**

Under the modified Phase 2 Project, the circulation pattern would be modified from the adopted WLSP and General Plan, with River Islands Parkway, Lakeside Drive, and Paradise Road shifting locations to the updated land use pattern, and new arterials and collector streets added. Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the current plan. An additional arterial from the existing terminus of Golden Valley Parkway in the Employment Center would continue into the Phase 2 area for internal circulation.

The existing access to the MacArthur Drive/I-205 interchange via Paradise Road has been retained during project development and is used for both construction and operations access.

## **OFFSITE ELEMENTS**

Two potential offsite elements located outside of Stewart Tract are considered in this SEIR, both consisting of road extensions to I-205. One of these offsite elements consists of an extension of Golden Valley Parkway included in San Joaquin County's inter-regional system and part of its Regional Transportation Improvement Fee (RTIF) program. This roadway would be constructed as a multi-agency effort and the River Islands applicant would be required to continue to contribute funding towards this roadway as part of the RTIF program (fee payments). This extended portion of Golden Valley Parkway would connect to I-205 via the proposed Paradise Road/Chrisman Road interchange. Golden Valley Parkway, as part of the inter-regional transportation system, is planned for construction whether or not the River Islands Project proceeds further. The River Islands Project would not implement construction of Golden Valley Parkway outside the project site. Given these conditions, the portions of Golden Valley Parkway outside the project

site are evaluated in this SEIR as a “probable future project” in Chapter 5, “Cumulative Impacts.” See Chapter 5 for further information on the selection of probable future projects and the cumulative impact analysis methodology.

The second offsite road improvement considered in this SEIR is the widening and improvement of Paradise Road. Current traffic modelling (described in more detail in Section 4.4, “Traffic and Transportation”) indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes on Paradise Road triggering the widening of the road. Once leaving the project site and entering unincorporated San Joaquin County, Paradise Road would be improved from a two-lane rural road to a four-lane arterial up to the connection with Golden Valley Parkway (once Golden Valley Parkway is constructed). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. A portion of this six-lane segment has been studied by others as part of a I-205/Chrisman Road Interchange Project (California Department of Transportation 2012). The total distance of widened/improved roadway would be approximately 2.7 miles.

This SEIR provides a program level of analysis for the potential widening and improvement of Paradise Road, assessing and documenting the range of potential environmental effects of the potential roadway in the event the expansion is needed. This analysis is provided throughout Chapter 4, “Affected Environment, Environmental Consequences, and Mitigation Measures,” under the heading “Paradise Road Widening.”

## MODIFIED PHASE 2 PROJECT CONSTRUCTION

Construction in the Phase 2 area would likely begin in 2021, with buildout expected to be complete by December 2040.

Construction activities are anticipated to require up to an estimated 224 construction workers during peak construction (i.e., when individual construction crews would be needed for mass grading, underground utilities, finish grading, and homebuilding simultaneously). Construction activities would take place from Monday through Friday during normal daytime working hours (7:00 a.m. to 5:00 p.m.) for the majority of the construction activities; however, it may be occasionally necessary to conduct some activities on Saturdays. Construction would not occur on Sundays.

Material import or export is not necessary for Phase 2 construction, as any clean excess fill generated by project-related grading/excavation would be reused on the project site.

At buildout, about 75,000 trees will have been planted at the River Islands Project site as part of Phases 1 and 2. This includes trees in front of homes, along major roads, and in landscaped areas including parks and other recreational facilities. Approximately 16.2 trees per acre have been and will continue to be planted.

## 2.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

### 2.3.1 Project-Specific Impacts

This SEIR has been prepared pursuant to the CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 1500, et seq.) to evaluate the physical environmental effects of the modified Phase 2 Project. The City of Lathrop is the lead agency for the project. The City has the principal responsibility for approving and carrying out the project and for ensuring that the requirements of CEQA have been met. After the Final SEIR is prepared and the SEIR public review process is complete, the Lathrop City Council is the party responsible for certifying that the SEIR adequately evaluates the impacts of the project.

Table 2-3, presented at the end of this chapter, provides a summary of the environmental impacts for the modified Phase 2 Project. The table provides the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

## 2.3.2 Significant-and-Unavoidable Impacts

The modified Phase 2 Project would result in the following significant and unavoidable impacts; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level.

- ▶ **Air Quality:** Increases in Long-Term Regional Emissions
- ▶ **Noise:** Increases in Existing Traffic Noise Levels (project and cumulative)
- ▶ **Noise:** Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels
- ▶ **Agricultural Resources:** Conversion of Important Farmland (project and cumulative)
- ▶ **Agricultural Resources:** Potential Williamson Act Contract Cancellations (only if Paradise Road Widening triggers a cancellation)
- ▶ **Greenhouse Gas Emissions and Climate Change:** Project-Generated GHG Emissions (project and cumulative)

## 2.4 ALTERNATIVES TO THE PROJECT

The State CEQA Guidelines Section 15126.6 mandates that all EIRs include a comparative evaluation of the proposed project with alternatives to the project that are capable of attaining most of the plan's basic objectives but that would avoid or substantially lessen any of the significant effects of the project. CEQA requires an evaluation of a "range of reasonable" alternatives, including the "no project" alternative. The following alternatives are evaluated in this Draft SEIR. Table 2-2 presents a comparison of the environmental impacts between the alternatives and the project.

- ▶ **No Project—No Development Alternative**, which assumes no new development occurs on the project site beyond the Phase 1 Project, which is in progress; and
- ▶ **No Project—WLSLP Development Alternative**, which assumes that the proposed Phase 2 modifications are not approved and that development occurs consistent with the approved WSLP as described in the 2003 SEIR (as amended), with up to 11,000 residences at buildout.

**Table 2-2 Summary of Environmental Effects of the Alternatives Relative to the Modified Phase 2 Project**

Environmental Topic	Modified Phase 2 Project	No Project—No Development Alternative	No Project—WLSLP Development Alternative
Land Use	LTS	Similar	Similar
Population, Employment, and Housing	LTS	Less	Similar
Traffic and Transportation	LTS/M	Less	Greater
Air Quality	SU	Less	Similar
Noise and Vibration	SU	Less	Less
Geology, Soils, and Mineral Resources	LTS/M	Less	Similar
Hydrology and Water Quality	LTS/M	Less	Similar
Hazardous Materials and Public Health	LTS/M	Less	Similar
Public Services	LTS/M	Less	Less
Public Utilities	LTS/M	Less	Similar
Recreation	LTS	Less	Less
Agricultural Resources	SU	Less	Similar
Terrestrial Biology	LTS/M	Less	Similar
Fisheries	LTS/M	Less	Similar
Cultural and Tribal Cultural Resources	LTS/M	Less	Similar

Environmental Topic	Modified Phase 2 Project	No Project—No Development Alternative	No Project—WLSP Development Alternative
Aesthetics	LTS/M	Less	Similar
Energy	LTS	Less	Greater
Greenhouse Gas Emissions and Climate Change	SU	Less	Greater
Wildfire	LTS/M	Less	Similar

Notes: LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Source: Data compiled by Ascent Environmental in 2021

## 2.4.1 Environmentally Superior Alternative

For the modified Phase 2 Project, the No Project–No Development Alternative would avoid all adverse impacts resulting from construction and operation of the modified Phase 2 Project analyzed in Chapter 4; therefore, it is the environmentally superior alternative. However, the No Project–No Development Alternative would not meet the project objectives. As illustrated in Table 2-3, the No Project–WLSP Development Alternative does not avoid or even reduce significant and unavoidable impacts. The No Project–WLSP Development Alternative would have greater impacts than the modified Phase 2 Project in three issue areas, less impacts in three issue areas, and similar impacts in 13 issue areas.

When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126[d][2]) require selection of an environmentally superior alternative other than the No Project Alternative from among the other action alternatives evaluated. The full alternatives analysis from the 2003 SEIR is considered to be part of the text of this SEIR, and the analysis of alternatives from the 2003 SEIR is part of the “range of reasonable alternatives” to be considered per State CEQA Guidelines Section 15126.6(a). Although the Phase 1 Project is being developed consistent with the currently approved WLSP, if the principals of the Environmental Constraints (50% Development) Alternative were applied to the remaining Phase 2 area, the same types of reductions in impacts would be expected. Therefore, similar to what was identified in the 2003 SEIR, the Environmental Constraints (50% Development) Alternative would remain the environmentally superior alternative because it would have the highest ratio of less to greater impacts among the alternatives and would have lesser impacts than the modified Phase 2 Project. However, as discussed in the 2003 SEIR, the Environmental Constraints (50% Development) Alternative would result in significant unavoidable impacts related to traffic, air quality, noise, and agricultural resources. Although this alternative includes substantially less development than the modified Phase 2 Project, these significant unavoidable impacts would still occur. Further, given the large scale of the modified Phase 2 Project and the extensive infrastructure needed to support the project, it is unknown whether this substantially reduced development scenario would be financially feasible or could be effectively integrated into the City's planning goals. Also, it is uncertain if this alternative could attain most of the basic project objectives, including providing substantial employment opportunities and a harmonious mix of land uses. However, as mentioned above, CEQA does not permit the identification of the No Project Alternative as the environmentally superior alternative. Therefore, the Environmental Constraints (50% Development) Alternative is identified as the environmentally superior alternative.

## 2.5 AREAS OF CONTROVERSY

A notice of preparation (NOP) was distributed for the modified Phase 2 Project on March 6, 2020, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. The NOP was circulated for 34 days, through April 8, 2020. A public scoping meeting was held on April 1, 2020. The purpose of the NOP and the scoping meeting was to provide notification that an SEIR for the modified Phase 2 Project was being prepared and to solicit input on the scope and content of the environmental document. The NOP and comments received during the scoping period are included in Appendix A of this Draft SEIR.



Based on the comments received during the NOP comment period, the major areas of controversy associated with the project are:

- ▶ sedimentation that reduces channel flow capacity in and along the South Delta Lower San Joaquin River System;
- ▶ climate change and increasing flow volumes in and along the South Delta Lower San Joaquin River System;
- ▶ exacerbating flooding of surrounding areas;
- ▶ cumulative stormwater and effluent wastewater impacts;
- ▶ emissions of criteria pollutants from stationary and mobile sources;
- ▶ appropriate methods of mitigation for emissions of criteria pollutants; and
- ▶ appropriate characterization of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) and associated avoidance and minimization measures as mitigation for impacts to biological resources.

These issues are each addressed in this Draft SEIR.

## 2.6 ISSUES TO BE RESOLVED

Section 15123 of the State CEQA Guidelines requires the summary section of a Draft EIR to identify issues to be resolved in the EIR, including the choice among alternatives and whether or how to mitigate the significant project effects. The major issues to be resolved by the City regarding the project are whether:

- ▶ recommended mitigation measures should be adopted or modified;
- ▶ additional mitigation measures need to be applied to the project; and
- ▶ the project should or should not be approved or an alternative approved.

**Table 2-3 Summary of Impacts and Mitigation Measures**

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
B = Beneficial    NI = No impact    LTS = Less than significant    PS = Potentially significant    S = Significant    SU = Significant and unavoidable			
<b>Land Use</b>			
<p><b>Impact 4.2-a: Conflict with the Lathrop General Plan and West Lathrop Specific Plan</b>                      As determined in the 2003 SEIR, potential inconsistencies, by themselves, would not cause any physical environmental impacts. Since certification of the 2003 SEIR, the general plan and WLSP have been amended to reflect the River Islands at Lathrop project, including Phase 1 and Phase 2. The proposed project would increase the number and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would be consistent with the proposed amendments to the Lathrop General Plan and the WLSP. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<b>Population, Employment, and Housing</b>			
<p><b>Impact 4.3-a: Population Growth and Housing Demand During Construction</b>                      The 2003 SEIR evaluated the potential for construction of the River Islands Project to generate temporary population growth and demand for housing. The modified Phase 2 Project would generate a temporary increase in employment of an estimated 224 construction jobs during the peak construction period. Existing construction personnel in the region would be sufficient to meet demand associated with the project; therefore, this temporary increase in employment is not expected to generate substantial new population growth in the area or generate the need for substantial additional housing for construction workers. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.3-b: Population Growth</b>                      The 2003 SEIR evaluated the potential for the River Islands Project to generate long-term population growth. The modified Phase 2 Project would enable the development of additional new homes compared to the project evaluated in the</p>	LTS	No mitigation is required.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p style="text-align: center;"> <b>B = Beneficial</b>    <b>NI = No impact</b>    <b>LTS = Less than significant</b>    <b>PS = Potentially significant</b>    <b>S = Significant</b>    <b>SU = Significant and unavoidable</b> </p>			
<p>2003 SEIR, which would result in direct increases in population. The estimated increases in population exceed planned growth anticipated in the General Plan, the WLSP, and the Master Plan. However, the increase in planned and anticipated population growth as described here would not, on its own, cause significant environmental effects. Direct impacts associated with the development associated with increased population growth are evaluated in appropriate sections of this SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Impact 4.3-c: Housing Demand from Project Development</b>                      The 2003 SEIR evaluated the potential for the River Islands Project to generate long-term demand for housing. Project development would increase the number of housing units and jobs. The modified Phase 2 Project would have a jobs:housing balance of approximately 0.74, indicating that the proposed development would be housing-rich. The project is, therefore, not expected to induce substantial new housing demand. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.3-d: Housing Displacement</b>                      The 2003 SEIR evaluated the potential for the River Islands Project to displace existing housing. Fewer than 10 existing residents would be displaced by the entirety of the project (Phase 1 and Phase 2) and most are already owned by the project applicant. However, there are fewer existing residences in the Phase 2 area (less than five). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. this impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.3-e: Inconsistency with Housing Policies</b>                      The 2003 SEIR evaluated whether the River Islands Project was consistent with the adopted housing policies of the General Plan. The modified Phase 2 Project would densify the Phase 2 area by including additional multi-family dwellings as well as more attached single-family residences similar to units already constructed as part of Phase 1. The General Plan contains various policies and implementation guidelines related to the provision of affordable housing, housing for the elderly</p>	LTS	No mitigation is required.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p style="text-align: center;"> <b>B = Beneficial    NI = No impact    LTS = Less than significant    PS = Potentially significant    S = Significant    SU = Significant and unavoidable</b> </p>			
<p>and handicapped, and multifamily housing (e.g., apartments). Although the modified Phase 2 Project may not meet the desired availability and ratio of these housing elements at all times, the overall project would be consistent with housing policies in the General Plan. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Traffic and Transportation</b></p>			
<p><b>Impact 4.4-a: Vehicle Miles Traveled</b> Implementation of the Proposed Phase 2 Project would generate additional vehicles traveled associated with proposed residential, office, food, retail, hotel, and education land uses. The improved mix of complementary residential, employment, and education uses would increase internal trip capture and reduce VMT generation when compared to the Approved Phase 2 Project. Furthermore, the proposed mix of non-residential uses would complement the existing residential uses (1,069 dwelling units) in the River Islands Phase 1 Area. As a result, the Proposed Phase 2 Project will result in vehicle travel that exhibits low-VMT characteristics, and the Proposed Phase 2 Project is projected to generate lower VMT per household, VMT per capita and VMT per employee compared to the Approved Phase 2 River Islands Project. Therefore, the impact of the Proposed Phase 2 Project would be less than significant when compared to the Approved Phase 2 Project.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.4-b: Conflict with Existing and Planned Multi-Modal Facilities</b> Implementation of the Proposed Phase 2 Project would not conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the project would not interfere with the implementation of a plan related to bicycle facilities, pedestrian facilities, or transit service/facilities. The project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator. The impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.4-c: Hazards Impacts</b> Implementation of the Proposed Phase 2 Project would not result in a geometric design feature that is inconsistent with applicable City of Lathrop design standards.</p>	LTS	No mitigation is required.	LTS

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<p style="text-align: center;"> <b>B = Beneficial    NI = No impact    LTS = Less than significant    PS = Potentially significant    S = Significant    SU = Significant and unavoidable</b> </p>			
<p>The project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design. Therefore, the impact would be less than significant.</p>			
<p><b>Impact 4.4-d: Emergency Access Impacts</b> Implementation of the Proposed Phase 2 Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The RID area roadway and transportation network is designed to maintain levels of accessibility for police and fire response times, which ensures vehicles have the necessary access when responding to an emergency. The impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.4-e: Construction Related Transportation Impacts</b> Implementation of the Proposed Phase 2 Project would involve construction activities that could cause temporary adverse effects to transportation facilities, including temporary roadway, bikeway, and sidewalk closures; degrading roadway pavement conditions; temporary degradation in traffic operations; and increasing potential for conflicts between construction vehicles and bicyclists and pedestrians. These conditions have the potential result in hazardous conditions for motorists, bicyclists, pedestrians, or transit users; and substantially inhibit access for emergency response vehicles. Therefore, this impact would be significant.</p>	S	<p><b>Modified Mitigation Measure 4.4-v: Construction Traffic (2007 Base Case + Project)</b> <i>Mitigation Measure 4.4-v shown below includes the original language from the measure as it was adopted, with revisions to more clearly apply to the Phase 2 Project since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i> <del>The project applicant shall agree to and implement timing and route conditions regulating construction traffic during Phase 1a construction activity.</del> <b>OR</b> <del>As alternative mitigation to the impact along Stewart Road, the project applicant is proposing to have construction traffic enter the site via Manthey Road and the Paradise Cut levee road via an existing private crossing of the UPRR tracks (formerly SPRR).</del> <u>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:</u>  <ul style="list-style-type: none"> <li>▶ <u>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.</u></li> </ul> </p>	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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		<ul style="list-style-type: none"> <li>▶ <u>The construction traffic control plan shall identify standards and methods for the maintenance of emergency vehicle access during construction activities.</u></li> <li>▶ <u>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.</u></li> </ul>	
<p><b>Impact 4.4-f: Safety Impacts of the Proposed Phase 2 Project (Without Valley Link)</b> Implementation of the Proposed Phase 2 Project (Without Valley Link) would not disrupt an existing multi-modal facility or interfere with the implementation of a planned traffic safety improvements. Implementation of the Proposed Phase 2 Project (Without Valley Link) would not degrade traffic operations or result in a multi-modal traffic mix that is incompatible with facility design at freeway interchange intersections or on freeway weaving sections. Therefore, the impact of the Proposed Phase 2 Project (Without Valley Link) would be less than significant when compared to the Approved Phase 2 Project.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.4-g: Safety Impacts of the Proposed Phase 2 Project (With Valley Link)</b> Implementation of the Proposed Phase 2 Project (With Valley Link) would not disrupt an existing multi-modal facility or interfere with the implementation of a planned traffic safety improvements. Implementation of the Proposed Phase 2 Project (With Valley Link) would not degrade traffic operations or result in a multi-modal traffic mix that is incompatible with facility design at freeway interchange intersections or on freeway weaving sections. Therefore, the impact of the Proposed Phase 2 Project (With Valley Link) would be less than significant when compared to the Approved Phase 2 Project.</p>	LTS	No mitigation is required.	LTS
<b>Air Quality</b>			
<p><b>Impact 4.5-a: Increases in Regional Criteria Pollutants during Construction</b> The 2003 SEIR qualitatively evaluated construction emissions of criteria pollutants during construction of the River Islands Project. Although emissions were not quantified, the 2003 SEIR concluded that construction activities would generate substantial increases in ROG, NO<sub>x</sub>, and PM<sub>10</sub> emissions from site grading and excavation, road paving, application of architectural coatings, motor vehicle</p>	PS	<p><b>Modified Mitigation Measure 4.5-a: Increases in Regional Criteria Pollutants during Construction</b> <i>Mitigation Measure 4.5-a shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i></p>	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation		
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<p>exhaust, and operation and movement of heavy-duty construction equipment. The modified Phase 2 Project would entail similar types of construction activities over a similarly sized project site. Nonetheless, since certification of the 2003 EIR, SJVAPCD has updated its guidance for determining construction-related air quality analysis and recommends that emissions be quantified and evaluated against annual mass emissions thresholds and daily mass emissions screening criteria. In light of this new guidance, annual construction-generated emissions were quantified for both the approved Phase 2 Project and modified Phase 2 Project to determine whether construction of the modified Phase 2 Project would result in a substantially more severe impact than what was identified in the 2003 SEIR. Due to the differences in land uses between the approved Phase 2 Project, the modified Phase 2 Project would result in lesser annual emissions of criteria air pollutants as compared to the approved Phase 2 Project. Daily construction of the approved Phase 2 Project and modified Phase 2 Project under a worst-case scenario would generate the same level of emissions. Nonetheless, these emissions would exceed SJVAPCD's daily mass emissions screening criteria, resulting in an exceedance of an AAQS. There is no new significance impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain potentially significant as identified in the 2003 SEIR.</p>		<p>The SJVAPCD emphasizes implementation of effective and comprehensive control measures rather than requiring a detailed quantification of construction emissions. The 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.</p> <p>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.</p> <p>In accordance with SJVAPCD guidelines (<del>SJVAPCD 1998</del>), the following mitigation, which includes SJVAPCD Basic, Enhanced, and Additional Control Measures, shall be incorporated and implemented (<u>SJVAPCD 2015a</u>). <u>Fugitive dust emissions shall be reduced through application of control measures consistent with SJVAPCD Regulation VIII.</u> In addition to the mitigation measures identified below, construction of the proposed project is required to comply with applicable SJVAPCD rules and regulations, including the requirement of a California Occupational Safety and Health Administration-qualified asbestos survey before demolition.</p> <ul style="list-style-type: none"> <li>▶ All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, <u>non-toxic chemical or organic</u> stabilizer/suppressant, or vegetative ground cover.</li> <li>▶ All onsite unpaved construction roads and offsite unpaved construction access roads shall be effectively stabilized of dust emissions using water or <u>non-toxic chemical or organic</u> stabilizer/suppressant.</li> <li>▶ 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.</li> <li>▶ During demolition of buildings all exterior surfaces of the building shall be wetted.</li> <li>▶ <u>Keep bulk materials sufficiently wet when handling and storing.</u></li> <li>▶ 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.</li> </ul>			

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		<ul style="list-style-type: none"> <li>▶ 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.)</li> <li>▶ 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.</li> <li>▶ Onsite vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ <u>Excavation and grading, and demolition activities shall be suspended when winds exceed 20 mph.</u></li> <li>▶ The overall area subject to excavation and grading at any one time shall be limited to the fullest extent possible.</li> <li>▶ Onsite equipment shall be maintained and properly tuned in accordance with manufacturers' specifications.</li> <li>▶ <u>When not in use, onsite equipment shall not be left idling for more than 5 minutes.</u></li> <li>▶ <u>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.</u></li> <li>▶ <u>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).</u></li> <li>▶ <u>Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors.</u></li> <li>▶ <u>Install wind breaks at windward side(s) of construction areas.</u></li> <li>▶ <u>Limit areas subject to excavation, grading, and other construction activity at any one time.</u></li> </ul>			



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		<p>▶ <u>Plant vegetative ground cover (fast-germinating native grass seed) in disturbed areas as soon as feasible. Water appropriately until vegetation is established.</u></p> <p><b>New Mitigation Measure 4.5-a(2): Preparation of an Ambient Air Quality Analysis</b></p> <p>SJVAPCD recommends that construction and operational emissions that exceed 100 lb/day prepare 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. If, following the preparation of an AAQA, emissions are found to contribute to an exceedance of an AAQS, 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 100 lb/day 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 100 lb/day through a process that funds and 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.</p>			

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<p><b>Impact 4.5-b: Increases in Odorous Emission</b></p> <p>The 2003 SEIR evaluated the potential for adverse increases in odorous emissions due to the project site’s proximity to nearby existing agricultural uses. The City’s Right-to-Farm Ordinance, which requires buffers between agriculture and development, protects agricultural landowners from nuisance complaints related to normal agricultural operations. The 2003 SEIR also noted that the City’s industrial and wastewater facilities had not received odor complaints from nearby residents, and thus would not adversely affect the River Islands Project residents. The modified Phase 2 Project would not introduce any new sources of odor compared to what was evaluated in the 2003 SEIR and would be sited in the same location. Therefore, there is no change in odor impact conditions. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.5-c: Increases in Stationary Source Toxic Air Contaminants</b></p> <p>The 2003 SEIR evaluated the potential for sensitive receptors (e.g., residences, schools) to be exposed to TAC emissions from stationary sources, primarily from manufacturing activity in the Employment Center land use. The 2003 SEIR concluded that onsite and offsite facilities that may emit TACs would be required to comply with established emission standards through the SJVAPCD permitting process. The modified Phase 2 Project would include the construction and operation of the Employment Center; however, the size of the Employment Center would be approximately 60 acres less than what was evaluated in the 2003 SEIR. SJVAPCD permitting processes would continue to be applied to potential stationary sources of TACs, resulting in similar restrictions and controls on TAC emissions. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.5-d: Increases in Mobile Source Toxic Air Contaminants</b></p> <p>The 2003 SEIR evaluated the potential for sensitive receptors to be exposed to substantial diesel PM emissions from diesel-fueled delivery trucks associated with development of commercial- and industrial-related land uses. The 2003 SEIR concluded that movement of diesel-fueled delivery trucks could expose sensitive</p>	PS	<p><b>New Mitigation Measure 4.5-d: Incorporation of Design Features at Truck Loading/Unloading Areas to Reduce Health-Risk Exposure at Sensitive Receptors</b></p> <p>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</p>	LTS

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<p>receptors to substantial pollutant concentrations. The modified Phase 2 Project proposes a new Town Center and an Employment Center that would be serviced by diesel-fueled delivery trucks that could expose sensitive receptors to harmful concentrations of diesel PM. At the time of writing this SEIR, the level of diesel PM emissions associated with these land uses is unknown; however, it would be expected that diesel PM emissions would be comparable to what was evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.</p>		<p>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 SJVACPD and shall be approved by the city. 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 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:</p> <ul style="list-style-type: none"> <li>▶ 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 <i>Quantifying Greenhouse Gas Mitigation Measures</i> (CAPCOA 2010:300–303).</li> <li>▶ Use electric-powered "yard trucks" or forklifts to move truck trailers around a truck yard or truck loading/unloading facility.</li> <li>▶ Use buildings or walls to shield commercial activity from nearby residences or other sensitive land uses.</li> <li>▶ Plant and maintain a vegetative buffer between the truck loading/unloading facility and nearby sensitive residences, schools, and daycare facilities.</li> </ul>	
<p><b>Impact 4.5-e: Increases in Local Mobile Source CO Concentrations</b> The 2003 SEIR evaluated the generation of CO from project-generated vehicle trips. The 2003 SEIR concluded that the River Islands Project would not contribute</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

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<p>to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour. The proposed land uses under the modified Phase 2 Project would result in the redistribution of trips as compared to what was evaluated in the 2003 SEIR. However, this redistribution would not result in a new impact. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Impact 4.5-f: Increases in Long-Term Regional Emissions</b></p> <p>The 2003 SEIR evaluated the generation of long-term regional emissions of criteria air pollutants and ozone precursors and determined that emissions of ROG and NO<sub>x</sub> would exceed SJVAPCD's thresholds of significance that were in effect in 2003. Since certification of the 2003 SEIR, SJVAPCD has issued new guidance and thresholds of significance for determining long-term operational emissions of criteria air pollutants and ozone precursors. The approved Phase 2 Project and modified Phase 2 Project would generate emissions of ROG, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> in exceedance of SJVAPCD's operational thresholds of significance, consistent with the findings of the 2003 SEIR. However, the modified Phase 2 Project would result in greater total emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> as compared to the approved project. Therefore, this impact would be more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.</p>	<p>PS</p>	<p><b>Modified Mitigation Measure 4.5-f: Increases in Long-Term Regional Emissions</b></p> <p><i>Mitigation Measure 4.5-f shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>striethrough</del> and additional text shown in <u>underline</u>.</i></p> <p>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 <del>1998</del> 2015). <del>It should be noted that</del> <del>many</del> 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.</p> <ul style="list-style-type: none"> <li>▶ Provide transit enhancing infrastructure that includes transit shelters, benches, street lightening, route signs and displays, and/or bus turnouts/bulbs.</li> <li>▶ Provide park and ride lots and/or satellite telecommuting centers.</li> <li>▶ 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.</li> <li>▶ Provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system, secure bicycle parking, and/or employee lockers and showers.</li> <li>▶ 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</li> </ul>	<p>SU</p>

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		industrial), replace wood-burning stoves and fireplaces with gas-fired fireplaces or inserts. ▶ <u>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.</u> ▶ <u>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.</u> ▶ <u>Include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code.</u> ▶ <u>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.</u>	
<p><b>Impact 4.5-g: Consistency with Air Quality Plans</b></p> <p>The 2003 SEIR evaluated the River Islands Project’s consistency with applicable air quality plans and concluded that it would be consistent with the emissions inventories used for air quality planning purposes. The 2003 SEIR reviewed population growth associated with the River Islands Project against the growth assumed by the San Joaquin Council of Governments (SJCOG), which were an input into criteria pollutant emissions inventories. The River Islands growth was found to be consistent with SJCOG countywide growth projections and, therefore, the growth would also be consistent with applicable criteria pollutant emissions inventories based on projected County growth and demonstrates consistency with the region’s pollution budget. Since certification of the 2003 SEIR, SJCOG has produced and adopted more recent population growth estimates and regional transportation plans/sustainable communities strategies (RTP/SCSs). The most recent RTP/SCS prepared by SJCOG was adopted in 2018. The modified Phase 2 Project would support a population of greater size than what was evaluated in the 2003 SEIR. However, this level of growth would not be inconsistent with the growth projections or VMT reductions of SJCOG’s most recent population forecasts,</p>	LTS	No mitigation is required.	LTS

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<p>consistent with the findings of the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Noise and Vibration</b></p>			
<p><b>Impact 4.6-a: Increase in Short-Term Construction Generated Noise</b>                      The 2003 SEIR evaluated the potential for construction generated noise to result in noise levels that exceeded City of Lathrop Noise Ordinance standards. The proposed Phase 2 modifications would increase the amount and density of residential development but would not change the development footprint and would not change the general type and character of development. No new or more intense construction methods would be required that would generate substantially more noise compared to the approved River Islands Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.6-a: Increases in Short-Term Construction-Generated Noise</b>                      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.                      This mitigation measure has been implemented successfully during Phase 1 construction and would continue to be implemented during the modified Phase 2 Project.</p>	<p>LTS</p>
<p><b>Impact 4.6-b: Stationary Source Noise Generated by Onsite Land Uses</b>                      The 2003 SEIR evaluated the potential for operational noise generated by project land uses to exceed City of Lathrop General Plan and Municipal Code standards. The proposed Phase 2 modifications do not propose additional types of noise-generating uses beyond those already addressed in the 2003 SEIR. Phase 2 modifications would relocate the high school, potentially resulting in greater noise levels at existing noise-sensitive uses to the north. Noise levels resulting from all other project land uses would be similar to those identified in the 2003 SEIR and would not be substantially affected by Phase 2 modifications. The impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.6-b: Stationary Source Noise Generated by Onsite Land Uses</b>  <i>Mitigation Measure 4.6-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation (including elimination of the golf course and relocation of the high school), with text deletions shown in <del>striketrough</del> and additional text shown in <u>underline</u>.</i>                      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 <del>interior</del> noise standards included in these</p>	<p>LTS</p>

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		<p>guidelines, mitigation measures shall be required to reduce projected interior and exterior noise levels to within acceptable levels.</p> <p>Mitigation measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>▶ Dual-pane, noise-rated windows, mechanical air systems, exterior wall insulation, and other noise-reducing building materials shall be used.</li> <li>▶ 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.</li> </ul> <p><del>In addition, the following measures will apply to noise-generating activities associated with the golf course.</del></p> <ul style="list-style-type: none"> <li><del>▶ Onsite landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications.</del></li> <li><del>▶ For maintenance areas located within 500 feet of noise-sensitive land uses, the operation of onsite landscape maintenance equipment shall be limited to the least noise-sensitive periods of the day, between the hours of 7 a.m. and 7 p.m.</del></li> <li><del>▶ Areas of the golf course that would require frequent turf maintenance (e.g., fairways, tees) shall be located at a minimum distance of 100 feet from the property line of nearby existing residences.</del></li> </ul> <p><u>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.</u></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during the modified Phase 2 Project.</p>			
<p><b>Impact 4.6-c: Increases in Existing Traffic Noise Levels</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to cause a substantial permanent traffic noise level increase at existing sensitive land uses in</p>	S	<p><b>New Mitigation Measure 4.6-c: Traffic Noise Reduction Measures</b></p> <p>For existing residences, noise attenuation techniques such as repaving roadways with a "quiet pavement," replacement or construction of noise barriers, traffic calming, and</p>	SU		

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<p>the vicinity. The proposed Phase 2 modifications would increase the amount and density of residential development and, therefore, would likely increase traffic noise levels. As further buildout of the area within the project vicinity has occurred since the 2003 SEIR, there are new and more noise-sensitive receptors located along roadways affected by project-generated traffic. An updated traffic noise study was prepared to determine current existing traffic noise levels and noise level increases resulting from the modified Phase 2 Project. New traffic data shows greater increases in noise resulting from the modified Phase 2 Project, and due to the introduction of new noise-sensitive receptors along project-affected roadways, there would be a substantial increase in the traffic noise impact identified in the 2003 SEIR. Therefore, the impact would now be significant.</p>		<p>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.</p> <p>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.</p> <p>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 (Leq/CNEL). Traffic calming measures that regulate speed improve the noise environment by smoothing out noise levels.</p> <p>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. 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.</p>	
<p><b>Impact 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels</b></p> <p>The 2003 SEIR evaluated the compatibility of the River Islands Project with the City’s “normally acceptable” land used compatibility noise standards. The proposed Phase 2 modifications would not introduce any new categories of land use which were not previously analyzed in the 2003 SEIR. Noise levels in the Phase 2 area have changed since the 2003 SEIR and were reanalyzed based on noise</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels</b></p> <p><i>Mitigation Measure 4.6-d shown below includes the original language from the measure as it was adopted, with revisions to apply to the modified Phase 2 Project which is designed based on updated California Building Code regulations, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i></p>	<p>SU</p>



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<p>measurement survey and traffic noise modeling data. As the majority of the Phase 2 area is not located near any new and substantial sources of environmental noise, the impact would be similar to that identified in the 2003 SEIR. There would be no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain significant.</p>		<p>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 <u>reproduced in this document as Table 4.6-3</u>). Where individual project elements do not clearly comply with exterior noise standards included in the City guidelines (Table 4.6-1 <u>reproduced in this document as Table 4.6-4</u>), 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.</p> <p>Title 24 of the California Code of Regulations requires the preparation of an acoustical analysis for <del>multifamily</del> residences that demonstrates how interior noise levels will achieve a 45 dBA CNEL<sub>A<sub>dn</sub></sub> <del>where the exterior noise levels exceed 60 dBA CNEL<sub>A<sub>dn</sub></sub></del>. As a result, a Title 24 analysis shall be prepared as part of the final design of any proposed <del>multifamily</del> 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<sub>A<sub>dn</sub></sub>.</p> <p>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.</p> <p><b>New Mitigation Measure 4.6-d(1): Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels</b></p> <p>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<sub>eq</sub> (1-hr) in occupied areas during any hour of operation. To the extent</p>	

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		<p>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 <math>L_{eq}</math> (1-hr) or below.</p>	
<p><b>Impact 4.6-e: Generation of Excessive Groundborne Vibration</b> Construction-related vibration levels would have the potential to exceed applicable vibration thresholds at nearby sensitive land uses. This impact is considered potentially significant.</p>	<p>PS</p>	<p><b>New Mitigation Measure 4.6-e: Construction Vibration Reduction</b> 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.</p>	<p>LTS</p>
<p><b>Geology, Soils, and Mineral Resources</b></p>			
<p><b>Impact 4.7-a: Potential for Construction Activities to Disturb Soils and Result in Erosion</b> The 2003 SEIR evaluated the potential for earthwork activities to expose soils to erosion during all project phases. Given the sediment-containment function provided by the levees surrounding the RID Area, the relatively small size of disturbance outside the RID Area, and the implementation of erosion controls/best management practices (BMPs) included in Storm Water Pollution Prevention Plans (SWPPP), a substantial amount of soil erosion is not expected to occur with implementation of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.7-b: Loss, Injury, or Death Resulting from Seismic Hazards</b> The 2003 SEIR evaluated the potential for the River Islands Project to expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death, through seismic ground shaking. Because of the relatively close presence of the Great Valley Fault, it is possible that the site may experience ground shaking that would result in severe structural and nonstructural damage. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for large earthquakes to generate strong to violent ground shaking at the site. The types of buildings, development, and land uses remain similar relative to seismic risk and</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.7-b: Ground Shaking</b> <i>Mitigation Measure 4.7-b shown below includes the original language from the measure as it was adopted, with revisions to reflect the more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR mitigation, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i> Project facilities shall be designed for maximum horizontal ground surface accelerations of at least <del>0.23</del> <u>0.46</u> g (<u>gravity [g] [equivalent to ±46 percent of the earth's normal gravitational strength]</u>). Geotechnical reports completed by ENGEO in <del>2002</del> <u>2018</u> for the <del>proposed project</del> <u>River Islands Project (Baseline Geotechnical Assessment: River Islands, Lathrop, California and Preliminary Levee Evaluation:</u></p>	<p>LTS</p>

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<p>sensitivity. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>		<p>River Islands, Lathrop, California (ENGE 2018a, 2018b) predict that a horizontal ground surface acceleration of <del>0.23</del> <u>0.46</u> g at the River Islands site would have a <del>40</del> <u>2</u>% 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 <del>0.23</del> <u>0.46</u> 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 <del>0.23</del> <u>0.46</u> g, risks of loss, injury, or death from ground shaking would be substantially reduced.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-b are reflected above and will be applied during Phase 2 implementation.</p>	
<p><b>Impact 4.7-c: Loss, Injury, or Death Resulting from Liquefaction</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to result in substantial risk of structural damage and exposure of residents, workers, and visitors on the project site to substantial risk of bodily injury due to liquefaction. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for large earthquakes to result in liquefaction, exposing residents, workers, and visitors on the project site to substantial risk of bodily injury. The types of buildings, development, and land uses remain similar relative to liquefaction risk and sensitivity. Although soil boring data indicates that the potential for liquefaction and settlement may be considered low, portions of the soil profile at the site may be potentially liquefiable under seismic loading. Compared to the 2003 SEIR, there is no new significant impact and the impact is not substantially more severe. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.7-c: Liquefaction</b></p> <p><i>Mitigation Measure 4.7-c shown below includes the original language from the measure as it was adopted, with revisions to reflect the more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR mitigation, with text deletions shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <p>A design-level geotechnical study shall be completed for each <u>individual</u> project development (e.g., housing subdivision, Employment Center subdivision, school, levee segment) <u>within Phase 2</u> before a grading permit is issued <u>for that given project</u>, 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 <u>of the specific development</u>. 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 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 <u>individual project, or an operation and maintenance plan will be put in place to repair any levee embankments damaged during a seismic event.</u></p>	<p>LTS</p>

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		<p>This mitigation measure from the 2003 SEIR has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-c are reflected above and will be applied during Phase 2 implementation.</p>	
<p><b>Impact 4.7-d: Loss, Injury, or Death Resulting from Ground Lurching and Soil Settlement</b></p> <p>The 2003 SEIR evaluated the potential for ground lurching and settlement to result in risk of structural damage and exposure of residents, workers, and visitors on the River Islands Project site to risk of bodily injury. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR, with the same types of soils that are unlikely to be susceptible to ground lurching and settlement. The types of buildings, development, and land uses remain similar relative to ground lurching and soil settlement risk and sensitivity. Compared to the 2003 SEIR there is no new significant impact and the impact is not substantially more severe. Because of soil conditions at the project site, this impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.7-e: Loss, Injury, or Death Resulting from Lateral Spreading and Landslide</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to result in seismically induced lateral spreading and landslide. Preliminary lateral spreading analysis conducted as part of the project geotechnical studies indicate maximum lateral deformation of up 12 inches could occur along the top of slope at the existing levee locations. However, levees surrounding both the Phase 1 and Phase 2 areas have been completed in compliance with Mitigation Measure 4.7-e. Therefore, this impact would be less than significant.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.7-f: Expansive or Otherwise Unstable Soils</b></p> <p>The 2003 SEIR evaluated whether shrinking and swelling of soils could result in damage to structures, underground utilities, and other facilities on the River Islands Project site. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for expansive soils to result in damage to structures, underground utilities, and other facilities in the Phase 2 area. Therefore, there is no new significant impact and the</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.7-f: Shrink-Swell Potential</b></p> <p>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</p>	<p>LTS</p>

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<p>impact is not substantially more severe than the impact identified in the 2003 SEIR. Because some soils on the project site have high plasticity, this impact would remain significant as identified in the 2003 SEIR.</p>		<p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	
<p><b>Impact 4.7-g: Exposure of Subsurface Facilities to the Effects of Corrosive Soils</b></p> <p>The 2003 SEIR evaluated whether corrosive soils would cause damage to buried concrete slabs and foundations and buried metal pipes during project operation. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for corrosive soils to result in damage to subsurface facilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because soils on the project site may have a moderate to low potential for corrosion to buried metals, this impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.7-g: Corrosive Soils</b></p> <p><i>Mitigation Measure 4.7-g shown below includes the original language from the measure as it was adopted, with revisions to reflect the more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR mitigation, with text deletions shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <p>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 <del>or Type II Modified</del> cement. Appropriate measures identified in each geotechnical study shall be implemented during project construction.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-g are reflected above and will be applied during Phase 2 implementation.</p>	<p>LTS</p>
<p><b>Impact 4.7-h: Loss of Access to Mineral Resources</b></p> <p>The 2003 SEIR evaluated the potential for development of the River Islands Project to result in the loss of access to potentially significant sand deposits. The Phase 2 area is not located within an area where known mineral resources are located. Therefore, there would be no impact.</p>	<p>NI</p>	<p>No mitigation is required.</p>	<p>NI</p>

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<b>Hydrology and Water Quality</b>			
<p><b>Impact 4.8-a: River Islands Area Construction Sediment and Water Quality Contamination</b></p> <p>The 2003 SEIR evaluated the potential for sedimentation and degradation of interior water quality during construction. Project construction could result in impacts to water quality from sedimentation or pollutant discharge. The Phase 2 modifications would result in development of the same footprint as the development area evaluated in the 2003 SEIR and would not include any new areas of construction not previously evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.</p>	PS	<p><b>Modified Mitigation Measure 4.8-a: RID Area Construction Sediment and Water Quality Contamination</b></p> <p><i>Mitigation Measure 4.8-a shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i></p> <p>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:</p> <ul style="list-style-type: none"> <li>▶ 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 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.</li> </ul>	LTS

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		<p>Also addressed in the SWPPP also will identify will be identification 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.</p> <p>The SWPPP would include an erosion control plan. The general goals of this plan would be to minimize runoff from leaving construction sites, remove sediment from onsite runoff before it leaves the site, slow runoff rates across construction sites, and provide soil stabilization during and after construction.</p> <ul style="list-style-type: none"> <li>▶ 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 goal is to ensure that mitigation and all required permit terms and conditions are implemented.</li> </ul> <p>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 <u>prior to conducting any activities within the applicable jurisdiction</u>, including, but not limited to:</p> <ul style="list-style-type: none"> <li>▶ <u>Notification of California Department of Fish and Game Code 1600 Lake and Streambed Alteration Agreement</u></li> <li>▶ <u>RWQCB Section 401 certification and/or waiver of Waste Discharge Requirements (WDRs)</u></li> <li>▶ <u>NPDES Storm Water Pollution Prevention Permit for General Construction</u></li> <li>▶ <u>Clean Water Act Section 404 and Rivers and Harbors Act Section 10 compliance through the USACE</u></li> <li>▶ <u>Incidental take authorization from the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding endangered species</u></li> <li>▶ <u>California State Lands Use Lease Permit (Public Trust)</u></li> </ul>			

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		<p>▶ <del>Reclamation Board</del> <u>Central Valley Flood Protection Board (CVFPB)</u> Encroachment Permit</p> <p>Spills from construction equipment could release contaminants 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:</p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ Make efforts to store only enough product necessary to complete the job.</li> <li>▶ 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.</li> <li>▶ Keep products in their original containers with the original manufacturer's label.</li> <li>▶ Do not mix substances with one another unless recommended by the manufacturer.</li> <li>▶ Do not dispose of containers with residual hazardous materials without proper sealing.</li> <li>▶ 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.</li> <li>▶ If surplus product must be disposed of, the manufacturer-recommended or the local- and state-recommended methods for proper disposal will be followed.</li> <li>▶ 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.</li> </ul>			



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		<ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ Applicable provisions of this mitigation measure have been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</li> </ul>	
<p><b>Impact 4.8-b: Interior Lake Water Quality</b></p> <p>The 2003 SEIR evaluated the potential for project operations to result in impacts the water quality of the interior lake, which could affect the quality of groundwater and surrounding waterways through stormwater runoff. The analysis noted that implementation of BMPs would ensure that the project would not create additional sources of polluted runoff. The interior lake system was subsequently modified to consist of multiple interconnected smaller lakes. This modified system was evaluated in later SEIR Addenda and was determined to result in no change in the impacts identified in the 2003 SEIR. Operation of the existing interconnected Phase 1 lake system have shown total dissolved solids and other water quality parameters in the lake system meeting or exceeding those identified in the 2003 SEIR (Engeo 2020). The Phase 2 modifications would not change the development footprint of Phase 2 but will result in an increase the total amount of impervious pavement, which will increase stormwater runoff. Implementation of the project specific BMPs would treat and reduce stormwater runoff. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation and performance of the lake system to continue as anticipated (Engeo 2020; PACE 2020). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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<p><b>Impact 4.8-c: Earth Moving in or Adjacent to Water Bodies</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to result in construction-related impacts to water quality. Earth moving activities in or adjacent to water bodies could result in impacts to water quality due to sedimentation or pollutant discharge. Levee construction and improvements surrounding both the Phase 1 area and Phase 2 development area have been completed, consistent with plans and entitlements. No additional large-scale earth-moving or disturbing activities associated with the levees would occur under the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.8-c: Earth Moving in or Adjacent to Water Bodies</b></p> <p><i>The following provides the content of Mitigation Measure 4.8-c as it appears in the 2003 SEIR, even though some of the referenced activities are no longer part of the proposed project.</i></p> <p>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:</p> <ul style="list-style-type: none"> <li>▶ Perform breaching operations and all other in-river work, or work immediately adjacent to the rivers, during low tide and during low flows.</li> <li>▶ Work in Paradise Cut only when floodwaters from the San Joaquin River are not present in the cut and there is no immediate threat of floodwaters overtopping the Paradise Weir.</li> <li>▶ 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.</li> <li>▶ Adhere to all local, state, and federal regulations regarding turbidity reduction measures applicable to this activity, including developing and implementing a SWPPP.</li> <li>▶ Adhere to applicable requirements in <u>Modified</u> Mitigation Measure 4.8-a.</li> </ul> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	<p>LTS</p>
<p><b>Impact 4.8-d: In-Water Project Features</b></p> <p>The 2003 SEIR evaluated the potential for the construction of in-water project features, such as bridges and docks, to cause sedimentation and water quality impacts. Since certification of the 2003 SEIR, in-water features along the San Joaquin River, Old River, and Paradise Cut have been removed from the River Islands project, although bridges remain part of the project. No new or substantially different in-water project features are proposed as part of the modified Phase 2 Project. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.8-d: In-Water Project Features</b></p> <p><i>The following provides the content of Mitigation Measure 4.8-d as it appears in the 2003 SEIR, with minor modifications in response to some of the referenced activities (i.e., docks on the exterior waterways) are no longer part of the proposed project.</i></p> <p>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.</p>	<p>LTS</p>

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<p>construction of some in-water project features (i.e., bridges) would still occur, this impact would remain significant as identified in the 2003 SEIR.</p>		<p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	
<p><b>Impact 4.8-e: Utility Crossings</b>                      The 2003 SEIR evaluated the potential for construction of the natural gas pipeline under the San Joaquin River to result in short-term degradation of water quality from accidental seepage of drilling slurry into the river. Major utilities for the project have been completed under Phase 1 of the River Islands Project, excluding minor utilities and the storm drainage system. However, a directional boring under the San Joaquin River to provide utility service is no longer required. Therefore, this impact mechanism would no longer occur and there would be no impact.</p>	<p style="text-align: center;">NI</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">NI</p>
<p><b>Impact 4.8-f: Diversion Effects on Old River Hydrology</b>                      The 2003 SEIR evaluated the potential for diversion from the Old River into the RID Area to impact hydrology. Water diversions under the proposed project would result in less water that is pumped from Old River into the RID Area compared to agricultural operations and shift diversions to a period when demand from agricultural users outside the project site is reduced. These conditions would remain the same under the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be less than significant as identified in the 2003 SEIR.</p>	<p style="text-align: center;">LTS</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">LTS</p>
<p><b>Impact 4.8-g: Diversion Effects on Old River Water Quality</b>                      The 2003 SEIR evaluated the potential for diversion from the Old River into the RID Area to impact water quality. Water diversions under the Phase 2 modifications would result in less water that is pumped from Old River into the RID Area compared to agricultural operations and shifts diversions to a period when demand from agricultural users outside the project site is reduced. These conditions would remain the same under the modified Phase 2 Project as the conditions evaluated for the Phase 2 Project in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts would be less than significant as identified in the 2003 SEIR.</p>	<p style="text-align: center;">LTS</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">LTS</p>

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<p><b>Impact 4.8-h: Water Discharges to the Delta (Hydrology)</b></p> <p>The 2003 SEIR evaluated the potential for water discharged from the RID area into the Delta to impact hydrology. Phase 2 modifications include only minor changes to the proposed stormwater system. Analysis of the addition of the planned modified Phase 2 lakes to the overall stormwater system shows operation and performance of the lake system, including discharges, to continue as anticipated (PACE 2020). In addition, discharge to Paradise Cut is covered under the City's current MS4 permit and would comply with all applicable discharge standards and requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Adherence to the City's current MS4 permit requirements would further ensure that impacts to the Delta hydrology would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.8-i: Water Discharges to the Delta (Water Quality)</b></p> <p>The 2003 SEIR evaluated the potential for water discharged from the RID area into the Delta to affect water quality. Phase 2 modifications include only minor changes to the proposed storm drainage system. Operation of the existing interconnected Phase 1 lake system have shown the differences in water quality of discharges compared to agricultural operations identified in 2003 SEIR are occurring. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue as anticipated (Engeo 2020; PACE 2020). In addition, discharge to Paradise Cut is covered under the City's current MS4 permit and would comply with all applicable discharge standards and requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Adherence to the City's current MS4 permit requirements would further ensure that impacts to the Delta water quality would remain less than significant, as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.8-j: Maintenance Dredging of Back Bays</b></p> <p>The 2003 SEIR evaluated the potential for maintenance dredging of the nine proposed back bays to release sediments and increase turbidity, adversely affecting water quality in the San Joaquin and Old Rivers. The Third Addendum to the SEIR (2012) eliminated the nine back bays from the River Islands Project. The modified Phase 2 Project does not include back bays and no maintenance dredging would occur. Therefore, there is no new significant impact and the</p>	NI	No mitigation is required.	NI

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<p>impact is not substantially more severe than the impact identified in the 2003 SEIR. While the 2003 SEIR determined that impacts related to the dredging of the back bays would be less than significant with implementation of mitigation, back bays have been eliminated from the project and no impact would occur.</p>			
<p><b>Impact 4.8-k: Increased Boat Traffic</b>                      The 2003 SEIR evaluated the potential for proposed docks along the San Joaquin River, Old River, and Paradise Cut to result in increased boat traffic that could adversely affect water quality in these surrounding waterways. The Third Addendum to the SEIR (2012) modified the project to eliminate the back bays and docks along the exterior water system. The Phase 2 modifications do not alter this approach and there is no proposal for docks along exterior water features as part of Phase 2. Therefore, the potential for new docks to increase boat traffic on exterior water features would not occur and adverse effects associated with increased boat traffic also would not occur. Therefore, no impact would occur.</p>	<p style="text-align: center;">NI</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">NI</p>
<p><b>Impact 4.8-l: Flood Protection for the RID Area</b>                      The 2003 SEIR evaluated the potential to place development in the FEMA 1-in-100-AEP floodplain. However, levee construction and improvements surrounding both the Phase 1 area and Phase 2 area have been completed, consistent with plans and entitlements. The modified Phase 2 Project area will not be located within the FEMA 1-in-100-AEP floodplain when development is initiated. Therefore, there would be no impact.</p>	<p style="text-align: center;">NI</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">NI</p>
<p><b>Impact 4.8-m: Surrounding Flood Stage Elevations</b>                      The 2003 SEIR and subsequent Addenda evaluated the potential for levee improvements to result in increases to flood stage elevations in the surrounding area during severe flood events. The net impact on flooding from the River Islands Project would result in benefits at floods up to the 1-in-100 AEP and only minor increases in flood elevations during floods greater than the 1-in-200 AEP. Compared to the 2003 SEIR and subsequent Addenda, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because the modified Phase 2 Project does not include any modifications to the levee system, this impact would remain less than significant as identified in the 2003 SEIR.</p>	<p style="text-align: center;">LTS</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">LTS</p>

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<p><b>Impact 4.8-n: Non-flood Hydrology in Surrounding Waterways</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to affect non-flood water volumes in the surrounding waterways. The Phase 2 modifications would not substantially alter the drainage pattern of the area or the flows in the surrounding waterways. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.8-o: Groundwater Quality During Construction</b></p> <p>The 2003 SEIR evaluated the potential for construction-related activities to result in impacts to groundwater quality due to sedimentation or pollutant discharge. Excavation activities could intersect shallow groundwater and result in sediments or contaminants entering the groundwater. The Phase 2 modifications would not substantially alter construction methods, excavations, and contact with groundwater during construction. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain potentially significant as identified in the 2003 SEIR.</p>	PS	<p><b>Adopted Mitigation Measure 4.8-o: Groundwater Quality During Construction</b></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	LTS
<p><b>Impact 4.8-p: Groundwater Quality and Supply During Project Operation</b></p> <p>The 2003 SEIR evaluated whether groundwater quality and supply could be adversely affected during project operation. Water features associated with the River Islands Project would come in contact with groundwater; however, these contacts would not be with groundwater tables used for potable water. In addition, project water that might come contact with the shallow groundwater table (interior lake system water and recycled water used for irrigation) would be of sufficient quality that adverse groundwater quality impacts would not occur. The modified Phase 2 Project does not alter these conditions. The City is projected to have adequate water supplies to serve the modified Phase 2 Project until full buildout in 2040 (Woodard &amp; Curran 2020). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS

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<p><b>Impact 4.8-q: Water Supplies to Other Users</b></p> <p>The 2003 SEIR evaluated whether the River Islands Project could directly or indirectly affect water supplies to other water users. Phase 2 modifications include increases in the number of dwelling units and density of residential development and a mixed-use Village Center and TOD area. However, the overall demand for potable water is less than originally evaluated in the 2003 SEIR due to less actual water usage by unit experienced with the project (Woodard &amp; Curran 2020). The secured water supplies to serve the overall City development, including Phase 2 is sufficient under buildout conditions, even during single and multi-year drought conditions (Woodard &amp; Curran 2020). The increased development under the modified Phase 2 Project would not alter any of the potential water supply impact considered in Impact 4.8-q in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.8-r: Compliance with Water Quality Control Plan or Sustainable Groundwater Management Plan</b></p> <p>The project would comply with all applicable federal, state, and local regulations and requirements for construction and implementation of the project as well as applicable elements of the SWRCB Bay-Delta Plan. The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and therefore the impact would be less than significant.</p>	LTS	No mitigation is required.	LTS
<p><b>Hazardous Materials and Public Health</b></p>			
<p><b>Impact 4.9-a: Hazardous Materials</b></p> <p>The 2003 SEIR evaluated the potential for hazardous materials to create a significant hazard to the public. The storage, use, transportation, and disposal of hazardous materials is regulated by local, state, and federal regulations. Compliance with all applicable local, state, and federal regulations regarding hazardous materials is required for all development, including implementation of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS

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<p><b>Impact 4.9-b: Hazardous Materials Sites</b>                      Agricultural and farming uses could have resulted in soil and/or groundwater contamination on the project site. Site disturbance could expose people in the area to hazardous materials. The proposed Phase 2 modifications would result in development of the same project site as evaluated in the 2003 SEIR and the same potential for site disturbance to expose people to hazardous materials from soil and/or groundwater contamination. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.</p>	<p>PS</p>	<p><b>Modified Mitigation Measure 4.9-b: Exposure of Construction Workers, Residents, and Others to Hazardous Materials</b>  <i>Mitigation Measure 4.9-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <ul style="list-style-type: none"> <li>▶ <u>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.</u></li> <li>▶ 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, <u>including the potential for lead and termiticide</u>. 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.</li> <li>▶ 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.</li> <li>▶ 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</li> </ul>	<p>LTS</p>



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		<p>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.</p>	
<p><b>Impact 4.9-c: Exposure of School Sites to Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 mile of an Existing School</b></p> <p>While exposure of school sites to hazardous materials was not expressly evaluated in the 2003 SEIR, effects of hazardous materials on residents, workers, and others in the River Islands area was evaluated, which would have included the school sites included in the project description for River Islands. Compliance with all applicable local, state, and federal regulations regarding hazardous materials is required for all development, including implementation of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.9-d: Interfere with Implementation of an Emergency Response Plan</b></p> <p>The modified Phase 2 Project would include work within rights-of-way, which has the potential to interfere with emergency access. This impact would be potentially significant.</p>	<p>PS</p>	<p><b>Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction</b> Implement Adopted Mitigation Measure 4.10-a in Section 4.10, "Public Services."</p>	<p>LTS</p>
<p><b>Public Services</b></p>			
<p><b>Impact 4.10-a: Obstruction of Roadways during Construction</b></p> <p>The 2003 SEIR evaluated the potential for construction activities associated with the River Islands Project to adversely affect local roadways. It was concluded that the project could obstruct roadways in the vicinity during construction, which could obstruct or slow emergency vehicles attempting to access the area. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for obstruction of roadways during construction, which could obstruct or slow emergency vehicles. Therefore, there is no new significant impact and the impact is not substantially</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction</b> 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.</p>	<p>LTS</p>

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<p>more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>		<p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	
<p><b>Impact 4.10-b: Increased Demand for Fire Protection Facilities and Services</b>                      The 2003 SEIR evaluated whether the River Islands Project would increase the demand for fire protection facilities and services. The proposed Phase 2 modifications would result in additional residential development compared with what was evaluated in the 2003 SEIR and, thus, an increased demand for fire protection facilities and services. Without new fire stations, existing fire protection facilities and services within the City would not be able to adequately serve the project. The City of Lathrop strives to maintain adequate response times of a maximum of 3 to 4 minutes for incidents in urban areas (City of Lathrop 2004). LMFD does not currently meet the response time goal for the City overall; the current average response time for LMFD is approximately 5 minutes and 44 seconds to all incidents (LMFD 2020b). With the construction of Fire Station 35 and with Fire Station 34 in Mossdale Landing in close proximity to the Town Center via Bradshaw’s Crossing Bridge, Phase 1 of River Islands meets the 3- to 4-minute average response time requirement. The construction of a new fire station in the Phase 2 area would help the City meet its response time goal and ensure that adequate fire protection facilities and services are available to serve the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.10-b: Increased Demand for Fire Protection Facilities and Services</b>  <i>Mitigation Measure 4.10-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i>                      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 LMFPD<del>LMFD</del> methodologies. At some currently undetermined point during Phase 1<del>2</del>, the new permanent fire station (tentatively planned in the Employment Center Fire Station 36), <del>tentatively planned in the Woodlands District near River Islands Parkway</del>, 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. LMFPD would build and equip necessary fire stations, as needed, on land dedicated by the project applicant. <u>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.</u> 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 <u>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.</u>                      Construction of structures greater than 50 feet in height or four stories will not be permitted by the City until <del>LMFPD</del>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.</p>	<p>LTS</p>

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		<p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.</p>	
<p><b>Impact 4.10-c: Increased Demand for Water-Related Emergency Services and Facilities</b></p> <p>The 2003 SEIR determined that as a result of heavy integration of water features in the project design, demand for water-related emergency services and facilities would increase, and LMF D would require additional equipment to meet increased demand. Since certification of the 2003 SEIR, docks along the exterior water system that were identified in the original project design have been largely removed as part of project modifications evaluated in the 2012 Addendum. Interior and exterior water features authorized by current entitlements would not be altered by the modified Phase 2 Project. Further, since certification of the 2003 SEIR, LMF D has acquired Boat 31, which serves over 30 miles of Delta waterways along the San Joaquin River and would provide water-related emergency services to the River Islands Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would be less than significant.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.10-d: Increased Demand for Fire Flow</b></p> <p>The 2003 SEIR identifies that project development of residential, commercial, school, and other uses would require adequate fire flow needed for emergency fire suppression and that a lack of available resources would substantially impede the ability of the LMF D to provide effective services at the project site. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and would require adequate fire flow for emergency fire suppression. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.10-d: Increased Demand for Fire Flow</b></p> <p>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 <del>LMFPD</del> LMF D and the California Fire Code.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	<p>LTS</p>
<p><b>Impact 4.10-e: Increased Demand for Police Protection Facilities and Services</b></p> <p>The 2003 SEIR determined that development of the project would increase the demand for police protection facilities and services as well as result in the need for additional staff members and equipment to maintain an adequate level of service. The proposed Phase 2 modifications would result in additional residential development compared with what was evaluated in the 2003 SEIR and, thus, an</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.10-e: Increased Demand for Police Protection Facilities and Services</b></p> <p><i>Mitigation Measure 4.10-e shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i></p>	<p>LTS</p>

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<p>increased demand for police protection facilities and services. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>		<p>The project applicant shall pay to the City the startup costs incurred in the hiring and training for each of the new police officer positions needed to serve the project (four for Phase 1a, an additional 13 officers for Phase 1, and 27 more officers for Phase 2 (total of 44), assuming the existing 1.4 officer to 1,000 resident ratio). This fee shall be incurred once per position (i.e., it shall not be used to train turnover staff). In addition, the following equipment costs shall be paid for by the applicant:</p> <ul style="list-style-type: none"> <li>▶ standard safety equipment for each officer, including sidearm; belt, holster, etc.; body armor; mobile radio, etc.; and</li> <li>▶ a fully equipped patrol vehicle for every two officers, including radio, siren, roof lighting, Opticom mobile strobe, mobile computer terminal, and vehicle video recorder.</li> </ul> <p>The payment of the above startup fees and equipment costs shall be phased to coincide with the need for new officers generated by project development. Each time sufficient dwelling units are developed to generate 714 residents, the fee equivalent for one officer shall be paid to the City (based on a 1.4 officer to 1,000 resident ratio). The resident threshold may be adjusted if City policy results in a different officer to resident ratio. Resident generation rates to be used for this calculation are:</p> <ul style="list-style-type: none"> <li>▶ single family: 3.2 persons per dwelling unit,</li> <li>▶ multifamily: 2.5 persons per dwelling unit, and</li> <li>▶ active adult: 1.5 persons per dwelling unit.</li> </ul> <p>As police officers and support staff members are hired to meet demand associated with the proposed project, the planned Government Center, or similar or interim facilities, would be completed before Police Department staff exceed available space in the 7th Street building. 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.</p> <p>The project applicant shall mitigate for the need for sworn police officers at the ratio of 1 sworn officers per 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</p>	

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		<p><u>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.</u></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.</p>			
<p><b>Impact 4.10-f: Increased Demand for Animal Control Facilities and Services</b></p> <p>The 2003 SEIR determined that increased population as a result of project development would result in a corresponding increase in demand for animal control facilities and services. Development of new facilities and hiring of additional staff members would be required to maintain the existing level of service in the City. The proposed Phase 2 modifications would result in additional residential development compared with what was evaluated in the 2003 SEIR and, thus, an increased demand for animal control facilities and services. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	S	<p><b>Modified Mitigation Measure 4.10-f: Increased Demand for Animal Control Facilities and Services</b></p> <p><i>Mitigation Measure 4.10-f shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <p><del>The project applicant and City of Lathrop shall negotiate an animal control services agreement element. The agreement shall be designed to ensure that resources are available for animal control facilities and staff to expand to meet demand associated with the proposed project. Credit may be given to the project applicant if a portion of the River Islands Animal Campus is dedicated to use by the City's Animal Control Division.</del></p> <p><u>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.</u></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.</p>	LTS		
<p><b>Impact 4.10-g: Increased Demand for Public School Facilities and Services</b></p> <p>The 2003 SEIR determined that project implementation would result in increased demand for elementary and high schools. The approved River Islands Project</p>	S	<p><b>Modified Mitigation Measure 4.10-g: Increased Demand for Public School Facilities and Services</b></p>	LTS		

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<p>included construction of seven to eight grade K-8 schools (or six K-6 schools and two grade 6-8 schools), and a single high school. The plan for schools was modified with amendments to Phase 1, which included the construction of two schools (River Islands Technology Academy [K-8] and Next Generation S.T.E.A.M. Academy [K-12]), and would be further altered by the modified Phase 2 Project, which includes construction of four grade K-8 schools and one high school. Schedule and funding mechanisms are agreed to in accordance with the mitigation agreements between the applicant and BESD and TUSD for construction of these schools. It is anticipated that development of the modified Phase 2 Project would generate 6,380 students in grades K-8 and 1,653 students in grades 9-12. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts to public school facilities and services would remain significant as identified in the 2003 SEIR.</p>		<p><i>Mitigation Measure 4.10-g shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <p>The City shall not allow occupancy of any project residences until <del>a mitigation agreement has been executed between the project applicant and the BESD and TUSD regarding school districts ensure that its existing mitigation agreements are</del> <u>adhered to for</u> the provision of school services for the proposed project or payment of the state-mandated school impact fee City.</p> <p>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 <del>the a revised</del> <u>mitigation agreement needs to be executed only with the BESD and not with the TUSD only would meet this requirement.</u></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.</p>	
<p><b>Impact 4.10-h: Increased Generation of Solid Waste</b></p> <p>The 2003 SEIR evaluated the potential for increased solid waste generation as a result of project implementation. Foothill Sanitary Landfill, which would receive solid waste from the River Islands Project, has ample long-term available capacity and would be able to adequately serve the project. The modified Phase 2 Project would generate a similar amount of waste compared with what is described in the 2003 SEIR and would also use the Foothill Sanitary Landfill for solid waste disposal. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Public Utilities</b></p>			
<p><b>Impact 4.11-a: Demand for Potable Water</b></p> <p>The 2003 SEIR evaluated whether the River Islands Project would create demand for potable water beyond the available service capacity. The modified Phase 2 Project is estimated to generate a potable water demand of 3,038 AFY and a total water demand 3,798 AFY at project buildout in 2045. The WSA prepared for the modified Phase 2 Project noted that projected demand for potable water would</p>	S	<p><b>Adopted Mitigation Measure 4.11-a: Demand for Potable Water at Buildout</b></p> <p>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.</p>	LTS

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<p>decrease as compared with the 2002 WSA discussed in the 2003 SEIR. The 2020 WSA also noted that the 2002 WSA did not anticipate the use of non-potable water. While the modified Phase 2 Project would result in an overall increase in demand for water, the demand for potable water would decrease. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, because overall water demand for the River Islands Project would increase due to the modified Phase 2 Project, this impact would remain significant, as identified in the 2003 SEIR.</p>		<p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	
<p><b>Impact 4.11-b: Environmental Impacts Associated with the Development of New City Wells</b></p> <p>The 2003 SEIR determined that construction and operation of planned new City wells could contribute to significant geotechnical, groundwater, flooding, noise, farmland, aesthetics/views, terrestrial biology, and cultural resources impacts. Since that time, Well 21 and the Well 21 WTF have been constructed, though they are currently offline due to sanding and elevated levels of arsenic and uranium. While the majority of the infrastructure associated with Well 21 and the Well 21 WTF, such as the well head and the pump, have already been completed, the City is evaluating options that would allow Well 21 and the Well 21 WTF to resume production. Remaining improvements would not require large-scale construction that would result in more substantial impacts than those analyzed under the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. These impacts would remain less than significant as identified in the 2003 SEIR with implementation of the mitigation measures identified in the various sections of the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.11-c: Demand for Wastewater Treatment Capacity during Phase 1a and Phase 1</b></p> <p>The 2003 SEIR determined that implementation of Phase 1a and Phase 1 would create a demand for wastewater treatment that could not be met by existing City facilities. In order to accommodate the increased demand for wastewater treatment associated with project implementation, additional facilities would need to be constructed. Because this impact is specific to Phase 1a and Phase 1, the proposed Phase 2 modifications would not affect wastewater treatment capacity for earlier phases. Therefore, there would be no impact related to wastewater treatment capacity for Phase 1a and Phase 1.</p>	<p>NI</p>	<p>No mitigation is required.</p>	<p>NI</p>

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<p><b>Impact 4.11-d: Demand for Wastewater Treatment Capacity for Phase 2</b></p> <p>The 2003 SEIR determined that inadequate wastewater treatment capacity existed to serve the Phase 2 Project. Expansion of existing facilities or development of new facilities would be required for adequate treatment capacity at buildout. The proposed Phase 2 modifications would not result in an increased need for wastewater treatment capacity; therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant, as identified in the 2003 SEIR.</p>	S	<p><b>Adopted Mitigation Measure 4.11-d: Demand for Wastewater Treatment Capacity for Phase 2</b></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	LTS
<p><b>Impact 4.11-e: Environmental Impacts Associated with the Expansion of WRP # 1 and Construction of WRPs #2 and #3</b></p> <p>The 2003 SEIR determined that the expansion of WRP #1, construction of WRPs #2 and #3, and the potential discharges of treated wastewater to the San Joaquin River during later expansion phases could contribute to significant geotechnical, groundwater, flooding, air, odor, noise, land use, aesthetics/views, terrestrial biology, cultural resources, and emergency response impacts. Several potential impacts would be reduced to less-than-significant levels through implementation of mitigation measures, with the exception of odor and cumulative surface water quality and fisheries impacts. Since the 2003 SEIR, the LCTP (formerly WRP #1) has been completed and has adequate capacity to treat wastewater from the River Island development. The modified Phase 2 Project would not require construction of the WRPs #2 and #3 because the LCTP has sufficient capacity to serve the entirety of River Islands. The proposed Phase 2 modifications would not require additional expansion of wastewater treatment facilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be less than significant, as identified in the 2003 SEIR.</p>	LTS	<p>No mitigation is required.</p>	LTS
<p><b>Impact 4.11-f: Demand for Recycled Water Storage and Disposal Capacity during Phase 1a and Phase 1</b></p> <p>The 2003 SEIR determined that implementation of the project would result in increased demand for recycled water storage and disposal areas during Phase 1a and Phase 1. However, adequate storage and disposal areas are available to</p>	NI	<p>No mitigation is required.</p>	NI



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<p>accommodate the quantity of treated wastewater to be generated by the project during Phase 1a and 1. Because this impact is specific to Phase 1a and Phase 1, the proposed Phase 2 modifications would not affect wastewater treatment capacity for earlier phases. Therefore, there would be no impact related to wastewater treatment capacity for Phase 1a and Phase 1.</p>			
<p><b>Impact 4.11-g: Demand for Recycled Water Storage and Disposal Capacity for Phase 2</b></p> <p>The 2003 SEIR determined that the Phase 2 Project would result in an incremental increase in project-generated recycled water and that the project site would not have sufficient area to dispose of additional recycled water. Further, no offsite land disposal sites had been identified at that time. Although additional recycled water storage and disposal sites have been approved and constructed since the 2003 SEIR, sufficient existing offsite recycled water disposal capacity may still not be available and there would not be sufficient capacity on the project site. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.11-g: Demand for Recycled Water Storage and Disposal Capacity for Phase 2</b></p> <p>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:</p> <ul style="list-style-type: none"> <li>▶ sufficient acreage of storage ponds and spray fields is found for the disposal of the additional recycled water generated by the particular development area,</li> <li>▶ infrastructure is developed to convey this additional recycled water to the storage and disposal areas,</li> <li>▶ the storage ponds are lined,</li> <li>▶ the application occurs at agronomic rates, and</li> <li>▶ the off-site disposal system is operational.</li> </ul> <p>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.</p>	<p>LTS</p>
<p><b>Impact 4.11-h: Stormwater/Surface Runoff Management</b></p> <p>The 2003 SEIR determined that project would generate substantial amounts of stormwater/surface runoff through the development of roughly 2,900 acres of impervious surfaces. However, the project includes BMPs and elements to manage, store, and clean stormwater runoff and provide onsite stormwater storage and discharge capabilities. The proposed Phase 2 modifications will also provide sufficient stormwater management capabilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

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<p>identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Impact 4.11-i: Demand for Electricity and Natural Gas at Buildout</b></p> <p>The 2003 SEIR determined that the project would generate an increase in the demand for electricity and natural gas, but that PG&amp;E would be able to provide electricity and natural gas to the project and the increase in demand for electricity and natural gas would not be substantial in relation to the existing electricity and natural gas consumption in PG&amp;E's service area. An evaluation of the electricity and natural demand of the River Islands Project with the proposed Phase 2 modifications concluded that LID and PG&amp;E would be able to serve full development of the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Recreation</b></p>			
<p><b>Impact 4.12-a: Demand for Neighborhood and Community Parks</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to increase demand on existing neighborhood and community parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Residential development proposed for the modified Phase 2 Project would require 160.89 acres of parkland to meet the General Plan standard of 5 acres of parkland (2 acres of neighborhood park and 3 acres of community park) per 1,000 residents. The modified Phase 2 Project would include 162.41 acres of neighborhood and community parks as well as other parkland. As such, the modified Phase 2 Project would create parkland in excess of anticipated demand (by approximately 1.5 acres), thus satisfying and exceeding the General Plan requirements for parkland. The modified Phase 2 Project, therefore, would be expected to alleviate the demand on, and therefore increase availability of, existing parkland in the City of Lathrop. No substantial physical deterioration of existing parkland would result. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain beneficial as identified in the 2003 SEIR.</p>	B	No mitigation is required.	B

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<p><b>Impact 4.12-b: Reduced Recreational Boating Opportunities</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to result in reduced recreational boating opportunities. The approved River Islands Project included the construction of numerous new docks along the San Joaquin River and Old River that would require establishment of new areas with boat speed limits near the project site, thus limiting some recreational boating opportunities (e.g., water skiing). Since certification of the 2003 SEIR, however, docks and boat launch facilities along the exterior waterways have been removed as project features. Therefore, the modified Phase 2 Project would not substantially reduce recreational boating opportunities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.12-c: Consistency with Open Space Designation</b></p> <p>The 2003 SEIR evaluated whether the River Islands Project would be consistent with the General Plan's open space requirements. The General Plan designates a network of landscaped open space corridors on the River Islands Project site. The modified Phase 2 Project includes parks and landscaped parkways in most of these areas and expands the network in other areas (i.e., landscaped areas along the internal lakes and an extensive network of bicycle and pedestrian trails). As such, the modified Phase 2 Project would exceed open space requirements in the General Plan, enhancing the availability of recreational opportunities in the project vicinity. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, this impact would remain beneficial as identified in the 2003 SEIR.</p>	B	No mitigation is required.	B
<b>Agricultural Resources</b>			
<p><b>Impact 4.13-a: Conversion of Important Farmland</b></p> <p>The 2003 SEIR evaluated whether the River Islands Project would result in a conversion of Important Farmland to non-agricultural use. Implementation of the River Islands Project as a whole would result in the permanent conversion of approximately 3,620 acres of Prime Farmland and Farmland of Statewide Importance. Because the project footprint has not expanded, implementation of the modified Phase 2 Project would not result in the additional conversion of Important Farmland beyond the project area that was identified and evaluated in</p>	S	<p><b>Modified Mitigation Measure 4.13-a: Conversion of Important Farmland</b></p> <p><i>Mitigation Measure 4.13-a shown below includes the original language from the measure as it was adopted, with revisions to reflect the mitigation fees that are being paid to the <u>Central Valley Farmland Trust</u>, with text deletions shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <p>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</p>	SU

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<p>the 2003 SEIR. While this SEIR makes a technical correction to the amount of land that would be converted in the Phase 2 area, it does not identify any new areas proposed to be converted; the same land that was identified as being converted in the 2003 SEIR would be converted as a result of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain significant as identified in the 2003 SEIR.</p>		<p>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 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. <u>In addition, fees paid by the applicant to the Central Valley Farmland Trust partially mitigates conversion by providing funds towards the protection of off-site farmlands. However, therefore,</u> full compensation for losses of Important Farmland could not be achieved.</p> <p>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.</p>	
<p><b>Impact 4.13-b: Williamson Act Contract Cancellations</b></p> <p>The 2003 SEIR evaluated whether the River Islands Project would cause a conflict with a Williamson Act contract. Implementation of the River Islands Project would result in the cancellation of Williamson Act contracts for at least 415 acres and no more than 1,770 acres in the Phase 1 area. Implementation of the modified Phase 2 Project would not conflict with land under a Williamson Act contract or result in the cancellation of Williamson Act contracts because there are no longer any Williamson Act contracts in effect in the Phase 2 area (since certification of the 2003 SEIR, the Williamson Act contracts in the Phase 2 area were not renewed, and as anticipated, the contracts have since expired). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, there would be no impact for the modified Phase 2 Project.</p>	<p>NI</p>	<p>No mitigation is required.</p>	<p>NI</p>

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<p><b>Impact 4.13-b: Potential Williamson Act Contract Cancellations (only if Paradise Road Widening triggers a cancellation)</b></p> <p>Unlike the modified Phase 2 Project, the expansion of Paradise Road could have the potential to result in the cancellation of Williamson Act contracts (Impact 4.13-b). Many of the parcels adjacent to the road are under Williamson Act Contracts. Although the Phase 2 area does not contain lands in an FSZ, one parcel immediately adjacent to the existing road is located in an FSZ. FSZs are similar to Williamson Act contracts, but extend the contract time period from 10 to 20 years. However, the conditions of Williamson Act Contracts and FSZs may allow for agricultural lands under the contract to be transferred to public agencies for infrastructure projects. Also, the current County right-of-way for Paradise Road may extend beyond the existing roadway onto a portion of the adjacent agricultural lands, permitting road improvement activities on these lands. Therefore, further site-specific research will be required once a road design is developed to confirm whether or not any Williamson Act or FSZ contracts will need to be cancelled.</p>	S	<p><b>Modified Mitigation Measure 4.13-b: Williamson Act Contract Cancellations</b></p> <p><i>Mitigation Measure 4.13-b shown below includes the original language from the measure as it was adopted, with revisions to apply to the Paradise Road widening. Text deletions are shown in <del>strike through</del> and additional text shown in <u>underline</u>.</i></p> <p>Potential Williamson Act cancellations are limited to Phase 1a and Phase 1 of the River Islands Project <u>and have the potential to be triggered by the widening and improvement of Paradise Road.</u> The project applicant shall continue to allow/promote farming operations as long as possible on Phase 1a and Phase 1 as development proceeds. <u>The entity implementing the Paradise Road widening, if they use this SEIR to provide CEQA compliance, shall continue to allow/promote farming operations as long as possible as roadway design and construction proceeds.</u> 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.</p> <p>The River Islands at Lathrop project applicant would participate in the SJMSCP. <u>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.</u> 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.</p> <p>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.</p>	SU

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<p><b>Impact 4.13-c: Adjacent Landowner/User Conflicts</b></p> <p>The 2003 SEIR evaluated the potential for the River Islands Project to result in a conflict between existing agricultural lands and adjacent land uses. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for conflicts between project development and agricultural operations would continue during development of the modified Phase 2 Project when the development edge is adjacent to ongoing agricultural operations. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Potential conflicts between onsite agricultural operations and development would remain potentially significant as identified in the 2003 SEIR.</p>	<p>PS</p>	<p><b>Adopted Mitigation Measure 4.13-c: Adjacent Landowner/User Conflicts</b></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	<p>LTS</p>
<p><b>Terrestrial Biology</b></p>			
<p><b>Impact 4.14-a: General Biological Resources</b></p> <p>The 2003 SEIR evaluated the potential conversion of agricultural and ruderal habitats. This impact was determined to be less than significant, because agricultural and ruderal habitats are abundant locally and regionally. These habitats continue to be abundant locally and regionally, and the proposed Phase 2 modifications would not convert additional acres of habitat beyond the area considered in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

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<p><b>Impact 4.14-b: Special-Status Plants</b></p> <p>The 2003 SEIR evaluated the impacts to special-status plants from project implementation and concluded that disturbance to aquatic and riparian habitats could result in impacts to special-status plants should they occur in these areas. The updated CNPS database query conducted for this SEIR yielded three additional special-status plants that may potentially occur in these same aquatic and riparian habitats as those species considered in the 2003 SEIR. The proposed Phase 2 modifications could adversely affect aquatic habitats and riparian habitats where special-status species may occur, but the effects would be the same as those identified in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact to special-status plants would remain potentially significant as identified in the 2003 SEIR.</p>	PS	<p><b>Modified Mitigation Measure 4.14-b: Terrestrial Special-Status Plants</b></p> <p><i>The text of the following Mitigation Measure has been modified from the version included in the 2003 SEIR to incorporate the three additional special-status plant species identified in the impact discussion above. Text deletions are shown in <del>striketrough</del> and additional text is shown in <u>underline</u>.</i></p> <p><u>The project applicant will implement SJMSCP incidental take avoidance and minimization measures for special-status plants.</u> The following is a summary and clarification of <del>SJMSCP incidental take avoidance and minimization measures for special-status plants</del> <u>those measures</u>:</p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ If no special-status plants are found during focused surveys, the findings shall be documented in a letter report to <del>the regulatory agencies</del> <u>SJCOG</u>, and no further mitigation will be required.</li> <li>▶ If SJMCP covered special-status plants are found, the following measures shall be implemented <u>for SJMSCP covered species</u>:                             <ul style="list-style-type: none"> <li>▀ <b>Sanford's arrowhead, Delta button-celery, and Slough thistle:</b> The SJMSCP requires complete avoidance <del>for these species</del> <u>of Sanford's arrowhead (CRPR 1B.2), Delta button-celery (CESA Endangered), and slough thistle (CRPR 1B.1);</u> therefore, potential impacts on these species <del>could not be</del> <u>are not</u> 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 <u>the scope of effects and appropriate mitigation-avoidance and minimization</u> measures for any populations affected by the project, such as creation of offsite populations 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 <del>mitigation-avoidance, minimization, and mitigation</del> <u>mitigation-avoidance, minimization, and mitigation</u> measures determined necessary during this consultation shall be implemented by the project proponent <u>in accordance with the NPPA and CESA as applicable.</u></li> </ul> </li> </ul>	LTS

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		<ul style="list-style-type: none"> <li> <span style="color: #000080;">▶</span> <b>Mason's lilaepsis, rose mallow, Suisun marsh aster, Delta mudwort, and Delta tule pea:</b> The SJMSCP considers Mason's lilaepsis (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). <del>These species are considered widely distributed species by the SJMSCP,</del> and 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 <del>mitigate</del> impacts on these species, with the MSCP fees applied to the establishment and preservation of conservation area properties.                     </li> <li> <span style="color: #000080;">▶</span> <b>Wright's trichocoronis and bristly sedge:</b> <u>The SJMSCP considers Wright's trichocoronis (CRPR 2B.1) and bristly sedge (CRPR 2B.1). These species is considered a narrowly distributed species by the SJMSCP,</u> 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 <del>determine</del> <u>confirm</u> 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. <u>The project sponsor shall implement the</u> <del>After the appropriate mitigation has been determined, it shall be implemented by the project proponent confirmed by the Technical Advisory Committee.</del> </li> <li> <span style="color: #000080;">▶</span> <u>Marsh skullcap is not a SJMSCP 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:</u> <ul style="list-style-type: none"> <li> <span style="color: #000080;">▶</span> <u>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.</u> </li> <li> <span style="color: #000080;">▶</span> <u>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</u> </li> </ul> </li> </ul>			



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		<p><u>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.</u></p> <p><u>The applicant will provide the City documentation of compliance with these incidental take avoidance and minimization measures.</u></p> <p>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.</p>	
<p><b>Impact 4.14-c: Valley Elderberry Longhorn Beetle</b></p> <p>The 2003 SEIR evaluated the impacts to valley elderberry longhorn beetle and concluded that impacts would be significant due to the occurrence of elderberry shrubs in the project area that would be removed by development. The Phase 2 modifications would result in a reduced impact to valley elderberry longhorn beetle when compared to the approved project, because the construction of back bays along Old River would not occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, the modified Phase 2 Project would still result in the removal of some elderberry shrubs and, therefore, this impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.14-c: Valley Elderberry Longhorn Beetle</b></p> <p><i>Mitigation Measure 4.14-c shown below includes the original language from the measure as it was adopted, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i></p> <p><u>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 <del>SJMSCP incidental take avoidance and minimization measures for the valley elderberry longhorn beetle (VELB) those measures:</del></u></p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ 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).</li> <li>▶ 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</li> </ul>	<p>LTS</p>

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		<p>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).</p> <p><u>The applicant will provide the City documentation of compliance with these incidental take avoidance and minimization measures.</u></p> <p>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.</p>			
<p><b>Impact 4.14-d: Giant Garter Snake</b></p> <p>The 2003 SEIR disclosed that while giant garter snakes are not known to occur within the project area, potentially suitable aquatic habitat is present and could be adversely affected by project development. The dredge and fill of aquatic habitats that was discussed in the 2003 SEIR would be reduced under the proposed Phase 2 modifications; however, project activities are proposed within Paradise Cut and development would occur adjacent to these potentially suitable habitats that could result in the loss of individual giant garter snakes should they occur in the Phase 2 area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of individual garter snakes would remain a significant impact as identified in the 2003 SEIR.</p>	S	<p><b>Modified Mitigation Measure 4.14-d: Giant Garter Snake</b></p> <p><i>Since publication of the 2003 SEIR, the project applicant has participated in ESA consultation with the USFWS regarding giant garter snake. The following mitigation measure updates the text of the 2003 mitigation measure to better align with the results of this ongoing consultation. Text deletions are shown in <del>strikethrough</del> and additional text is shown in <u>underline</u></i></p> <p><u>The project applicant will implement SJMSCP incidental take avoidance and minimization measures for giant garter snake.</u> 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. <u>A Biological Assessment has been written for this consultation (Ascent Environmental and Roberson-Bryan 2016).</u> The following is a summary of SJMSCP and USFWS incidental take avoidance and minimization measures for the giant garter snake:</p> <ul style="list-style-type: none"> <li>▶ Preconstruction surveys for the giant garter snake shall occur within 24 hours of ground disturbance.</li> <li>▶ 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 presence/absence surveys, exclusion fencing) are necessary to minimize and avoid take.</li> </ul>	LTS		

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		<ul style="list-style-type: none"> <li>▶ Limit vegetation clearing within 200 feet of the banks of potential giant garter snake aquatic habitat to the minimal area necessary.</li> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ 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:                             <ul style="list-style-type: none"> <li>▣ install temporary fencing around potential garter snake habitat;</li> <li>▣ restrict working areas, spoils and equipment storage, and other project activities to areas outside of potential garter snake habitat; and</li> <li>▣ 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.</li> </ul> </li> <li>▶ 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).</li> </ul> <p><u>The applicant will provide the City documentation of compliance with these incidental take avoidance and minimization measures.</u></p> <p>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.</p>			
<p><b>Impact 4.14-e: Western Pond Turtle</b></p> <p>The 2003 SEIR disclosed that development of the River Islands Project would disturb western pond turtle habitat and result in the potential loss of individual turtles. The proposed Phase 2 modifications would result in a reduced acreage of impact overall compared to the approved Phase 2 Project evaluated in the 2003 SEIR, and the modified Phase 2 Project would avoid impacts to aquatic western pond turtle habitat at the pond in the RID Area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact</p>	S	<p><b>Modified Mitigation Measure 4.14-e: Western Pond Turtle</b></p> <p><i>The text of this Mitigation Measure has been modified compared to what is shown in the 2003 SEIR to better reflect project specific conditions associated with the modified Phase 2 Project. Text deletions are shown in <del>striketrough</del> and additional text is shown in <u>underline</u></i></p>	LTS		

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<p>identified in the 2003 SEIR. However, the proposed Phase 2 modifications still include activities that may result in loss of western pond turtle habitat. The loss of western pond turtle habitat would remain a significant impact, as identified in the 2003 SEIR.</p>		<p>The project applicant will implement the following measures are designed to minimize potential loss of western pond turtles and include the avoidance and minimization measures in the SJMSCP:</p> <ul style="list-style-type: none"> <li>▶ <u>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. During dewatering and fill of the pond in the RID Area, a qualified biologist shall be present onsite to search for western pond turtles. If no pond turtles or nests are observed, no further mitigation is necessary.</u></li> <li>▶ <u>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) 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).</u></li> <li>▶ <u>If individual pond turtles are found, they shall be relocated by the biologist to the nearest suitable aquatic habitat in Paradise Cut.</u></li> </ul> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>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.</p>	
<p><b>Impact 4.14-f: Swainson’s Hawk</b></p> <p>The 2003 SEIR described that the River Islands Project area includes suitable foraging habitat and active Swainson’s hawk nests that would be disturbed by project implementation. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat than that disclosed in the 2003 SEIR; however, loss of foraging habitat and potential losses of active nests would occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of foraging habitats and active Swainson’s hawk nests would remain a significant impact, as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.14-f: Swainson's Hawk</b></p> <p><i>The text of this Mitigation Measure has been modified compared to what is shown in the 2003 SEIR to remove reference to California Species Act Management Authorization for the West Lathrop Specific Plan (WLSP) as it has been confirmed that this permitting mechanism will not be used to address project effects on Swainson's hawk. Text deletions are shown in <del>strike through</del> and additional text is shown in <u>underline</u>.</i></p> <p>The City of Lathrop has obtained a California Endangered Species Act Management Authorization from CDFG for the WLSP (1996) to offset the impacts on the Swainson's hawk from development of West Lathrop. The management authorization is dependent on implementation of the WLSP habitat management agreement for Swainson's hawk (Sycamore Environmental Consultants 1995).</p>	<p>LTS</p>

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		<p>However, because the project proponent would seek coverage under the SJMSCP, it is anticipated that the SJMSCP would be the mechanism used to mitigate impacts on the Swainson's hawk from the proposed project. As an alternative, the existing management authorization could be used. A summary of both mitigation alternatives is provided below.</p> <p>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. These would be implemented in addition to payment of development fees required by the SJMSCP for funding of the establishment of habitat conservation areas.</p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ 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.</li> <li>▶ 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.</li> </ul> <p>The following measures are a summary of those set forth in the California Endangered Species Act Management Authorization from CDFG for the WLSP.</p> <ul style="list-style-type: none"> <li>▶ Mitigation for the loss of suitable Swainson's hawk foraging habitat shall be provided at a ratio of 0.5 acre of dedicated habitat to 1 acre of foraging habitat to be lost.</li> <li>▶ Before project construction that would occur during the nesting season (March 1 through August 15), surveys shall be conducted for active Swainson's hawk nests in areas with suitable nest trees within 0.25 mile of the proposed construction</li> </ul>			

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		<p>area. Large trees throughout the project site provide suitable habitat. Surveys shall be conducted at the beginning of the nesting season (April 15 through April 30). A visible exclusion zone shall be established around the portion of the construction area that occurs within 0.25 mile of the nest tree, and no project construction activity shall commence in the exclusion zone between March 1 and August 15. Nests shall be revisited during the posthatching stage (June 1 through June 30) and during the fledging period (July 1 through July 31) to determine the number of juveniles that have fledged.</p> <p>► All active and historic (those used during the previous 5 years) Swainson's hawk nest trees in the project area shall be preserved during implementation of the proposed project. No construction shall occur within 100 feet of a historic nest tree. A visible 100-foot exclusion zone shall be established around any historic nest tree located within 150 feet of a designated construction area.</p> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.</p>			
<p><b>Impact 4.14-g: Aleutian Canada Goose and Greater Sandhill Crane</b></p> <p>The 2003 SEIR described that the River Islands Project area includes suitable foraging habitat for Aleutian Canada goose and greater sandhill crane that would be disturbed by project implementation. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat than that disclosed in the 2003 SEIR, and suitable foraging habitat continues to be in abundance locally and regionally. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS		
<p><b>Impact 4.14-h: Burrowing Owl</b></p> <p>The 2003 SEIR described that the River Islands Project area includes potentially suitable foraging and burrow habitat for burrowing owl that would be disturbed by project implementation. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat or burrow habitat than that disclosed in the 2003 SEIR; however, this loss of foraging habitat and the potential loss of active burrows would nonetheless occur. Therefore, there is no new</p>	S	<p><b>Modified Mitigation Measure 4.14-h: Burrowing Owl</b></p> <p><i>The text of this Mitigation Measure has been modified to reflect an update to the SJMSCP avoidance and minimization measures for burrowing owl adopted in 2013. Text deletions are shown in <del>strikethrough</del> and additional text is shown in <u>underline</u>.</i></p> <p><u>The following is a summary and clarification of SJMSCP project applicant will implement the</u> incidental take avoidance and minimization measures for burrowing</p>	LTS		

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<p>significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, this would remain a significant impact to burrowing owl, as identified in the 2003 SEIR.</p>		<p>owl in the SJMSCP. The following is a summary and clarification of those measures as revised in 2013:</p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ <u>If burrowing owls are known to occupy the project site, during the breeding season p</u>Preconstruction surveys for burrowing owls shall be conducted within 75 meters of areas of project activity in locations with potential burrow habitat, including field edges, roadsides, levees, and fallow fields following the Staff Report on Burrowing Owls (CDFW 2012). <del>Actively farmed agricultural fields and regularly disked or graded fields do not provide suitable burrow sites and need not be surveyed.</del> The survey shall be conducted within 1 week <del>no less than 14 days prior and again within 24-hours</del> before the beginning of construction. If burrowing owls are found, the following measures shall be implemented:             <ul style="list-style-type: none"> <li>■ 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 <u>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 CDFG's-CDFW's Staff Report on Burrowing Owls (CDFG 1995-CDFW 2012).</u></li> <li>■ 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. the fledglings are capable of independent survival. <del>After-Once</del> <u>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</u></li> </ul> </li> </ul>	

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		<p>burrow can be destroyed. <u>After burrows are destroyed, pre-construction surveys are required 24-hours prior to construction to ensure owls do not re-colonize the area.</u></p> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>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.</p>			
<p><b>Impact 4.14-i: Colonial Nesting Birds</b></p> <p>The 2003 SEIR described that the River Islands Project area includes suitable foraging habitat for tricolored blackbird, black-crowned night-heron, and great blue heron that would be disturbed by project implementation, but that none of these species are likely to nest in the project area. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat than that disclosed in the 2003 SEIR, and suitable foraging habitat continues to be in abundance locally and regionally. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS		
<p><b>Impact 4.14-j: Ground-Nesting or Streamside/Lakeside-Nesting Birds</b></p> <p>The 2003 SEIR disclosed that the River Islands Project may result in loss of northern harrier nests. The updated CNDDDB query conducted for this SEIR yielded two additional special-status bird species (short-eared owl and yellow-headed blackbird) that could potentially occur in Paradise Cut and around the pond in the Phase 2 area. While the Phase 2 modifications would not disturb any lands/habitats not already considered in the 2003 SEIR, active nests of northern harrier, short-eared owl, and yellow-headed blackbird may still be lost due to direct or indirect disturbance. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain a potentially significant impact, as identified in the 2003 SEIR.</p>	PS	<p><b>Modified Mitigation Measure 4.14-j: Ground-Nesting or Streamside/Lakeside-Nesting Birds</b></p> <p><i>The text of this Mitigation Measure has been modified compared to what is shown in the 2003 to address short-eared owl and yellow-headed blackbird. Text deletions are shown in <del>strikethrough</del> and additional text is shown in <u>underline</u>.</i></p> <p>The <u>project applicant will implement</u> following is a summary and clarification of SJMSCP incidental take avoidance and minimization measures for the northern harrier <u>and short-eared owl found in the SJMSCP. The following is a summary and clarification of those measures:</u></p> <ul style="list-style-type: none"> <li>▶ If project activity would occur during the <del>norther harrier</del> nesting season <u>for northern harrier and short-eared owl</u> (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 <del>the bench in the PCIP Area</del> <u>Paradise Cut Area</u> but also could include fallow fields if they are allowed to develop herbaceous cover.</li> </ul>	LTS		



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		<p>The survey shall be conducted within 1 week before the beginning of construction.</p> <ul style="list-style-type: none"> <li>▶ <u>If northern harrier or short-eared owl nests are found, a</u> A setback of 500 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.</li> </ul> <p><u>The following measures would avoid and minimize the loss of yellow-headed blackbird nests:</u></p> <ul style="list-style-type: none"> <li>▶ <u>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.</u></li> <li>▶ <u>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.</u></li> </ul> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>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.</p>			
<p><b>Impact 4.14-k: Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat</b></p> <p>The 2003 SEIR evaluated the potential for impacts on special-status birds nesting in isolated trees or shrubs outside of riparian habitat. The 2003 SEIR concluded that the River Islands Project was not likely to adversely affect yellow warbler, but that the project could result loss of loggerhead shrike nests should they occur in the project area. The proposed Phase 2 modifications would not result in a greater loss of suitable nesting habitat, but the loss of loggerhead shrike nests could still</p>	PS	<p><b>Modified Mitigation Measure 4.14-k: Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat</b></p> <p><i>The project applicant will implement the following is a summary and clarification of SJMSCP incidental take avoidance and minimization measures for loggerhead shrike in the SJMSCP. The following is a summary and clarification of those measures:</i></p>	LTS		

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<p>occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant, as identified in the 2003 SEIR.</p>		<ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ 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.</li> </ul> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>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.</p>	
<p><b>Impact 4.14-l: Birds Nesting along Riparian Corridors</b></p> <p>The 2003 SEIR evaluated the potential for impacts to special-status birds nesting along riparian corridors. The 2003 SEIR concluded that there would not likely be an adverse effect on yellow-breasted chat, but that the River Islands Project had the potential to remove or disturb the nests of Cooper’s hawk and white-tailed kite. The proposed Phase 2 modifications would not result in additional nest disturbance or loss beyond what was considered in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of nests would be a potentially significant impact, as identified in the 2003 SEIR.</p>	<p>PS</p>	<p><b>Modified Mitigation Measure 4.14-l: Birds Nesting along Riparian Corridors</b></p> <p><i>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:</i></p> <ul style="list-style-type: none"> <li>▶ 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.</li> <li>▶ 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</li> </ul>	<p>LTS</p>

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		<p>season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.</p> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented with equal success during Phase 2.</p>	
<p><b>Impact 4.14-m: Snowy Egret, American White Pelican, Double-Crested Cormorant and White-Faced Ibis</b></p> <p>The 2003 SEIR evaluated the potential loss of foraging habitat for white-faced ibis, snowy egret, American white pelican, and double-crested cormorant, which are not likely to nest in the River Islands Project area. The proposed Phase 2 modifications would not convert any additional foraging habitat beyond what was analyzed in the 2003 SEIR and the availability of foraging habitat regionally and locally has not substantially changed. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.14-n: Ferruginous Hawk</b></p> <p>The 2003 SEIR evaluated the potential conversion of ferruginous hawk foraging habitat to development and noted the abundance of foraging habitat available to ferruginous hawks in the region and locally. The proposed Phase 2 modifications would not result in the disturbance of ferruginous hawk foraging habitat beyond what was considered in the 2003 SEIR and there has not been a substantial change in the abundance of foraging habitat for the species. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.14-o: Common Tree-Nesting Raptors</b></p> <p>The 2003 SEIR evaluated the potential impacts on common tree-nesting raptors from implementation of the River Islands Project. The 2003 SEIR disclosed that red-tailed hawk, red-shouldered hawk, and great-homed owl are known to nest in the project area, and that active nests of these species may be lost during</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.14-o: Common Tree-Nesting Raptors</b></p> <p>The following measures are designed to avoid loss of common tree-nesting raptors:</p> <ul style="list-style-type: none"> <li>▶ If project activity would occur during the raptor nesting season (February 15 through September 15), preconstruction surveys shall be conducted during the</li> </ul>	<p>LTS</p>

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<p>construction. The proposed Phase 2 modifications would not result in impacts to more suitable nesting habitat than the habitat that was analyzed in the 2003 SEIR; however, loss of common tree-nesting raptor nests may still occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of active nests would be a significant impact, as identified in the 2003 SEIR.</p>		<p>nesting season in suitable nesting habitat within 100 feet of areas of project activity. Large trees throughout the project area provide suitable habitat. The survey shall be conducted within 1 week before the beginning of construction or tree removal.</p> <ul style="list-style-type: none"> <li>▶ 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.</li> </ul> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, with equal success during Phase 2.</p>	
<p><b>Impact 4.14-p: Special-Status Bats</b></p> <p>The 2003 SEIR identified that no large roosts or maternity roosting sites for greater western mastiff bat, red bat, Yuma myotis, and Townsend's big-eared bat would be adversely affected by the River Islands Project. The proposed Phase 2 modifications would not disturb additional potentially suitable habitat or potential roost sites of western mastiff bat, red bat, Yuma myotis, Townsend's big-eared bat, and pallid bat beyond what was analyzed in the 2003 SEIR. Therefore, there is no new impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.14-q: Riparian Brush Rabbit</b></p> <p>The 2003 SEIR evaluated the potential conversion of riparian brush rabbit habitat on the species and concluded that activities within Paradise Cut would result in habitat removal and potential loss of individuals. The construction of the Golden Valley Parkway bridge in Paradise Cut is proposed to occur under the Phase 2 modifications and these activities would result in loss of habitat and the potential loss of individuals, which would be a significant impact.</p>	S	<p><b>Modified Mitigation Measure 4.14-q: Riparian Brush Rabbit</b></p> <p><u>The project applicant will implement the incidental take and avoidance measures in the SJMCSP for riparian brush rabbit.</u> The SJMCSP 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 SJMCSP. For the proposed project to qualify for coverage under the SJMCSP 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</p>	LTS

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		<p>not feasible, a separate <u>Section 7</u> consultation with USFWS under the ESA <u>would be required</u>, and <u>incidental take authorization from</u> CDFW under CESA. <u>Under CESA, the project would require a Section 2081(b) would be conducted</u>, and an Incidental Take Permit <u>would be required</u>. Specific <del>mitigation measures</del> <u>avoidance and minimization</u> would be developed during the consultation process. Potential take avoidance <u>and minimization</u> 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 <del>is expected to would</del> 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. <u>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.</u></p> <p><u>The applicant will provide the City documentation of compliance with these avoidance and minimization measures.</u></p> <p>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.</p>			
<p><b>Impact 4.14-r. Jurisdictional Waters of the United States and Riparian Habitat</b></p> <p>The 2003 SEIR disclosed that project implementation would result in fill of waters of the United States from fill of the agricultural ditch, fill of the pond, and construction of bridges across the San Joaquin River and Paradise Cut. The proposed Phase 2 modifications may result in dredge or fill of waters of the United States and removal of riparian habitat within Paradise Cut, but would not result in an increase in dredge, fill, or riparian disturbance from that considered in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This dredge</p>	S	<p><b>Modified Mitigation Measure 4.14-r. Jurisdictional Waters of the United States and Riparian Habitat</b></p> <p><i>The following text is a reproduction of Mitigation Measure 4.14-r in the 2003 SEIR. Some elements of the original mitigation measure are retained, such as filling of the "agricultural ditch and pond," even though they are not part of the modified Phase 2 Project. Text deletions are shown in <del>strikethrough</del> and additional text is shown in <u>underline</u>.</i></p> <p>The following measures are designed to minimize and mitigate impacts on jurisdictional waters of the United States and riparian habitat:</p>	LTS		

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<p>and fill of waters of the United States and riparian habitat removal would be a significant impact, as identified in the 2003 SEIR.</p>		<ul style="list-style-type: none"> <li>▶ Before <del>project implementation of project elements that could affect waters of the United States and riparian habitat</del>, 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. <del>This is expected to be completed through reverification of the existing wetland delineation.</del></li> <li>▶ <del>Authorization for The fill or discharge of dredged material into of the agricultural ditch and pond or other alteration of waters of the United States, and disturbance of riparian habitat will be subject to a</del> shall be secured from USACE <del>via the Section 404 permitting process permit.</del></li> <li>▶ A CDFW Streambed Alteration Agreement is also expected to be required for <u>modification to the bed, bank or channel of any streams or drainages including potential work within existing levees</u> along the San Joaquin River, Old River, and Paradise Cut.</li> <li>▶ 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.</li> <li>▶ 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.</li> </ul> <p><u>The applicant will provide the City documentation of compliance with these measures.</u></p>	
<p><b>Impact 4.14-s: Wildlife Corridors</b>                      The 2003 SEIR evaluated the potential impacts from development within the San Joaquin River Wildlife Corridor and potential conflicts with the SJMSCP. The proposed Phase 2 modifications would not include development that would conflict with the San Joaquin River Wildlife Corridor; therefore, there would be no conflict with the SJMSCP regarding this corridor. Therefore, there is no new</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

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<p>significant impact on wildlife corridors and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be less than significant for the modified Phase 2 Project.</p>			
<p><b>Impact 4.14-t: Biological Resources Associated with Offsite Facilities</b></p> <p>The 2003 SEIR concluded that impacts to biological resources could occur with the development of offsite facilities and that these impacts would be consistent with the impacts to biological resources that were evaluated throughout the 2003 SEIR. The impacts from offsite facilities proposed for the Phase 2 modifications would also be consistent with the impacts discussed for specific biological resources within this section. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant, as identified in the 2003 SEIR.</p>	<p>PS</p>	<p><b>Adopted Mitigation Measure 4.14-t: Biological Resources Associated with Offsite Facilities</b></p> <p>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.</p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented with equal success during Phase 2.</p>	<p>LTS</p>
<p><b>Fisheries</b></p>			
<p><b>Impact 4.15-a: RID Area Construction Sediment</b></p> <p>The 2003 SEIR concluded that the impact from construction sediment would be less than significant with the implementation of a storm water pollution prevention plan (SWPPP) and best management practices (BMPs). The Phase 2 modifications would not result in a larger area of construction than the project analyzed in the 2003 SEIR and a SWPP and BMPs would also be in place. Therefore, there is no new significant impact from construction sediment on fisheries as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

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<p><b>Impact 4.15-b: Levee Breaching</b></p> <p>The 2003 SEIR concluded that the breaching of levees along the San Joaquin River, Old River, and Paradise Cut would result in sediment entering and being suspended in the water, which would result in a significant impact to special-status fish. The River Islands Project no longer includes levee breaching activities along the Old River or San Joaquin River as back bays were removed from the proposed project as identified and evaluated in the adopted Third Addendum to the Phase 2003 SEIR. Levee breaches in Paradise Cut are still proposed, and although regularly described as part of Phase 1, the timing of the breaches would likely occur after Phase 1 development is complete and when Phase 2 is underway or complete (as evaluated in the Sixth Addendum to the 2003 SEIR). Implementation of these levee breaches could release sediment into Paradise Cut that could have a significant adverse effect on fish that may be present. There is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.15-b: Levee Breaching</b></p> <p><i>Mitigation Measure 4.15-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation (including references to items that are no longer included in the River Islands Project, such as levee breaching along Old River and the San Joaquin River), with text deletions shown in <del>strike</del> and additional text shown in <u>underline</u>.</i></p> <p>The City shall ensure that a SWPPP is prepared and implemented during construction activities and that all 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.</p> <p>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.</p> <p>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 <del>Old River and</del> 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 <del>Old River and</del> 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.</p> <p><del>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</del></p>	<p>LTS</p>



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		<p>be considered first; September and October should be considered next; and March, April, and May should be considered last.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.</p>			
<p><b>Impact 4.15-c: Bridge and Utility Crossings</b></p> <p>The 2003 SEIR disclosed that the construction of bridges and the utility crossing on the San Joaquin River would be a significant impact, because these activities could result in stream bed and riverbank disturbance, sediment input, and contaminant input, all of which could substantially adversely affect fish species in the immediate area. The construction of the Golden Valley Parkway Bridge and the second two lanes of the Bradshaw’s Crossing Bridge are proposed for construction in Phase 2 and would have substantial adverse effects on multiple special-status fish species. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Modified Mitigation Measure 4.15-c: Bridge and Utility Crossings</b></p> <p><i>The following mitigation measure combines relevant elements of adopted Mitigation Measures 4.15-b and 4.15-c from the 2003 SEIR. Mitigation Measure 4.15-b applies to levee breaching, which now may only occur in Paradise Cut (see discussion of Impact 4.15-b above). However, Mitigation Measure 4.15-c in the 2003 SEIR references and incorporates portions of Mitigation Measure 4.15-b. The relevant portions of Mitigation Measure 4.15-b are included here. In addition, portions of Mitigation Measure 4.15-c related to direction drilling under the San Joaquin River that were included in the 2003 SEIR, but no longer apply to the project, have been removed. Text deletions are shown in <del>strike through</del> and additional text is shown in <u>underline</u>.</i></p> <p>The City shall ensure that a SWPPP is prepared and implemented during construction activities and that all 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.</p> <p>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 <u>Modified Mitigation Measures 4.8-a and Adopted Mitigation Measure 4.8-c</u> 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.</p> <p><del>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 Old River and 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 Old River and Paradise Cut are March, April, and May, with January, February, and June being the second</del></p>	<p>LTS</p>		

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		<p>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.</p> <p>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.</p> <p><del>The City and the project applicant shall implement all measures identified for 4.15-b. Implementation of the items included in Mitigation Measure 4.15-b also would address potential construction impacts associated with bridge crossings over the San Joaquin River. In addition, the SWPPP used for the directional boring of the 4-inch natural gas pipeline under the San Joaquin River shall include specific measures to avoid, minimize, and, if necessary, clean up bentonite/drilling slurry releases into the river. Measures could include monitoring drilling slurry pressures and halting drilling if pressures drop significantly; monitoring the river for bentonite plumes; avoiding drilling at night; and having containment booms, vacuum trucks, and other containment and cleanup equipment onsite during drilling. Also see Mitigation Measure 4.8-e in Section 4.8, "Hydrology and Water Quality."</del></p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.</p>			
<p><b>Impact 4.15-d: Paradise Cut Bridge</b></p> <p>The 2003 SEIR concluded that the construction of the Golden Valley Parkway Bridge within Paradise Cut would result in significant impacts due to adverse effects of sediment and contaminant runoff. The construction of Golden Valley Parkway Bridge within Paradise Cut is proposed to occur as part of the Phase 2 modifications and would have the same adverse effects as described in the 2003 SEIR on special-status fishes. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, the impact of construction</p>	S	<p><b>Adopted Mitigation Measure 4.15-d: Paradise Cut Bridge</b></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during applicable Phase 1 activities and would continue to be implemented during Phase 2.</p>	LTS		

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<p>of the Golden Valley Parkway Bridge would result in a significant impact on fisheries as identified in the 2003 SEIR.</p>			
<p><b>Impact 4.15-e: Dock Construction</b>                      The 2003 SEIR disclosed that dock construction along the San Joaquin River, Old River, and Paradise Cut would result in temporary sediment loading, which due to its limited scope and the implementation of BMPs would be a less-than-significant impact on fisheries. The Phase 2 modifications do not include the construction of docks on the San Joaquin River, Old River, or Paradise Cut; therefore, there would be no impact on fisheries from this activity.</p>	<p style="text-align: center;">NI</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">NI</p>
<p><b>Impact 4.15-f: Structural Habitat Features</b>                      The 2003 SEIR disclosed that the construction of docks, back bays, bridge pilings, and habitat enhancements would result in additional fisheries habitat that would be beneficial to fisheries in the project area. Since publication of the 2003 SEIR docks and back bays along the exterior waterways have been removed as project features; therefore, the Phase 2 modifications would not include the construction of docks or back bays. However, the construction of bridge pilings and habitat enhancements are included. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. These structural habitat features that would increase fish habitat and result in a beneficial impact to fisheries, as identified in the 2003 SEIR.</p>	<p style="text-align: center;">B</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">B</p>
<p><b>Impact 4.15-g: Entrainment in Project Pumps</b>                      The 2003 SEIR disclosed that less water would be pumped to maintain the River Islands internal lake system than was pumped for existing agricultural operations, pumps in Paradise Cut would be removed, screens would be added to the pumps that remain in operation, and the seasonality of pumping would occur in more “fish-friendly” months. The Phase 2 modifications would not alter these project elements and would maintain the removal of pumps, screening, and seasonality of pumping that would decrease the likelihood of fish entrainment. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The Phase 2 modifications would result in an impact that would be beneficial to fisheries, as identified in the 2003 SEIR.</p>	<p style="text-align: center;">B</p>	<p>No mitigation is required.</p>	<p style="text-align: center;">B</p>

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<p><b>Impact 4.15-h: Water Discharges to the Delta</b></p> <p>The 2003 SEIR disclosed that water discharges from the project would pass through a system of swales and paseos into the River Islands internal lake system before being discharged into the Delta only at high flows. The 2003 SEIR concluded that this system would result in beneficial impacts when compared to the discharge from the existing agricultural production in the project area. The Phase 2 modifications include the same stormwater treatment system of swales, paseos, and lake discussed in the 2003 SEIR with modifications evaluated in subsequent Addenda (i.e., a shift from one large central lake to several smaller interconnected lakes). Operation of the existing interconnected Phase 1 lake system have shown the differences in discharges compared to agricultural operations identified in 2003 SEIR are occurring. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue with performance similar to the current Phase 1 system (Engeo 2020; PACE 2020). Therefore, the allowance of additional housing potential, increased density of housing, and additional retail and commercial development proposed in Phase 2 would not result in appreciably different land disturbance or water discharges beyond that assumed in the 2003 SEIR. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, the impact of water discharges to the Delta from the Phase 2 modifications would be beneficial to fisheries, as identified in the 2003 SEIR.</p>	B	No mitigation is required.	B
<p><b>Impact 4.15-i: Altered Hydrology from Water Discharges</b></p> <p>The 2003 SEIR concluded that changes to hydrology that would occur from discharges to Paradise Cut would have a less than significant impact on fisheries. The Phase 2 modifications would not substantially change the discharge from the artificial lake system or the deepening or widening of in Paradise Cut proposed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.15-j: Maintenance Dredging of Back Bays</b></p> <p>The 2003 SEIR disclosed that the dredging of back bays constructed along the San Joaquin River and Old River would result in temporary sediment loading, which</p>	NI	No mitigation is required.	NI

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<p>due to its potential effects on special-status fishes would be a significant impact. Back bays have since been removed as a project element. The Phase 2 modifications do not include the construction or dredging of back bays; therefore, there would be no impact on fisheries from this activity.</p>			
<p><b>Impact 4.15-k: Habitat Modifications in Paradise Cut</b>                      The 2003 SEIR concluded that the proposed habitat modifications in Paradise Cut would be beneficial to fisheries. The habitat modifications in Paradise Cut are proposed to continue with the Phase 2 modifications. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts to fisheries due to habitat modifications in Paradise Cut from the Phase 2 modifications would remain beneficial as identified in the 2003 SEIR.</p>	B	No mitigation is required.	B
<p><b>Impact 4.15-l: Diversion of Chinook Salmon Smolts</b>                      The 2003 SEIR disclosed that the changes to Paradise Cut flood capacity would change the magnitude of flows from the San Joaquin River into Paradise Cut, but that the changes in magnitude would not have a substantial effect on the number of chinook salmon smolts that are diverted into Paradise Cut. Furthermore, there would be no change to the timing, frequency, or duration of flows. Therefore, the 2003 SEIR concluded that there would be a less than significant impact. The Phase 2 modifications would not involve any changes to Paradise Weir or modifications to Paradise Cut beyond those analyzed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact to the diversion of chinook salmon smolts would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.15-m: Creation of New Fish Habitat in the RID Area</b>                      The 2003 SEIR concluded that the construction of artificial lake habitat in the existing agricultural uplands would result in an increase in fish habitat that would have a beneficial impact on fisheries. The Phase 2 modifications would continue to create lake habitat within the project area. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would therefore result in a beneficial impact to fisheries, as identified in the 2003 SEIR.</p>	B	No mitigation is required.	B

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<p><b>Impact 4.15-n: Introduction of Exotic Fish into the Delta</b></p> <p>The 2003 SEIR disclosed that exotic fishes could be introduced into the Delta from the constructed internal lake system; however, only fish species that currently exist in the Delta would be stocked into the internal lakes. Therefore, the introduction of exotic fish into the Delta as a result of the project would be a less-than-significant impact. The creation of a series of artificial lakes are proposed to continue with the Phase 2 modifications and stocking of these lakes would occur as described in the 2003 SEIR. Therefore, there is no new significant impact related to the introduction of exotic fish into the delta as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.15-o: Increased Water Consumption</b></p> <p>The 2003 SEIR disclosed that the water for the project would be provided by the City of Lathrop in part from surface water supplies. The document concluded that the amount of surface water consumption by the project is minimal when compared to the total surface water use in the state and would therefore be a less-than-significant impact on fisheries. The Phase 2 modifications would result in a minor decrease in water consumption from what was estimated in the 2003 SEIR (Woodard &amp; Curran 2020). This change would not be substantial and would also be minimal when compared to the total surface water use in the state. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Cultural and Tribal Cultural Resources</b></p>			
<p><b>Impact 4.16-a: Cause a Substantial Adverse Change in the Significance of a Listed Archaeological Site</b></p> <p>The 2003 SEIR evaluated the potential for construction of the River Islands Project to alter the surrounding visual context of cultural resources listed as California historic landmarks. Because the project footprint has not expanded, implementation of the modified Phase 2 Project would not adversely affect any additional archaeological sites that were not identified and evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	S	<p><b>Adopted Mitigation Measure 4.16-a: Listed Archaeological Sites</b></p> <p>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</p>	LTS

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		<p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as applicable, during Phase 2.</p>	
<p><b>Impact 4.16-b: Cause a Substantial Adverse Change in the Significance of a Recorded Archaeological Site</b></p> <p>The 2003 SEIR evaluated the potential for construction of the River Islands Project to affect one prehistoric archaeological site (RI 1), which could represent a unique archaeological resource. However, archaeological site RI 1 is not located within the Phase 2 area and the updated records search results revealed no sites that could represent unique archaeological resources. Therefore, there would be no impact.</p>	<p>NI</p>	<p>No mitigation is required.</p>	<p>NI</p>
<p><b>Impact 4.16-c: Cause a Substantial Adverse Change in the Significance of Historic Properties</b></p> <p>The 2003 SEIR evaluated the potential for construction of the River Islands Project to affect historic properties, including two sets of silos (Site RI-10H and Site RI-12H). These sites are not located within the Phase 2 area and the updated records search results revealed no historic properties. Therefore, there would be no impact.</p>	<p>NI</p>	<p>No mitigation is required.</p>	<p>NI</p>
<p><b>Impact 4.16-d: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources</b></p> <p>The 2003 SEIR evaluated the potential for discovery or damage of yet undiscovered archaeological resources. No archaeological sites have been identified within the Phase 2 area. Nonetheless, project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of encountering previously undiscovered archaeological resources. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.</p>	<p>PS</p>	<p><b>Modified Mitigation Measure 4.16-d: Undiscovered/Unrecorded Archaeological Sites</b></p> <p><i>Mitigation Measure 4.16-d shown below includes the original language from the measure as it was adopted, with clarifications and refinements to reflect the AB 52 consultation conducted, to date, as part of this SEIR CEQA process, with text deletions shown in <del>strikethrough</del> and additional text shown in <u>underline</u>.</i></p> <p>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. <u>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.</u></p>	<p>LTS</p>

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		<p><u>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 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.</u></p> <p>If artifacts or unusual amounts of stone, bone, or shell are uncovered during construction activities, <u>or discovered during inspections by Tribal representatives,</u> 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. <u>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.</u> 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.</p> <p>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.</p>			



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<p><b>Impact 4.16-e: Disturb Human Remains</b></p> <p>The 2003 SEIR evaluated the potential for discovery or damage of previously unknown human remains. Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the project site. However, ground-disturbing construction activities could uncover previously unknown human remains. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of encountering previously unknown human remains. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.16-e: Undiscovered/Unrecorded Human Remains.</b></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.</p>	<p>LTS</p>
<p><b>Impact 4.16-f: Cause a Substantial Adverse Change in Offsite Resources</b></p> <p>The 2003 SEIR evaluated the potential for construction of the River Islands Project to affect offsite resources in areas where specific construction corridors/footprints had not been defined (e.g., electrical transmission lines, Golden Valley Parkway route to I-205, I-205/Chrisman Road interchange, I-5/Louise Avenue interchange improvements). As identified in the 2003 SEIR, construction-related activities during installation of these facilities could affect as yet undiscovered or unrecorded archaeological sites or human remains in these areas. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain significant as identified in the 2003 SEIR.</p>	<p>S</p>	<p><b>Adopted Mitigation Measure 4.16-f: Offsite Resources.</b></p> <p>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.</p> <p>This mitigation measure has been implemented successfully during Phase 1 where offsite activities have been implemented and would continue to be implemented during Phase 2.</p>	<p>LTS</p>
<p><b>Impact 4.16-g: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource</b></p> <p>The City of Lathrop sent notification for consultation under PRC 21080.3.1 to two tribes on March 25, 2020 who had previously requested notifications per PRC 21080.3.1 (b)(1). Only the Northern Valley Yokuts Tribe requested consultation. Consultation did not result in the identification of any tribal cultural resources (TCRs). There is no evidence that a resource</p>	<p>PS</p>	<p><b>New Mitigation Measure 4.16-g: Undiscovered/Unrecorded Tribal Cultural Resources</b></p> <p>Implement Modified Mitigation Measure 4.16-d.</p>	<p>LTS</p>

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<p>that would qualify as a TCR is present in the Phase 2 area. However, consultation under AB 52 has resulted in the indication that the area is sensitive for undiscovered TCRs. Therefore, impacts to resources that could qualify as TCRs would be potentially significant.</p>			
<p><b>Aesthetics</b></p>			
<p><b>Impact 4.17-a: Views of the Site from Surrounding Lands</b>                      The 2003 SEIR evaluated the potential for significant impacts related to view of the project site from surrounding lands. Because of the flat terrain, views of the project would be largely obscured from public viewpoints by elevated levees and raised freeways. Views of the project site following buildout of River Islands would be consistent with surrounding views of residential and commercial development. The proposed Phase 2 modifications would increase the amount and density of residential development but would not change the development footprint and would not change maximum building height as compared with the approved River Islands Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.17-b: Views from I-5 and the I-5/I-205/SR 120 Merge Segment</b>                      The 2003 SEIR evaluated whether project implementation would result in significant effects to views of the project site from I-5 and the I-5/I-205/SR 29 merge segment. The analysis noted that while development of the project site would be visible from these highway segments, none of the highways are identified as scenic highways and post=project views would be similar to those found elsewhere in the vicinity. The proposed Phase 2 modifications would increase the amount and density of residential development but would not change the development footprint and would not change maximum building height as evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain less than significant as identified in the 2003 SEIR.</p>	LTS	No mitigation is required.	LTS
<p><b>Impact 4.17-c: Views for Recreational Boaters</b>                      The 2003 SEIR evaluated the potential for impacts to views for recreational boaters and noted that development of the River Islands project would likely result in an improvement relative to existing views of the levee faces. The modified Phase 2 Project would not modify any part of the levee system or any of the water features</p>	LTS	No mitigation is required.	LTS

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<p>as approved and modified by the six previous addenda. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Impact 4.17-d: Nighttime Views</b>                      The 2003 SEIR evaluated whether project implementation would impact nighttime views due to light and glare. The 2003 SEIR concluded that project implementation would result in an incremental increase in the amount of light and glare but adherence to UDC lighting guidelines, consistent the WLSP, would minimize potential light and glare impacts on nighttime views. The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and Transit Oriented Development within the original boundaries of the Phase 2 area, which could incrementally increase the amount of nighttime light in the project area because lighting associated with commercial and higher density residential development typically generated a higher level of foot-candles than low density residential. However, compliance with UDC lighting guidelines, the City of Lathrop municipal code, and other guidelines and requirements would minimize light and glare impacts to nighttime views. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain less than significant as identified in the 2003 SEIR.</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>
<p><b>Impact 4.17-e: Views of the Grain Silos and Railroad Bridge</b>                      The 2003 SEIR evaluated whether the visibility of project elements in the background of the brick grain silos and UPRR bridge would result in significant impacts related to visual resources. Development of the River Islands Project area would add new structures that would be visible in the background of these historic structures, but the historic structures would not be altered and would continue to be visible from highways and other locations. The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and Transit Oriented Development within the original boundaries of the Phase 2 area but would not interfere with views of the historic structures because the heights of these structures as allowed by the WLSP, UDC, and subsequent design level documents would be restricted. Therefore, there is no new significant impact and the impact is</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p style="text-align: center;"> <b>B = Beneficial    NI = No impact    LTS = Less than significant    PS = Potentially significant    S = Significant    SU = Significant and unavoidable</b> </p>			
<p>not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain less than significant as identified in the 2003 SEIR.</p>			
<p><b>Impact 4.17-f: Design and Function of Walls and Fences/Consistency with the WLSP</b>                      The 2003 SEIR evaluated whether proposed openings in walls adjacent to arterial roads, as described in the River Islands UDC, could expose adjacent residential areas to intrusive levels of light and glare. The River Islands UDC suggests that walls between residential neighborhoods and arterial roads contain openings that either lack any fencing or that feature “see through” fences. Such fencing could contradict guidelines in the WLSP that require visual separation between roadways and neighborhoods to reduce light, glare, and aesthetic impacts. The proposed Phase 2 modifications would result in development of the same project site as evaluated in the 2003 SEIR and the same potential for gaps and openings along arterial roadways to intrude on residential areas. Many of the design aspects depicted in the 2003 UDC have been incorporated into the Phase 2 UDC to appear as a seamless transition of walls and fence structures from one phase to the other. Additionally, subsequent NDP and AG/DS required for each district of development will further detail requirements for wall and fences. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.</p>	<p>PS</p>	<p>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 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.                      This mitigation measure has been implemented successfully during Phase 1 construction and would continue to be implemented during the modified Phase 2 Project.</p>	<p>LTS</p>
<p><b>Energy</b></p>			
<p><b>Impact 4.18-a: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation</b>                      Implementation of the modified Phase 2 Project would result in the consumption of additional energy supplies during construction in the form of gasoline and diesel fuel consumption; however, this energy expenditure would not be considered atypical when compared to other construction projects. Operation of new land uses associated with the modified Phase 2 Project would also result in additional energy consumption, but the modified Phase 2 Project would be required to comply with the most recent iteration of the California Energy Code as it becomes more stringent over time. Additionally, the modified Phase 2 Project would provide necessary housing to the City of Lathrop meeting the objectives of the 2019 General Plan Update Housing Element. As compared to the approved Phase 2 Project, the modified Phase 2 Project would be more energy efficient</p>	<p>LTS</p>	<p>No mitigation is required.</p>	<p>LTS</p>

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p style="text-align: center;"> <b>B = Beneficial    NI = No impact    LTS = Less than significant    PS = Potentially significant    S = Significant    SU = Significant and unavoidable</b> </p>			
<p>when considered in the context of the number of residents that the modified Phase 2 Project supports. Therefore, the modified Phase 2 Project would not have a more severe impact than the approved Phase 2 Project due to its greater energy efficiency. This impact would be less than significant.</p>			
<p><b>Impact 4.18-b: Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency</b>                      Although implementation of the modified Phase 2 Project would increase energy demands compared to existing conditions, development would be required to comply with applicable California Energy Code and RPS. As a result, implementation of the modified Phase 2 Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would therefore be less than significant.</p>	LTS	No mitigation is required.	LTS
<p><b>Greenhouse Gas Emissions and Climate Change</b></p>			
<p><b>Impact 4.19-a: Project-Generated GHG Emissions</b>                      Construction of the approved Phase 2 Project would generate a total of 14,882 MTCO<sub>2</sub>e, or 744 MTCO<sub>2</sub>e/year, when amortized over a 20-year period. Construction of the modified Phase 2 Project would generate 14,549 MTCO<sub>2</sub>e, or 724 MTCO<sub>2</sub>e/year. Operational emissions associated with the approved Phase 2 Project and the modified Phase 2 Project would result in GHG emissions associated with transportation, electricity and natural gas combustion, water consumption, and wastewater and solid waste generation. Operation of the approved Phase 2 Project would generate approximately 10.67 MTCO<sub>2</sub>e/year/SP in 2040. The modified Phase 2 Project would generate approximately 7.73 MTCO<sub>2</sub>e/year/SP in 2040. This level of emissions is greater than 2.12 MTCO<sub>2</sub>e/year/SP; however, the efficiency metric under the modified Phase 2 Project would be less than what would have occurred under the approved Phase 2 Project. Nonetheless, because the modified Phase 2 Project would generate GHG emissions in exceedance of 2.12 MTCO<sub>2</sub>e/year/SP in 2040, this impact would be potentially significant. This impact would, however, not be more severe, and in fact would be less than would have occurred with the approved Phase 2 Project.</p>	PS	<p><b>New Mitigation Measure 4.19-a(1): Implement All Feasible On-Site Greenhouse Gas Reduction Measures</b>                      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 mandatory requirements for future residential and nonresidential buildings.</p>	SU

Impacts			Significance before Mitigation	Mitigation Measures	Significance after Mitigation
B = Beneficial	NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
				<p>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.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul> <p>b. Operational GHG Reduction Measures</p> <ul style="list-style-type: none"> <li>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.</li> </ul>	

Impacts			Significance before Mitigation	Mitigation Measures	Significance after Mitigation
B = Beneficial	NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
				<ul style="list-style-type: none"> <li>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.</li> <li>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).</li> <li>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.</li> <li>v. All buildings shall be designed to include cool roofs consistent with requirements established by Tier 2 of the CALGreen Code.</li> <li>vi. All buildings shall be designed to comply with requirements for water efficiency and conservation as established in the CALGreen Code.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	

Impacts			Significance before Mitigation	Mitigation Measures		Significance after Mitigation
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				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. xii. The project applicant shall create safe paths of travel to building and park access points, connecting to existing bicycle and pedestrian facilities. <b>New Mitigation Measure 4.19-a(2): Purchase Real, Quantifiable, Permanent, Verifiable, Enforceable, and Additional Carbon Offsets</b> 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 <sub>2</sub> e/year/SP, the project applicant shall offset the remaining GHG emissions to meet 2.12 MTCO <sub>2</sub> e/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 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 <sub>2</sub> e/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		



Impacts			Significance before Mitigation	Mitigation Measures		Significance after Mitigation
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					<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> <li>▶ 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 in a quantity equal to the project’s remaining GHG emissions;</li> <li>▶ 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;</li> <li>▶ 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</li> <li>▶ 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.</li> </ul>	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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<b>Wildfire</b>			
<p><b>Impact 4.20-a: Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan</b></p> <p>The San Joaquin County OES maintains an Emergency Operations Plan (2019) that serves as the official emergency plan for the county. Additionally, the San Joaquin County OES has published evacuation maps for communities within the county, including River Islands. The established evacuation route is to exit River Islands via Lakeside Drive to I-5. Construction activities associated with the project could result in temporary lane closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. As part of project operation, adequate emergency access routes to and from the development area would be established and emergency response would not be impaired. Nonetheless, because construction activities could interfere with or slow down emergency vehicle access and services, this impact would be potentially significant.</p>	PS	<p><b>Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction</b></p> <p>Implement Adopted Mitigation Measure 4.10-a in Section 4.10, "Public Services."</p>	LTS

## 3 DESCRIPTION OF THE PROPOSED PROJECT

This chapter presents a detailed description of the approved River Islands at Lathrop Project (River Islands Project) as well as the proposed changes to Phase 2 of the River Islands Project (modified Phase 2 Project or project). The proposed changes would include densification of a portion of the Phase 2 area with additional multi-family units as well as additional attached single-family units, the creation of a “town center” mixed-use area at Paradise Road (Paradise Cut Village Center), the addition of a mixed-use Transit Oriented Development (TOD) area to complement the future planned Valley Link transit station, and changes in the circulation pattern. The modified Phase 2 Project also includes an amendment to the existing 2002 West Lathrop Specific Plan (WLSP) and 2004 City of Lathrop General Plan to reflect these land use changes. It is anticipated that traffic generated by the River Islands Project will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. The widening of Paradise Road is considered in the SEIR.

This chapter describes project location, background and need, previous CEQA documentation, City of Lathrop project objectives, project characteristics and changes to the previously approved Phase 2 Project, and potential permits and approvals required.

### 3.1 PROJECT LOCATION

The project is located in the city of Lathrop, San Joaquin County, California. Lathrop is situated in the San Joaquin Valley, at the junction of Interstate 5 (I-5), I-205, and State Route 120 (SR 120), approximately 65 miles east of San Francisco and 55 miles south of Sacramento.

Development of the approved River Islands Project is split among two primary development phases—Phase 1 and Phase 2—as shown in Figure 3-1. The project site is the Phase 2 area of the River Islands Project (Phase 2 area), located on Stewart Tract and Paradise Cut within the WLSP in the city of Lathrop. The Phase 2 area includes approximately 3,434 acres of land and open space, with 2,730 acres located on Stewart Tract (an inland island bounded by Paradise Cut, the San Joaquin River, and Old River) and 704 acres located in Paradise Cut (a flood control bypass that receives water from the San Joaquin River when there are sufficient flows and connects downstream to Old River) (Figure 3-2). Throughout this SEIR, the portion of the Phase 2 area on Stewart Tract may be referred to as the Phase 2 development area, or as part of the River Islands Development (RID) Area. The RID Area designates all portions of the project site on Stewart Tract, both Phase 1 and Phase 2. The Paradise Cut portion of the project site may be referred to as the Paradise Cut Conservation Area. Local access is currently provided by River Islands Parkway, Paradise Road (reopening after levee construction activities), and Manthey Road.

The project site (Phase 2 development area and Paradise Cut Conservation Area) is mostly undeveloped and/or agricultural land. The exception is the Old River District (also known as “Stage 2B”), which is an area originally slated for development within Phase 1 of the RID Area, where extension of utilities and the Phase 1 roadway network has been completed under Phase 1 Project approvals. Development of single family and multi-family units in the Old River District requires the City’s approval of the proposed Phase 2 modifications. For the balance of the project area, a few single-family residences, a horse ranch, and related agriculture-related buildings are located in discrete portions of the Phase 2 development area. The project site also contains the Central Drainage Ditch (also known as “Stewart Canal”), a long agricultural ditch that bisects Stewart Tract, along with a small pond located on Stewart Tract near Paradise Cut. Both areas are designated as waters of the U.S. by the U.S. Army Corps of Engineers (USACE). As development occurs within the Phase 2 area, these waters of the U.S. will be avoided. Flood protection improvements consisting of levees surrounding both the Phase 1 area and Phase 2 development area have been completed, consistent with plans and entitlements.

Development in the Phase 1 area is in progress. Of the planned 4,284 total residential units at Phase 1 completion, approximately 2,000 have been constructed and 1,600 of those are currently occupied. Of the planned 156 acres of employment center, 95 acres of Town Center, two schools, 13 lakes, and 98.6 acres of parks, the following has been constructed to date: a fire station (Lathrop Manteca Fire District Station 35) in the Employment Center, a baseball

stadium ("Islander's Field"), and a Lathrop Police Station (expected to be operational by early 2021) in the Town Center. Phase 1 infrastructure has largely been constructed. This includes the first two lanes of Bradshaw's Crossing bridge, major utilities, levees, and electrical infrastructure (e.g., substation and radial underground conduits). The second part of Bradshaw's Crossing bridge, which consists of a separate two-lane bridge paralleling the current bridge, and the Golden Valley Parkway bridge over the San Joaquin River, and over Paradise Cut are the major segments of infrastructure left remaining for Phase 1. It should be noted that the City of Lathrop is currently pursuing the construction of the first two lanes of the Golden Valley Parkway bridge over the San Joaquin River under a separate project-level CEQA/NEPA review.

## 3.2 PROJECT BACKGROUND AND NEED

The River Islands Project is a mixed-use, water-oriented master planned community, on approximately 4,905 acres on Stewart Tract and Paradise Cut. Project construction is split among two primary development phases, following an approximately 20-year buildout schedule. Phase 1, currently under construction, includes 4,284 residential dwelling units, a Town Center, a portion of a Business Park (Employment Center), lakes, parks, schools, and other open space. Much of the Phase 1 area has already been completed, as discussed above. As evaluated in the 2003 SEIR (State Clearinghouse No. 1993112027, City of Lathrop 2003), Phase 2 includes 6,716 dwelling units, the balance of the Business Park, a neighborhood commercial area, lakes, parks, golf courses, schools, and additional open space areas.

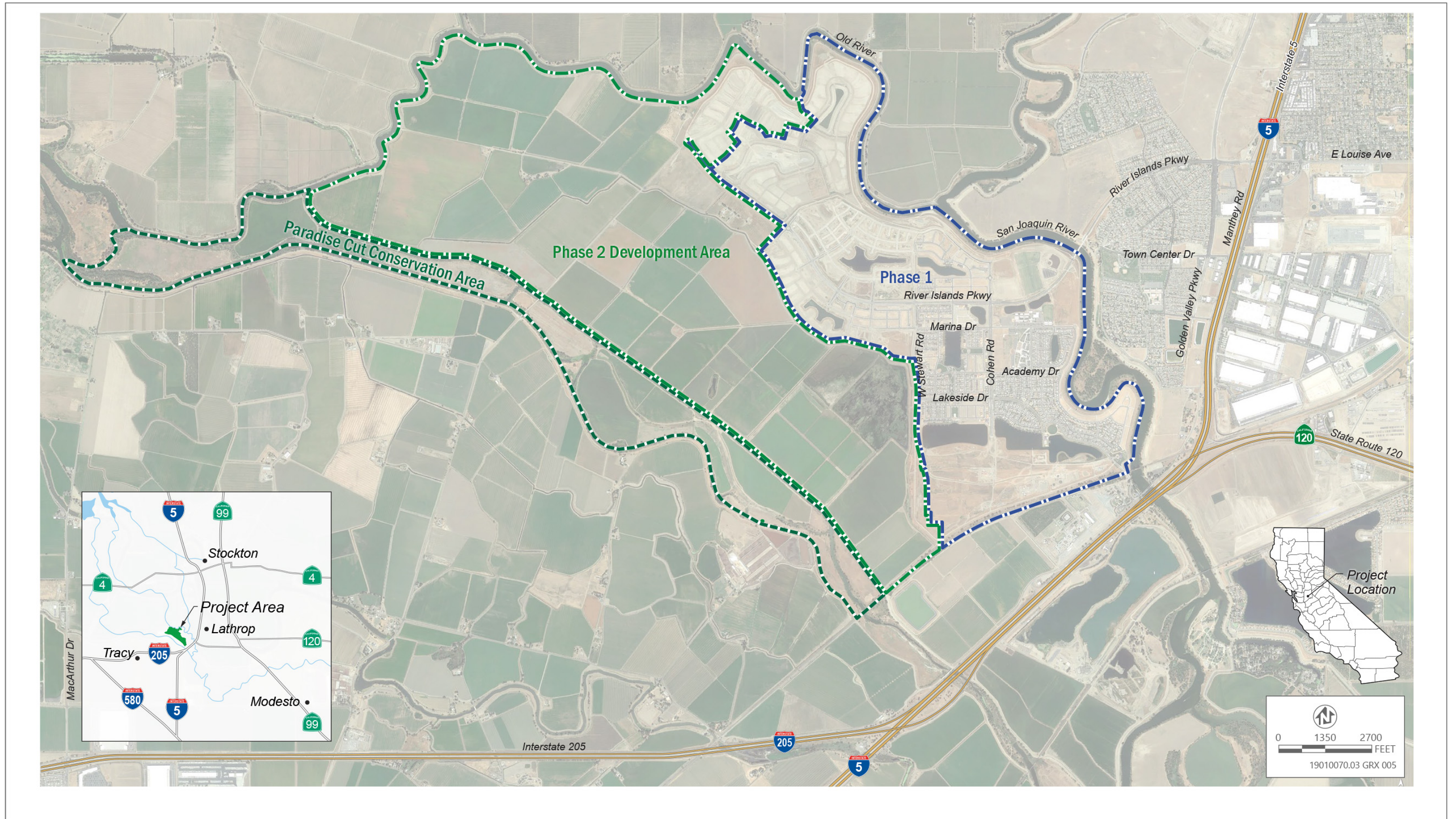
In 2003, the City certified the SEIR for the River Islands Project and approved various entitlements, including amendments to the General Plan, WLSP, a Vesting Tentative Map for Phase 1, and an Amended and Restated Development Agreement. Figure 3-3 shows the River Islands Project concept plan, as the project was envisioned at the time.

The 2003 SEIR included a project-level analysis for Phase 1 as well as a project-level analysis for Phase 2 with the exception of the issue of recycled water storage and disposal during Phase 2, which was evaluated at a program-level. Since certification of the SEIR in 2003, the City has prepared various addenda to evaluate modifications to the River Islands project and confirm that the modifications were covered by the SEIR and that there would be no new significant or substantially more severe environmental impacts under CEQA resulting from the project modifications. These addenda and the modifications they evaluate are described further below.

The applicant (Califia, LLC) proposes to modify the approved project by densifying proposed residential development within the Phase 2 area, including additional retail and commercial development, and adding a mixed-use TOD area to an area north of a site proposed for a Valley Link commuter rail station in the Employment Center District. The project modifications will include these changes, as well as other project refinements and updates proposed to accommodate changes in the transportation and circulation system, changes in school construction, and other similar issues. The overall project boundary of the River Islands Project would not change from that analyzed in the 2003 SEIR.

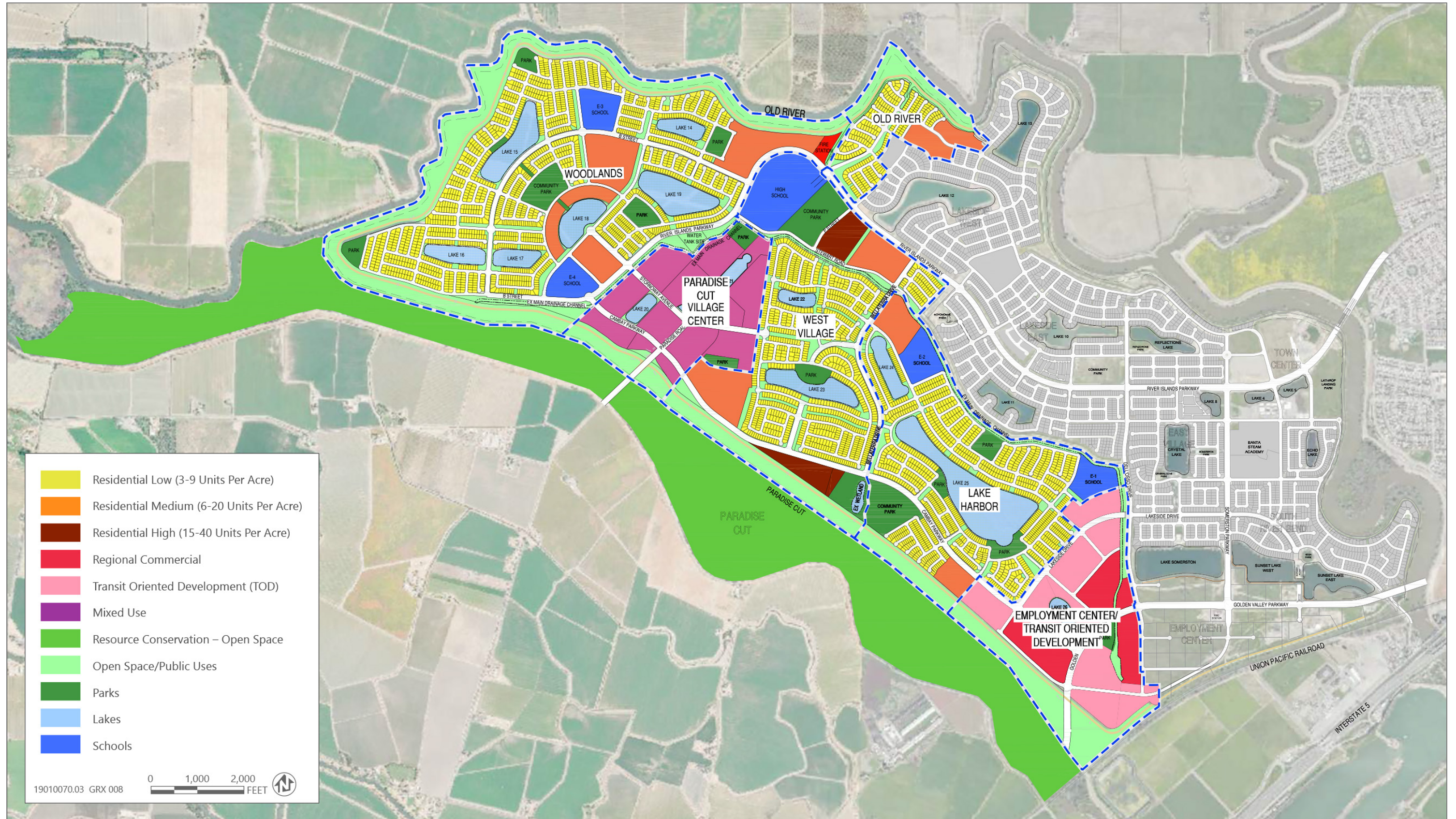
The applicant has applied to the City for a number of related project-level entitlements that will update the land use program for Phase 2, including the following:

- ▶ City of Lathrop General Plan Amendments for Land Use and Circulation,
- ▶ WLSP Amendment,
- ▶ Zoning Map and Text Amendment,
- ▶ Urban Design Concept,
- ▶ Vesting Tentative Map, and
- ▶ Potential Development Agreement Amendment.



Source: Image produced by Ascent Environmental in 2021

Figure 3-1 Project Vicinity



Source: Image produced by O'Dell Engineering in 2021

Figure 3-2 River Islands Phase 2 Masterplan Concept

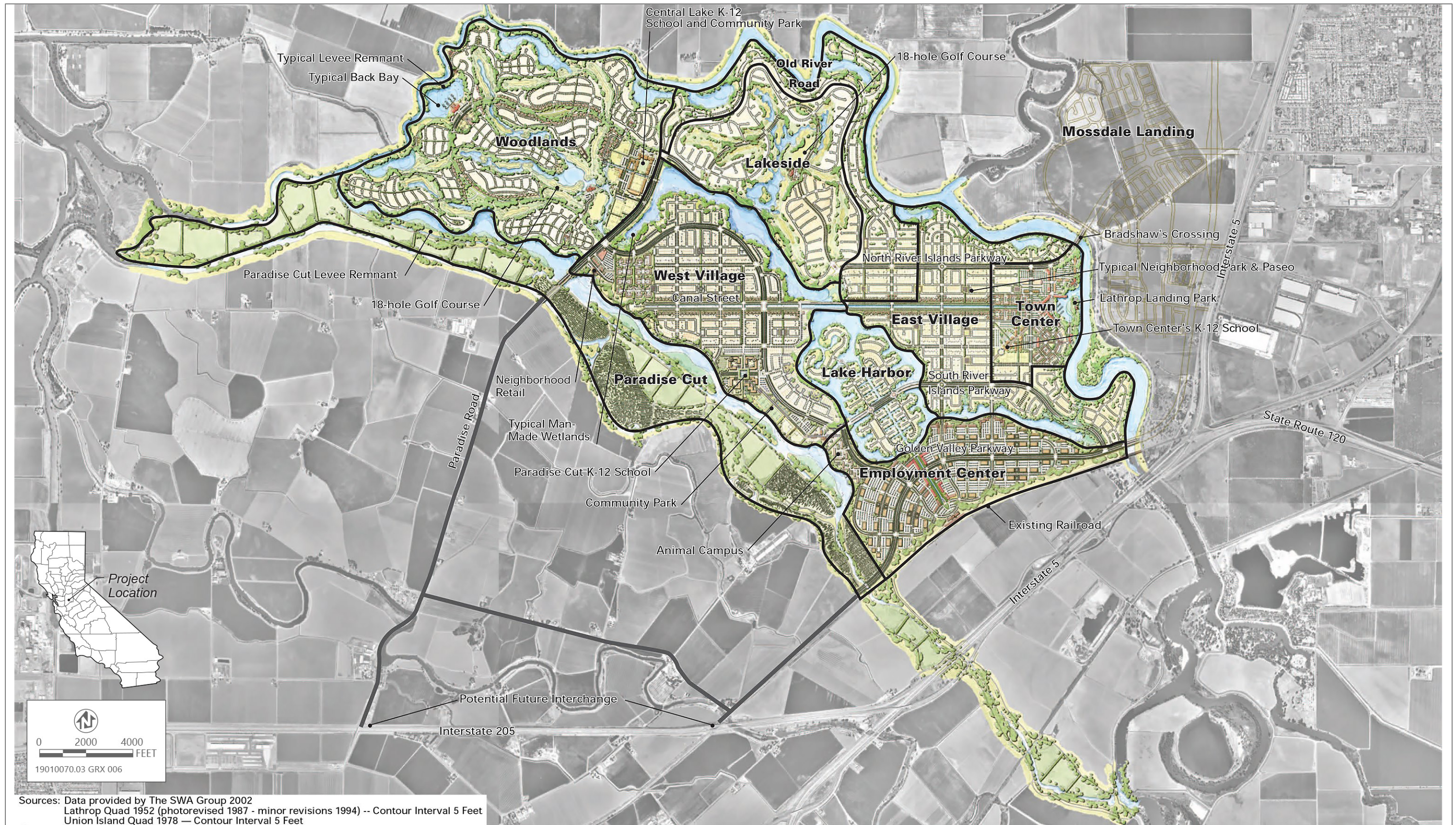


Figure 3-3 River Islands Project Conceptual Plan (as of 2002)

### 3.3 PREVIOUS CEQA DOCUMENTATION

The overall River Islands Project, first approved in 2003, has been updated and amended for Phase 1 development in particular, in 2005, 2007, 2012, 2014, 2015, and 2018. The 2012 and 2018 updates also included changes to Phase 2. A summary of these documents is provided below. The full content of the addenda identified below, including the setting discussions and summaries of project impacts and mitigation measures, are hereby incorporated by reference into this SEIR, consistent with State CEQA Guidelines Section 15150 (see Section 1.9, "Incorporation by Reference").

There have been six previous addenda prepared for the 2003 SEIR:

- ▶ In 2005, the First Addendum was prepared to address a revised vesting tentative map (VTM), known as Tract 3491. This amendment to the original Tract 3221 VTM evaluated subdividing approximately 1,500 acres of the Stewart Tract to support development of Phase 1a and Phase 1 of the River Islands Project.
- ▶ In 2007, a Second Addendum was prepared to address additional modifications to the VTM (now identified as Tract 3694), which evaluated subdividing approximately 1,793 acres of Stewart Tract to support development of Phase 1 of the River Islands Project.
- ▶ In 2012, a Third Addendum was prepared to address: (1) the adoption of the Tract 3765 VTM, a large lot vesting subdivision map for development of Phase 2 of the River Islands Project consistent with the WLSP; and (2) implementation of project modifications reflected in the Environment Impact Statement prepared by USACE for Phase 2 of the River Islands Project; Specifically, the project modifications included the elimination of back bays and avoidance of special aquatic features, modification of boat docks, greater detail regarding bridge construction, and flood protection improvements. A conceptual plan more consistent with these changes is shown in Figure 3-4.
- ▶ In 2014, a Fourth Addendum analyzed the placement of recycled water storage and disposal sites on Stewart Tract, immediately south of the project area analyzed in the SEIR.
- ▶ In 2015, a Fifth Addendum was prepared for another amendment to the Phase 1 Tract 3694 VTM (see second addendum), which analyzed minor modification to the boundaries of some zoning districts, adjustments to the alignments of some roadways, a change in the mix of single-family and multi-family housing units, increasing the number of multi-family units by approximately 140, but not altering the total unit count of 4,284 residential units in Tract 3694, replacing canals between internal lakes with paseos, open space, and parkland; changed the internal lake configuration from a "Central Lake" and "Grand Canal" to smaller decentralized lakes connected hydraulically by underground pipe ("lake system"); placed a possible Lathrop Landing Marina on the water side of the San Joaquin River project levee, rather than in a back bay; made minor changes to park land and open space locations with a small net increase in the acreage of land within the parks and open space land use category; and refined the implementation of Mitigation Measure 4.4-m related to peak hour vehicle trips on the Manthey Road/I-5 interchange and timing for completion of the River Islands Parkway bridge.
- ▶ In 2018, a Sixth Addendum analyzed minor changes to the Tract 3765 large lot map over the Stewart Tract portion of Phase 2, first approved in 2012 and addressed in the third addendum and other minor project modifications, replacement of the previously approved "undulated" location of the proposed Paradise Cut Set-Back Levee with a "straightened out" levee 100 feet from the toe of the existing levee and removal of soil from Paradise Cut.

### 3.4 PROJECT OBJECTIVES

The overall objective of the River Islands Project is the orderly and systematic development of an integrated, mixed-use community in the City of Lathrop generally consistent with goals and policies of the City's adopted General Plan and the WLSP. The specific project objectives for the modified Phase 2 Project, listed below, borrow from, and update the objectives originally identified in the 2003 SEIR:



- ▶ Provide to Lathrop (and the surrounding region) long-term community benefits, including generation of substantial permanent employment opportunities.
- ▶ Reinforce and enhance the City's positive image.
- ▶ Contribute a new variety of mixed-use/commercial land uses that could become a citywide and regional focal point.
- ▶ Continue to create a community that is consistent with many of the original goals of the Lathrop General Plan and WLSLP including employment generation.
- ▶ Develop a well-integrated and harmonious pattern of resident-oriented and visitor-oriented land uses in West Lathrop that provides local jobs, homes, and revenue-generating uses that complement other Lathrop development.
- ▶ Arrange phases of development to allow ongoing agricultural operations in the plan area to continue as long as feasible while allowing initial phases to act as catalysts for subsequent development.
- ▶ Incorporate water in its many forms throughout the project area to reinforce the area's Delta setting.
- ▶ Phase the provision of habitat preservation areas with overall development phases.
- ▶ Provide a wide range of housing types that could accommodate most income levels.
- ▶ Provide a variety of recreational opportunities focused on outdoor uses.
- ▶ Provide a high-density Transit Oriented Development in the vicinity of the planned Valley Link commuter rail station on the project site.

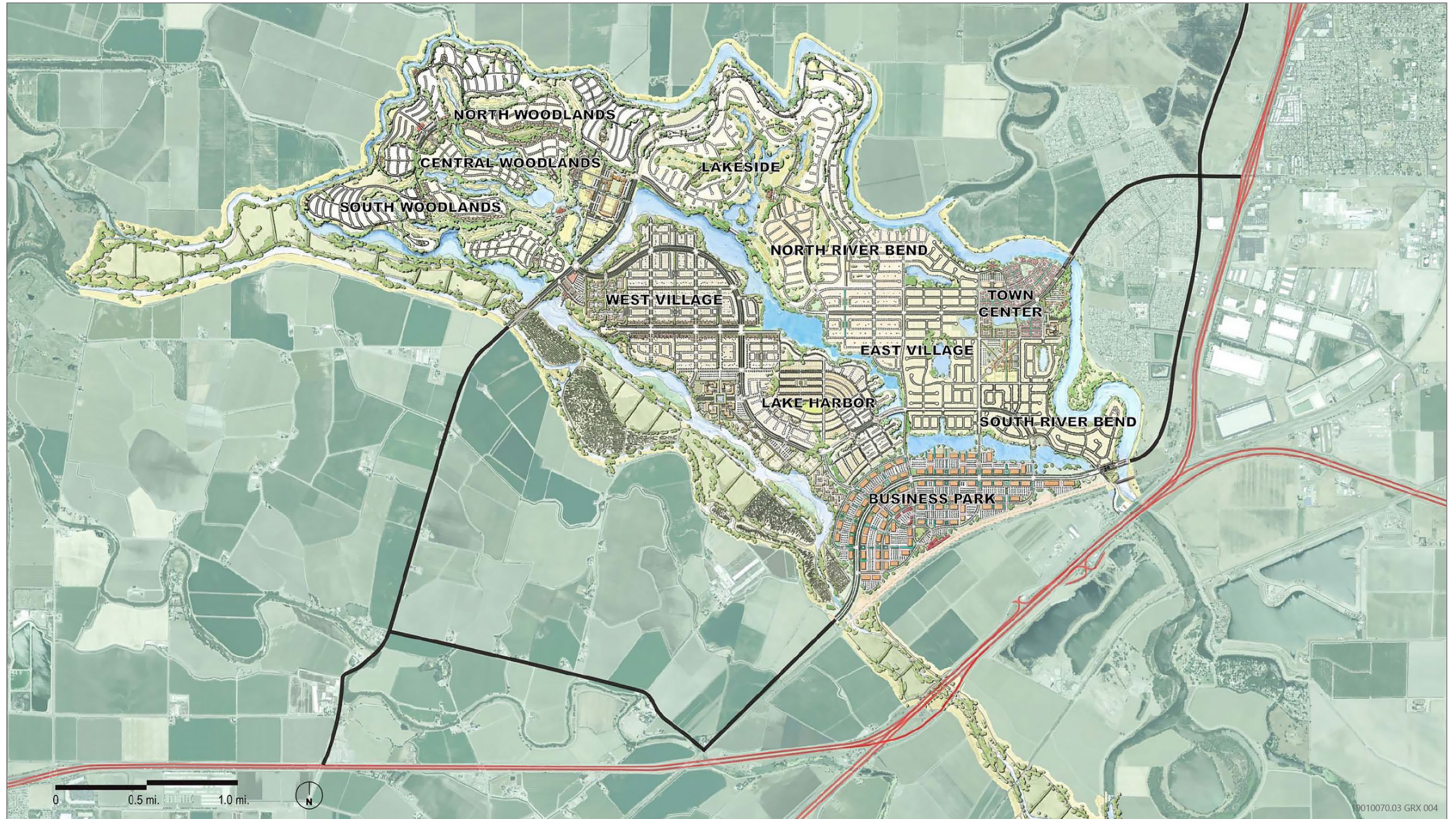
### 3.5 PROJECT CHARACTERISTICS AND CHANGES TO THE PREVIOUSLY APPROVED PHASE 2 PROJECT

The City is considering a number of related project-level entitlements that will update the land use program for the previously approved Phase 2 Project. These changes constitute the project to be analyzed in this SEIR and are described below. First, however, the approved River Islands Project is presented.

#### 3.5.1 Approved River Islands Project

In 2003, the City approved the River Islands Project, which included a Town Center, an Employment Center, residential areas, lakes and water features, schools, and parks and trails. It also included various flood management elements; construction of channels and other water features; biological habitat restoration/creation; and retention of natural lands. Proposed offsite project elements included an electrical transmission line, a natural gas pipeline, and a road extension to I-205. The project was anticipated to be developed in two phases, with buildout planned for 2025.

As noted above, in Section 3.1, "Project Location," development in the Phase 1 area is currently in progress. Of the planned 4,284 total residential units at Phase 1 completion, approximately 2,000 have been constructed and 1,600 of those are currently occupied. Of the planned 156 acres of employment center, 95 acres of Town Center, two schools, 13 lakes, and 98.6 acres of parks, the following has been constructed to date: a fire station (Fire Station 35) in the Employment Center, Islander's Field, and a Lathrop Police Station (expected to be operational by early 2021) in the Town Center. Phase 1 infrastructure has largely been constructed. This includes the first two lanes of Bradshaw's Crossing bridge, major utilities, levees, and electrical infrastructure (e.g., substation and radial underground conduits). The second part of Bradshaw's Crossing bridge, a separate two-lane bridge paralleling the current bridge, and the Golden Valley Parkway bridge over the San Joaquin River and Paradise Cut, are the major segments of infrastructure left remaining for Phase 1. No development has occurred in the Phase 2 area—the subject of this SEIR—other than the construction of flood protection levees as described below in the section titled "Flood Protection."



Source: City of Lathrop 2018

Figure 3-4 River Islands Project Updated Conceptual Plan (as of 2018)

## APPROVED DEVELOPMENT

Specific elements of the approved project (both Phases 1 and 2) include an approximately 305-acre Employment Center; a roughly 45-acre Town Center; approximately 2,060 acres of residential development; two golf courses; more than 260 acres of parkland; over 600 acres of lakes; more than 600 acres of open space; and necessary public facilities and infrastructure to support the project. Please note that the discussion below is inclusive of development that has already occurred in Phase 1 as well as development that has not yet occurred.

The approved project includes a mix of housing types in all phases of the development. Residential districts were anticipated to support housing, parks, water features, and schools, as well as limited commercial and employment development. Up to 11,000 residences were approved, ranging from single-family-detached homes to condominiums, townhouses, apartments, and active adult (senior-oriented) housing. At buildout, the River Islands Project was expected to include an estimated 31,680 residents and 16,751 jobs.

Residential areas, as well as the Employment Center, were divided into the following districts:

- ▶ The **Town Center district** would be the commercial and community center of River Islands. It would include a mix of retail, office, residential, education, and civic uses (e.g., city offices, performing arts center, churches); dock facilities; parks; and other public spaces. This district is included in the Phase 1 area and is not affected by the modified Phase 2 Project.
- ▶ The **East Village district** would occupy approximately 590 acres, surrounding the Town Center. The district was originally planned to be bisected by Canal Street, which would include a canal associated with the project's internal lake system that runs east to west through the RID Area. Amendments to Phase 1 in 2015 removed the canals and Canal Street. The East Village district is planned to have 2,300 residences. This district is included in the Phase 1 area and is not affected by the modified Phase 2 Project.
- ▶ The **Lake Harbor district** was originally located on two islands constructed in a proposed central lake and occupied approximately 275 acres, of which roughly 120 acres is comprised of the central lake. As identified above, the fifth Addendum changed the internal lake configuration from a "Central Lake" to smaller decentralized lakes, altering the physical configuration of the Lake Harbor district, but retaining the original proposal to include 500 single-family residences. The plan for this district is altered by the modified Phase 2 Project.
- ▶ The **West Village district** occupies approximately 720 acres. Like the East Village district, it was originally planned to be bisected by Canal Street and an associated canal that would cross much of the project site. Most of the other features of the West Village neighborhood are located along the water's edge of Paradise Cut. They include an office/retail center, the Paradise Cut school, and two parks. The water elements of this district were altered as part of the fifth Addendum, but other elements were not altered. The plan for this district is further altered by the modified Phase 2 Project.
- ▶ The **Woodlands district** occupies approximately 965 acres. The district would include 2,600 residences, with 2,571 single-family residences and 49 multifamily residences. The proposed high school and a community park also would be located here. The plan for this district is altered by the modified Phase 2 Project.
- ▶ The **Lakeside district** occupies approximately 470 acres and is divided into "Lakeside East" and "Lakeside West." The Lakeside East district would contain single-family residential neighborhoods of varying densities, formulated around two lakes, active parks, and linear open space. A 16-acre community park with active sports facilities, multi-purpose fields, and recreational trails would anchor its east end. The Lakeside West district would contain single-family residential neighborhoods of varying densities, two lakes, active parks, and linear open space. The bioretention swale along River Islands Parkway would be expanded within this district. This district is included in the Phase 1 area and is not affected by the modified Phase 2 Project.
- ▶ The **Old River district** (formerly known as "Old River Road" district) would contain 420 residences, all of which would be single-family-detached homes located along Old River, on the edge of the RID Area. As originally envisioned, most of the homes that are part of the Old River community would have been built on a "high-

ground corridor," a large earthen structure (several hundred feet wide at the top) built along the edge of the river. The plan for this district is altered by the modified Phase 2 Project.

- ▶ The **Employment Center district** would occupy approximately 450 acres. Roughly 35 percent of this area would be used for roads, parks, a fire station, the cross levee, and other infrastructure and also encompasses some open space features. Approximately 305 acres would be available for primary Employment Center uses.
- ▶ The **Community at South River Bend district** would contain a mix of single-family housing types as well as a neighborhood park (Vega Park) located on the lakeshore. This district is included in the Phase 1 area and is not affected by the modified Phase 2 project.

## LAKES AND WATER

The water elements incorporated into the River Islands Project are made up of an internal system that includes a number of man-made lakes in the RID Area and an external system that consists of various elements outside the Stewart Tract levee system: the San Joaquin River, Old River, and Paradise Cut. Nearly 600 docks in the internal water system would accommodate up to 604 boats. Docks along the exterior water system identified in the original project design were largely removed as part of project modifications evaluated in the 2012 third Addendum. Interior and exterior water features authorized by current City of Lathrop approvals would not be altered by the modified Phase 2 Project.

## SCHOOLS

The River Islands Project is located within two different school district boundaries: the Banta Elementary School District (BESD), which currently serves grades K-8, and the Tracy Unified School District (TUSD), which serves grades 9-12. The project applicant proposed to implement a nontraditional school program on the project site to serve the approximately 5,600 grade K-8 students and 1,350 grade 9-12 students that the project was anticipated to generate at full buildout. Three schools/campuses were proposed that would each house approximately 2,000-2,400 students and provide facilities on each campus for grades K-8 and grades 9-12 students. The plan for schools was modified with amendments to Phase 1 and is further altered by the modified Phase 2 Project. BESD is also in the process of unification, which would serve all public grade school children K-12 if approved and TUSD would no longer serve the project.

## FIRE AND POLICE PROTECTION

Fire protection services are, and would continue to be, provided by the Lathrop-Manteca Fire Protection District (LMFD). The approved River Islands Project includes an existing, operating fire station (Fire Station 35) in the Phase 1 area and a proposed site (Fire Station 36) in the Phase 2 area adjacent to River Islands Parkway. Station 35 also contains the administrative offices for LMFD and is located at 19050 Golden Valley Parkway. The modified Phase 2 Project provides an approximately 3.5-acre site for Fire Station 36, which is located in the Woodlands District near River Islands Parkway.

Police services are, and would continue to be provided, by Lathrop Police Services, which is contractually provided by the San Joaquin County Sheriff's Office. Lathrop Police Services is currently located at the Sheriff's Office at 7000 Michael Canlis Boulevard, French Camp, CA. A new Lathrop Police Station is under construction in the Phase 1 area near Bradshaw's Crossing bridge at 940 River Islands Parkway, Lathrop. The new Police Station is expected to be operational by early 2021.

An emergency response/evacuation plan for the project site would continue to be updated as development proceeds in coordination with the police and fire departments, Stewart Tract reclamation districts (RD 2062 and RD 2107), and the San Joaquin County Office of Emergency Services to ensure that River Islands Project residents would be evacuated safely in the event of a large-scale emergency or natural disaster.

These plans are not affected by the modified Phase 2 Project.

## PARKS AND TRAILS

Four primary categories of parks were originally proposed as part of the River Islands Project: community parks, river vista parks, lakefront parks, and neighborhood parks. A total of 265.3 acres of parks was proposed, with 98.6 acres of parkland proposed to be developed as part of Phase 1 and the remaining acreage proposed to be developed as part of Phase 2. The Phase 1 parks program was modified with City amendments to the Phase 1 entitlements in 2007 and 2015. Community parks, pocket parks, and neighborhood parks are now proposed, with other open space and recreational facilities provided by RD 2062. The plan for parks is further altered by the modified Phase 2 Project and detailed in the *River Islands Phase 2 Parks and Open Space Master Plan* (River Islands 2020) under consideration by the City of Lathrop.

The approved River Islands Project trail system consists of an interconnected, hierarchical system of trails for pedestrians and bicyclists that provides access to the project neighborhoods and districts. The trail system would connect to existing and planned trails in Lathrop and surrounding areas via pedestrian/bicycle lanes incorporated into project bridges over the San Joaquin River. The two main components of the trail system are the levee system, along both non-project and project levee segments and the internal trails along Dell'Osso Drive, the Central Drainage Ditch, and other areas that interface with internal bike lanes, paths, and routes within the interior of the overall project site. The modified Phase 2 Project expands and builds upon the existing plans.

## FLOOD PROTECTION

The entire River Islands project site was in the 100-year floodplain at the time of project approval in 2003. To provide flood protection for the RID Area (i.e., all new urban development associated with the project), various measures have been incorporated into the project design, primarily consisting of constructing and reconstructing levees, along with some high-ground corridors along the San Joaquin River. Levees sufficient to provide 200-year flood protection as defined by State law, currently surround the RID Area. The modified Phase 2 Project does not include any changes to the levee system that would affect urban flood protection. The project applicant, in concert with RD 2062, may pursue improvements that would connect project and non-project interior levees along Old River in particular, that would create new shaded riverine aquatic habitat along the water's edge by placing fill between the project and non-project (urban) levee system. This would be accomplished by degrading the existing project levees (agricultural or 50-year levee protection) to an elevation at or around mean high tide (ordinary high tide mark) so that normal river flows are unaffected by the improvements. The fill created by the degrading of the project levee segments would be placed between the two levees, creating a bench that can be vegetated with riparian plantings that provide the shaded riverine aquatic (SRA) habitat along the Old River and Paradise Cut systems that currently do not support this habitat. This improvement would entail Federal approvals outside the scope of this SEIR.

## TRAFFIC AND VEHICULAR ACCESS

There are two primary elements to the traffic network for the River Islands Project: an internal circulation network and external traffic features that connect the project site to highways, regional roads, and other local streets. Bridges crossing the San Joaquin River and Paradise Cut to allow vehicles to enter the project site are considered part of the internal circulation system.

### Internal Circulation

Several arterial roads, collectors, and local streets have already been incorporated into the design of the River Islands Project. The primary arterial providing access to the Employment Center district would be Golden Valley Parkway. Golden Valley Parkway includes a four-lane bridge on the east side crossing the San Joaquin River and a four-lane bridge to the west crossing Paradise Cut. Approximately three miles downstream from the Golden Valley Parkway bridge, the Bradshaw's Crossing bridge across the San Joaquin River provides the primary point of access to the Town Center and surrounding residential districts. A single two-lane bridge has been constructed at Bradshaw's Crossing that currently provides access to the Phase 1 development. A second two-lane bridge will be constructed as Phase 2 develops to provide increased vehicle capacity, with one bridge providing two lanes of traffic in one

direction, and the other bridge supporting traffic in the other direction. The existing Paradise Road bridges (across Paradise Cut) would be retained to provide a point of access to the northwestern portion of the project site. The addition of two parallel bridges adjacent to the existing bridges may be required by the City if traffic volumes warrant the expansion of Paradise Road to four lanes.

The primary onsite arterial street (up to six travel lanes) is River Islands Parkway that currently traverses the Phase 1 area. This major road is improved as two lanes at the current Bradshaw's Crossing bridge approach and is improved as four lanes from Somerston Parkway (a major north/south arterial) westward. River Islands Parkway will connect to other primary roads in Phase 2, including Paradise Road on an interim basis to provide a regional connection towards Tracy and I-205. This interim connection will be replaced by other arterial and collector roads that will maintain this regional access. Golden Valley Parkway will continue as a major project arterial street as it travels through the Employment Center and eventually proceeds over Paradise Cut via new bridges and connects to Paradise Road towards I-205. This segment of Golden Valley Parkway will end at the eastern end of the Employment Center. Lakeside Drive, currently constructed as a collector and arterial street in Phase 1, will continue into Phase 2 as an arterial street (four lanes) and provide additional east-west intra-regional traffic connections for Phase 2 and connect to other various collectors and local streets in Phase 2.

The internal circulation plan in the Phase 2 area is altered by the modified Phase 2 Project, although there are no alterations to the circulation system in the Phase 1 area.

### External Traffic Features

Initially, during the early portion of Phase 1 development, the RID Area was only connected to City of Lathrop surface streets and I-5 via existing Stewart Road, using the existing at-grade rail crossing near the San Joaquin River to Manthey Road. This connection may be terminated or modified in the future. Access to Mossdale Village and the rest of the City was accomplished with the construction of River Islands Parkway and the first two lanes of Bradshaw's Crossing bridge. Access to the freeway system is currently from either the Louise Avenue/River Islands Parkway interchange or the Mossdale/Manthey interchange.

To provide access to the Bradshaw's Crossing bridge from Mossdale Village, River Islands Parkway was extended from its former terminus at McKee Boulevard to complete the roadway at least two lanes from the Louise Avenue/River Islands Parkway interchange with I-5 to the San Joaquin River. As described above, the first two-lane bridge at Bradshaw's Crossing has been constructed and is in use. A second two-lane bridge will be constructed during Phase 2 when traffic volumes are sufficient to warrant two additional vehicle lanes. The modified Phase 2 Project does not alter this element of the circulation system.

The existing access to the MacArthur Drive/I-205 interchange via Paradise Road has been retained during project development and is used for both construction and operations access. Potential improvements to Paradise Road during Phase 2 are addressed below in Section 3.5.3, "Offsite Elements."

Initially, Somerston Parkway would be the primary method of access to the Employment Center. In later phases, the Employment Center would primarily be accessed via Golden Valley Parkway after the new bridge over the San Joaquin River is constructed. From the San Joaquin River, Golden Valley Parkway would extend north, generally paralleling I-5, and connecting the existing Golden Valley Parkway segment at Brookhurst Boulevard towards the River Islands Parkway/Louise Avenue I-5 interchange. After crossing Paradise Cut, Golden Valley Parkway would extend south, then west, generally paralleling I-205. These portions of Golden Valley Parkway are addressed further below in Section 3.5.3, "Offsite Elements."

Plans for these external traffic features are not affected by the modified Phase 2 Project. However, further information on traffic and the local and regional transportation networks has been developed since publication of the 2003 SEIR and subsequent addendums and is provided in this SEIR.

## UTILITIES

An irrigation district—the Lathrop Irrigation District (LID)—was formed with the authority to provide irrigation water, electricity, telecommunications, potable water, and wastewater services. LID was approved by San Joaquin County in May 2002 and its service area expanded to include the entire RID area in 2006. LID current has an independent Board of Directors and its staff provides electrical service to existing River Islands residents. LID will remain the electrical service provider for River Islands, including Phase 2.

### Water

Potable water for the River Islands Project currently is provided, and will continue to be provided, by a combination of groundwater and treated surface water by the City of Lathrop, in accordance with the *City of Lathrop Water System Master Plan* (EKI 2019a). Groundwater is provided by City of Lathrop wells and treated surface water is delivered from the South County Surface Water Supply Project to the City of Lathrop, and then to River Islands via pipelines that feed several water tanks located in the Phase 1 portion of the Employment Center.

Additional water mains, booster pumps, and storage tanks needed to support the entirety of the River Islands Project would be constructed in phases per the *City of Lathrop Water System Master Plan* (EKI 2019a). Water delivery infrastructure would be constructed as needed, as development proceeds. Water mains and other necessary pipelines would be installed in road rights-of-way and other appropriate utility corridors.

These plans would be updated by the modified Phase 2 Project, by providing more detailed locations of the facilities in City required plans that implement the guidelines and policies of the Master Plan.

### Sewer and Recycled Water

Wastewater from the River Islands Project is, and will continue to be, collected, treated to a tertiary level, and disposed of in accordance with the *City of Lathrop Wastewater System Master Plan* (EKI 2019b) and *City of Lathrop Recycled Water System Master Plan* (EKI 2019c), with modifications currently under proposed consideration by the City.

The River Islands Project incorporates the maximum potential use of recycled water through several methods. During Phase 1, recycled water has been, and will continue to be used to irrigate appropriate crops (e.g., alfalfa) in the Paradise Cut Conservation Area or on remaining agricultural lands in the RID Area, as needed, during the irrigation season. The Fourth Addendum to the 2003 SEIR (City of Lathrop 2014) evaluated the construction of approximately 65 acres of recycled water storage ponds and 20 acres of designated agricultural spray fields for recycled water disposal immediately southeast of the River Islands Project site. These facilities assist in fulfilling project requirements for offsite recycled water storage and disposal facilities identified in the 2003 SEIR. A portion of the ponds have been constructed and the entire spray field area is in operation. Sufficient acreage has been identified in these areas to fully accommodate the demand for recycled water land disposal areas, and the potential use of each is addressed in the City of Lathrop Water Recycling Plant No. 1 Phase 1 Expansion Project EIR. As project facilities are developed in the RID Area, recycled water would be used to irrigate public landscaped areas, such as parks, landscaped road medians, and other vegetated features as appropriate. During winter months, when demand for irrigation water is at its lowest, the recycled water is held in various storage ponds in the City and ultimately, may be discharged to the San Joaquin River system should an outfall be approved and constructed, as described below.

The City of Lathrop is currently considering changes to disposal of treated effluent. In addition to continued recycled water use for irrigation, the City is evaluating a general discharge of treated effluent to the San Joaquin River. This would remove the need to retain most of the storage ponds throughout the city, some of which are located on land shown for development in the City of Lathrop General Plan. The City is preparing an EIR to address the changes to the effluent disposal process, which would eliminate the need for disposal areas in Paradise Cut or other agricultural areas. Urban landscapes would still be irrigated by recycled water, including those in Phase 2 and supplemented by other non-potable (river and/or lake) water when recycled water is not available.

## Storm Drainage

The River Islands Project includes a storm drain system that includes pipelines and storm inlets in the City's street system that feed bio-retention basins, grassy swales and other features throughout the project to clean stormwater as it moves through the site, and a system of lakes interconnected by underground pipes that hold stormwater and allow it to percolate into the soil or be eventually discharged to Paradise Cut via existing outfalls. Such discharges are approved by the City's current MS4 permit with the State. The lake system and related facilities will be owned and operated by RD 2062 and existing agreements between the City and RD 2062 will govern the cleaning and discharge of stormwaters in the entire RID area, including Phase 2.

To maximize percolation into the ground, the lakes are not lined. To maintain lake levels, water is pumped out of and into the lake system from the surrounding rivers during extreme rainfall events and during dry periods. Water is pumped into the lake from the San Joaquin River and Old River using existing riparian water rights. Current intake structures will be upgraded in the future as needed, as the lake system expands over project buildout. When water is pumped out of the lake system it is pumped into Paradise Cut, as described above.

These plans are not affected by the modified Phase 2 Project, but the system is further refined by plans provided to the City in accordance with currently approved program level City plans.

## Electricity

Electricity is provided to the River Islands Project by LID. LID has constructed regional infrastructure in the last five years to interconnect its system to the state grid, including a new switchyard that connects to the existing 115-kilovolt (kV) Manteca-Kasson regional transmission line. A transmission line from the interconnection transverses I-5 through the southeast portion of Stewart Tract into the Employment Center in Phase 1. A new substation was constructed in the Employment Center that can be enlarged on the same site over time as project development continues to serve the buildout of the entire River Islands Project, including Phase 2. The distribution line between the switchyard east of I-5 and the substation in Phase 1 are both aboveground on poles. All permanent service connections extending from the substation are underground and extend the 21-kV system for service to residential and non-residential services. At predetermined locations, pad-mounted electrical switchgear and transformers are installed to provide 120/240 volt and 480-volt electricity to customers. The Phase 2 roadway system would include a continuance of joint trench facilities, including electricity to all neighborhoods in Phase 2.

These plans are not affected by the modified Phase 2 Project.

## Natural Gas

The Pacific Gas and Electric Company (PG&E) currently provides, and is expected to provide in the future, natural gas to the River Islands Project via connections to several existing natural gas pipelines and distribution systems in Lathrop and the surrounding area. Natural gas is currently provided to the project site through two pipelines: an 8-inch high pressure transmission line across Bradshaw's Crossing Bridge via River Islands Parkway and a 6-inch distribution line that crosses the San Joaquin River via the San Joaquin Pedestrian/Bicycle Bridge in a 10-inch casing and enters the southeastern end of the project site via Stewart Road. A pressure-reducing station near Bradshaw's Crossing Bridge was constructed by PG&E to distribute natural gas radially from the high-pressure source gas line to a number of distribution lines. These plans are not affected by the modified Phase 2 Project.

## HABITAT RESTORATION AND CREATION

Natural lands planned as part of the project would provide a variety of functions, including flood control, recreation, and habitat for sensitive species. Habitat restoration/enhancement would also be conducted in many of the natural land areas. The primary natural land areas associated with the project are Paradise Cut, the riverbanks, and the cross levee paralleling the western Union Pacific Railroad (UPRR) right-of-way. The modified Phase 2 Project does not include any modifications to planned habitat restoration activities, with the exception of the SRA habitat that may be constructed in the future, unaffected by the urban development proposed with the modified Phase 2 Project; a more detailed description is included in the Flood Protection section of this chapter.



As part of the overall project, River Islands would establish the biological habitat restoration/creation habitat areas and preserve natural lands in Paradise Cut if federal and state approvals could be obtained, as well as the perimeter areas along Old River. However, because proposed construction of the Phase 2 area avoids delineated wetlands and waters of the U.S., completion of the urban development of River Islands is not predicated on biological habitat restoration/creation activities and habitat restoration and could occur anytime that required State and Federal approvals are obtained.

### 3.5.2 Modified Phase 2 Project

The proposed modifications to the Phase 2 Project would densify the Phase 2 area by including additional multi-family dwellings (condominiums, apartments, etc.) as well as more attached single-family residences similar to units already constructed as part of Phase 1. The proposed modified development would also create a smaller "town center" mixed-use area at Paradise Road (at the west entry to the project area – Paradise Cut Village Center) and a mixed-use TOD area as part of the Employment Center District that would complement the future planned Valley Link transit station.

Table 3-1 shows the existing and proposed land use program for the modified Phase 2 Project, along with a comparison of the changes.

**Table 3-1 River Islands Modified Phase 2 Project Development Summary**

General Plan Designation/Land Use		Approved Phase 2 Project			Modified Phase 2 Project			Difference		
		Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)	Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)	Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)
MU-RI	Mixed Use - (Paradise Cut Village Center)	0.0	0	0	154.8	2,439	360,000	154.8	2,439	360,000
CR-RI	Regional Commercial - (Employment Center)	125.0	0	1,800,000	61.9	0	1,035,000	(63.1)	0	(765,000)
TOD-RI	Transit Oriented Development <sup>2</sup>	0.0	0	0	120.9	1,821	442,500	120.9	1,821	442,500
CN-RI	Neighborhood Commercial	17.7	0	180,000	0	0	0	(17.7)	0	(180,000)
RL-RI	Residential - Low	1,486.3	4,916	0	789.6	4,003	0	(696.7)	(913)	0
RM-RI	Residential - Medium	70.4	1,200	0	172.2	1,895	0	101.8	695	0
RH-RI	Residential - High	34.9	600	0	36.4	568	0	1.5	(32)	0
RCO/ OS-RI	Resource Conservation - Open Space	703.8	0	0	703.8	0	0	0.0	0	0
—	Parks	155.4	0	0	234.2	0	0	78.8	0	0
—	Lakes	235.0	0	0	195.5	0	0	(39.5)	0	0
—	Schools	106.4	0	0	108.6	0	0	2.2	0	0
—	Streets	382.3	0	0	198.6	0	0	(183.7)	0	0
—	Other Open Space/ Public Uses <sup>3</sup>	127.7	0	0	657.6	0	0	529.9	0	0
Total Land Use Parcels		3,444.9	6,716	1,980,000	3,434.1	10,726	1,837,500	(10.8)	4,010	(142,500)

Notes: Non-Res. = non-residential; s.f. = square feet

<sup>1</sup> The acreage shown includes Paradise Cut and adjacent waterways that may not be evaluated in the SEIR.

<sup>2</sup> This area was identified as "transit village" in the 2003 SEIR project description. The new title as shown should be used to be consistent with the Valley Link Transit Project.

<sup>3</sup> The acreage estimated includes public uses such as fire stations and other City facilities, as well as open space areas not included with other land use designations.

<sup>4</sup> Dwelling units tabulated are shown as per the City's existing and proposed land use categories and not in their physical location (e.g., districts).

Source: Provided by River Islands in 2021

Among the entitlements evaluated in the SEIR, the adopted WLSP and City of Lathrop General Plan would be amended to reflect the modified Phase 2 Project development unit projections.

Other proposed Phase 2 modifications include changes in the circulation pattern from the adopted WLSP and General Plan, with River Islands Parkway, Lakeside Drive, and Paradise Road shifting locations to the updated land use pattern. Other land use shifts include the Old River District, currently part of the Phase 1 development boundary, being included as proposed development within Phase 2. Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the current plan. An additional arterial from the existing terminus of Golden Valley Parkway in the Employment Center would continue into the Phase 2 area for internal circulation.

These proposed changes are described in more detail below.

## PROPOSED DEVELOPMENT MODIFICATIONS

As described above, the approved River Islands Project includes a mix of housing types, ranging from single-family-detached homes to condominiums, townhouses, apartments, and active adult (senior-oriented) housing, for a total of 11,000 residences. These same housing types are retained in the modified Phase 2 Project, but with 4,010 units added to the Phase 2 area, resulting in 15,010 total housing units.

At buildout, the River Islands Project was expected to include an estimated 31,680 residents and 16,751 jobs as currently approved. With the proposed Phase 2 modifications, the River Islands Project is expected to generate a total (Phase 1 and 2) of 44,963 residents and 22,162 jobs.

The residential districts included in the modified Phase 2 Project are listed below, as well as the proposed modifications to the number and type of residential units in each district (also, see Figure 3-2 for the proposed locations of these districts). Residential density (i.e., low, medium, high) is defined in Table 3-2.

- ▶ The **Old River district**. Under the modified Phase 2 Project, this district would now include 710 single-family and multi-family units and a public park. With the construction of the Stage 2B and Phase 2 levees, this district would no longer be developed on a high-ground corridor as its already fully flood protected. This is considered an expansion of the Planning District being built within the Phase 1 area.
- ▶ The **Lake Harbor district**. Under the modified Phase 2 Project, this district would now include 1,444 total residences, with 1,091 low-density residences and 353 medium-density residences.
- ▶ The **West Village district**. Under the modified Phase 2 Project, this district would now include 2,114 total residences, with 937 low-density residences, 465 medium-density residences, and 712 high-density residences. This district could also include an "active adult" community restricted to homeowners 55 years and older; these units would still be considered low-density units. The proposed River Islands High School would also be included in this district.
- ▶ The **Woodlands district**. Under the modified Phase 2 Project, this district would now include 2,574 total residences, with 1,714 low-density residences and 860 medium-density residences.
- ▶ The **Employment Center district**. Under the modified Phase 2 Project, the proposed mixed-use TOD area is included in this district. This TOD area will include a proposed train station for Valley Link service. Under the modified Phase 2 Project, this district would now include 1,677 total residences, with 436 medium-density residences, and 1,241 high-density residences.
- ▶ The **Paradise Cut Village Center district**. New for the modified Phase 2 Project, the Paradise Cut Village Center district would occupy approximately 124 acres on land formerly identified as parts of the West Village and Woodlands districts. The Paradise Cut Village Center would provide the modified Phase 2 Project with a mixed use/commercial center as well as linear parks and other community-oriented spaces with higher density housing. This district would include 2,439 total residences, with 877 medium-density residences, and 1,562 high-density residences.

Table 3-2 summarizes the residential distribution approved for the River Islands Project as part of the 2003 SEIR, the proposed Phase 2 modifications, and a comparison of the changes. As shown in the table, under the modified Phase 2 Project an additional 4,010 residential units are proposed.

**Table 3-2 River Islands Project Housing by Density**

Residential Density	Estimated Number of Housing Units		
	Approved River Islands Project (Phase 1 and 2) <sup>1</sup>	Phase 1 and Proposed Phase 2 Modifications <sup>2</sup>	Difference
Low-Density Residential (3-9 dwelling units per acre)	8,200	7,134	(1,066)
Medium-Density Residential (6-20 dwelling units per acre)	1,600	3,694	2,094
High-Density Residential (15-40 dwelling units per acre)	1,200	4,182	2,982
<b>Total</b>	<b>11,000</b>	<b>15,010</b>	<b>4,010</b>

<sup>1</sup> From Table 3-1 in the 2003 SEIR (City of Lathrop 2002).

<sup>2</sup> Data provided by project applicant in 2021.

Source: Compiled by Ascent Environmental in 2021 based on above data sources

## SCHOOLS

The approved Phase 2 Project included 106.4 acres of schools. The proposed modifications to the Phase 2 Project would add 2.2 acres of schools for a total of 108.6 acres of schools in the Phase 2 area. Specifically, four schools are proposed to serve grades K-8 students and one high school is proposed to serve grades 9-12 students (see Figure 3-2 for proposed school locations). The project applicant is working with both school districts regarding the location and design of the proposed high school and K-8 schools. It is anticipated that development of the modified Phase 2 Project would generate 6,380 students in grades K-8 and 1,653 students in grades 9-12.

## PARKS AND TRAILS

The approved Phase 2 Project included 166.7 acres of parkland. The proposed modifications to the Phase 2 Project would add 64.45 acres of parkland for a total of 231.15 acres of parkland in the Phase 2 area, as detailed in the *River Islands Phase 2 Parks and Open Space Master Plan* (River Islands 2020) under consideration by the City of Lathrop.

Figure 3-5 and Table 3-3 identifies the neighborhood parks, pocket parks, open space, community parks, and linear parks that would be developed as part of the modified Phase 2 Project. This table also indicates what parks count towards the City's Quimby Act requirements (see Section 4.12, "Recreation," for an analysis of the project's compliance with the Quimby Act).

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Source: River Islands 2020

Figure 3-5 Phase 2 Proposed Parks

**Table 3-3 Modified Phase 2 Project Parkland**

Park #	Park Name	Acreage	Miles	Quimby Act	Ownership
<b>Neighborhood Parks</b>					
N1	Neighborhood Park 1	5.97	—	X	RD 2062
N2	Neighborhood Park 2	6.02	—	X	City
N3	Neighborhood Park 3	6.07	—	X	RD 2062
N4	Neighborhood Park 4	4.01	—	X	City
N5	Neighborhood Park 5	5.39	—	X	City
N6	Neighborhood Park 6	7.10	—	X	City
N7	Neighborhood Park 7	5.12	—	X	City
N8	Neighborhood Park 8	5.28	—	X	RD 2062
N9	Neighborhood Park 9	4.19	—	X	RD 2062
N10	Neighborhood Park 10	2.73	—	X	RD 2062
N11	Neighborhood Park 11	4.0	—	X	City
School Sites	School Sites <sup>1</sup>	10.0	—	X	School
<b>Subtotal</b>		<b>65.88</b>			
<b>Pocket Parks</b>					
P1	Pocket Park 1	0.81	—	—	RD 2062
P2	Pocket Park 2	0.31	—	—	RD 2062
P3	Pocket Park 3	0.49	—	—	RD 2062
P4	Pocket Park 4	0.37	—	—	RD 2062
P5	Pocket Park 5	0.33	—	—	RD 2062
P6	Pocket Park 6	1.47	—	—	RD 2062
P7	Pocket Park 7	0.19	—	—	RD 2062
P8	Pocket Park 8	1.13	—	—	RD 2062
P9	Pocket Park 9	0.48	—	—	RD 2062
P10	Pocket Park 10	0.54	—	—	RD 2062
P11	Pocket Park 11	0.46	—	—	RD 2062
P12	Pocket Park 12	0.76	—	—	RD 2062
P13	Pocket Park 13	1.41	—	—	RD 2062
P14	Pocket Park 14	0.59	—	—	RD 2062
P15	Pocket Park 15	0.33	—	—	RD 2062
P16	Pocket Park 16	0.35	—	—	RD 2062
P17	Pocket Park 17	0.89	—	—	RD 2062
P18	Pocket Park 18	0.33	—	—	RD 2062
P19	Pocket Park 19	0.73	—	—	RD 2062
P20	Pocket Park 20	0.29	—	—	RD 2062
P21	Pocket Park 21	0.45	—	—	RD 2062
P22	Pocket Park 22	0.37	—	—	RD 2062
P23	Pocket Park 23	0.79	—	—	RD 2062
P24	Pocket Park 24	0.28	—	—	RD 2062
P25	Pocket Park 25	0.31	—	—	RD 2062
P26	Pocket Park 26	0.22	—	—	RD 2062
P27	Pocket Park 27	0.20	—	—	RD 2062

Park #	Park Name	Acreage	Miles	Quimby Act	Ownership
P28	Pocket Park 28	0.93	—	—	RD 2062
P29	Pocket Park 29	0.86	—	—	RD 2062
P30	Pocket Park 30	0.42	—	—	RD 2062
P31	Pocket Park 31	0.27	—	—	RD 2062
P32	Pocket Park 32	0.20	—	—	RD 2062
P33	Pocket Park 33	0.39	—	—	RD 2062
P34	Pocket Park 34	1.22	—	—	RD 2062
P35	Pocket Park 35	0.12	—	—	RD 2062
P36	Pocket Park 36	0.21	—	—	RD 2062
P37	Pocket Park 37	0.50	—	—	RD 2062
<b>Subtotal</b>		<b>20.0</b>			
<b>Open Space</b>					
—	—	274.02	—	—	—
<b>Subtotal</b>		<b>274.02</b>			
<b>Community Parks</b>					
C1	Community Park 1 <sup>2</sup>	31.47	—	X	City
C2	Community Park 2	22.5	—	X	City
C3	Community Park 3	14.56	—	X	City
C4	Levee Trail <sup>3</sup>	28.0	7.7	X	RD 2062
<b>Subtotal</b>		<b>96.53</b>			
<b>Linear Parks</b>					
LP1	Linear Park 1	16.65	1.99	—	RD 2062
LP2	Linear Park 2	2.59	0.28	—	RD 2062
LP3	Linear Park 3	1.36	0.19	—	RD 2062
LP4	Linear Park 4	0.74	0.14	—	RD 2062
LP5	Linear Park 5	5.68	0.48	—	RD 2062
LP6	Linear Park 6	0.90	0.14	—	RD 2062
LP7	Linear Park 7	0.75	0.10	—	RD 2062
LP8	Linear Park 8	1.19	0.16	—	RD 2062
LP9	Linear Park 9	16.61	1.24	—	RD 2062
LP10	Linear Park 10	2.29	0.18	—	RD 2062
<b>Subtotal</b>		<b>48.74</b>			

Notes: RD = Reclamation District

1 School sites calculation: Number of schools x 2.5 acres = total acres.

2 Community Park 1 acreage does not include wetland area.

3 Levee trail calculation: Total linear feet x 30-foot width = total square feet (43,560 square feet = 1 acre)

Total linear Feet = 40,656 linear feet

Total miles = 7.7 miles

Source: River Islands 2020 (Figure 4-3)

## TRAFFIC AND VEHICULAR ACCESS

### Internal Circulation

Under the modified Phase 2 Project, the circulation pattern would be modified from the adopted WLSP and General Plan, with River Islands Parkway, Lakeside Drive, and Paradise Road shifting locations to the updated land use pattern, and new arterials and collector streets added (see Figure 3-6). Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the current plan. An additional arterial from the existing terminus of Golden Valley Parkway in the Employment Center would continue into the Phase 2 area for internal circulation.

### External Traffic Features

The existing access to the MacArthur Drive/I-205 interchange via Paradise Road has been retained during project development and is used for both construction and operations access. Potential improvements to Paradise Road during Phase 2 are addressed below in Section 3.5.3, "Offsite Elements."

Initially, Somerston Parkway would be the primary method of access to the Employment Center. In later phases, the Employment Center would primarily be accessed via Golden Valley Parkway. From the San Joaquin River, Golden Valley Parkway would extend north, generally paralleling I-5, and connect to the Louise Avenue west of the I-5 interchange. After crossing Paradise Cut, Golden Valley Parkway would extend south, then west, generally paralleling I-205. These portions of Golden Valley Parkway are addressed further below in Section 3.5.3, "Offsite Elements."

### 3.5.3 Offsite Elements

Two potential offsite elements located outside of Stewart Tract are considered in this SEIR, both consisting of road extensions to I-205 (Figure 3-7). One of these offsite elements consists of an extension of Golden Valley Parkway included in San Joaquin County's inter-regional system and part of its Regional Transportation Improvement Fee (RTIF) program. This roadway would be constructed as a multi-agency effort and the River Islands applicant would be required to continue to contribute funding towards this roadway as part of the RTIF program (fee payments). This extended portion of Golden Valley Parkway would connect to I-205 via the proposed Paradise Road/Chrisman Road interchange. Golden Valley Parkway, as part of the inter-regional transportation system, is planned for construction whether or not the River Islands Project proceeds further. The River Islands Project would not implement construction of Golden Valley Parkway outside the project site. Given these conditions, the portions of Golden Valley Parkway outside the project site are evaluated in this SEIR as a "probable future project" in Chapter 5, "Cumulative Impacts." See Chapter 5 for further information on the selection of probable future projects and the cumulative impact analysis methodology.

The second offsite road improvement considered in this SEIR is the widening and improvement of Paradise Road. Current traffic modelling (described in more detail in Section 4.4, "Traffic and Transportation") indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes on Paradise Road triggering the widening of the road. Once leaving the project site and entering unincorporated San Joaquin County, Paradise Road would be improved from a two-lane rural road to a four-lane arterial up to the connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. A portion of this six-lane segment has been studied by others as part of an I-205/Chrisman Road Interchange Project (California Department of Transportation 2012). The total distance of widened/improved roadway would be approximately 2.7 miles.

This offsite element was identified as "potential" at the time the Notice of Preparation was released (March 2020) because it was unknown at the time whether the modified Phase 2 Project would result in the need to widen Paradise Road. Recent traffic modelling conducted to support this SEIR has indicated that the River Islands Project, including the modified Phase 2 Project, could generate sufficient vehicle trips on Paradise Road to trigger the need to widen and improve Paradise Road.



As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," this SEIR provides a program level of analysis for the potential widening and improvement of Paradise Road, assessing and documenting the range of potential environmental effects of the potential roadway in the event the expansion is needed. This analysis is provided throughout Chapter 4, "Affected Environment, Environmental Consequences, and Mitigation Measures," under the heading "Paradise Road Widening."

Because there is no proposal by any agency to widen Paradise Road in the near term, roadway design drawings of Paradise Road are not available. For the purposes of the program level analysis in this SEIR, the widened Paradise Road is assumed to be a four-lane Rural Arterial/Expressway between Paradise Cut and the currently identified connection with Golden Valley Parkway in the vicinity of the current Paradise Road/Canal Blvd. intersection (Figure 3-7). For the purposes of this SEIR, this segment of Paradise Road is assumed to be an 84-foot-wide roadway corridor, consistent with the San Joaquin County Improvement Standards for typical rural road sections (San Joaquin County 2016, see Drawing R-3). There may be some locations where the roadway would be wider than 84 feet including, for example, the need for left turn lanes at intersections, turn lanes at houses to allow easier vehicle entry/exit at private driveways, and acceleration lanes at private driveways to support entry onto the widened Paradise Road. Between the intersection with Golden Valley Parkway and I-205, it is assumed that Paradise Road would be widened to six lanes to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The roadway width for this segment is assumed to be 150 feet, with some wider areas for the same reasons identified for the 84-foot-wide segment. For both segments an additional 50 feet on each side of the roadway is assumed for construction disturbance and staging. It is assumed that generally the centerline of the disturbance corridors would align with the centerline of the existing Paradise Road; however, it is further assumed that the following criteria would be used to shift the road off the centerline:

- A. To avoid direct effects on a residence so that the road would not encroach on the residential lot;
- B. To avoid direct effects on a non-residential structure or encroaching too close to it; and
- C. To avoid a sensitive environmental resource (e.g., wetland, riparian habitat).

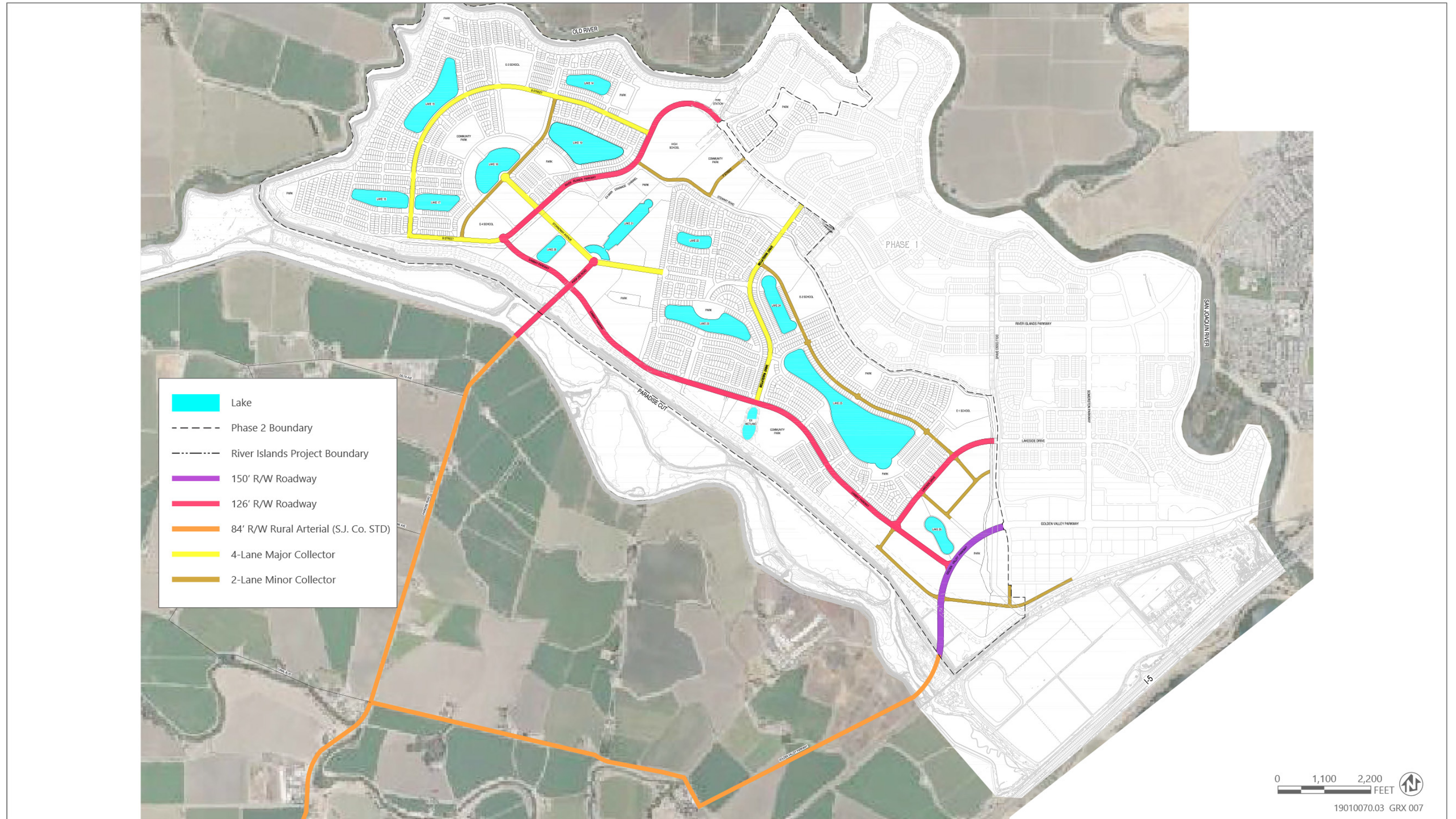
To avoid the above resources, this SEIR assumes that the roadway alignment would be shifted onto agricultural land where possible. In some instances, however, it may not be possible to avoid directly impacting existing houses, other structures, and sensitive resources if they are located in close proximity to and on both sides of the roadway. Therefore, this SEIR assumes that approximately five to six houses and some agricultural facilities would need to be removed to accommodate the road widening.

### 3.5.4 Modified Phase 2 Project Construction

Construction of the modified Phase 2 Project would likely begin in 2021, with buildout expected to be complete by December 2040. For the purposes of this SEIR, it is assumed that there would be a steady pace of construction over this approximately 20-year or 240-month period. The sequence and pace for constructing various land uses and facilities would be market driven; therefore, a specific construction schedule has not been developed.

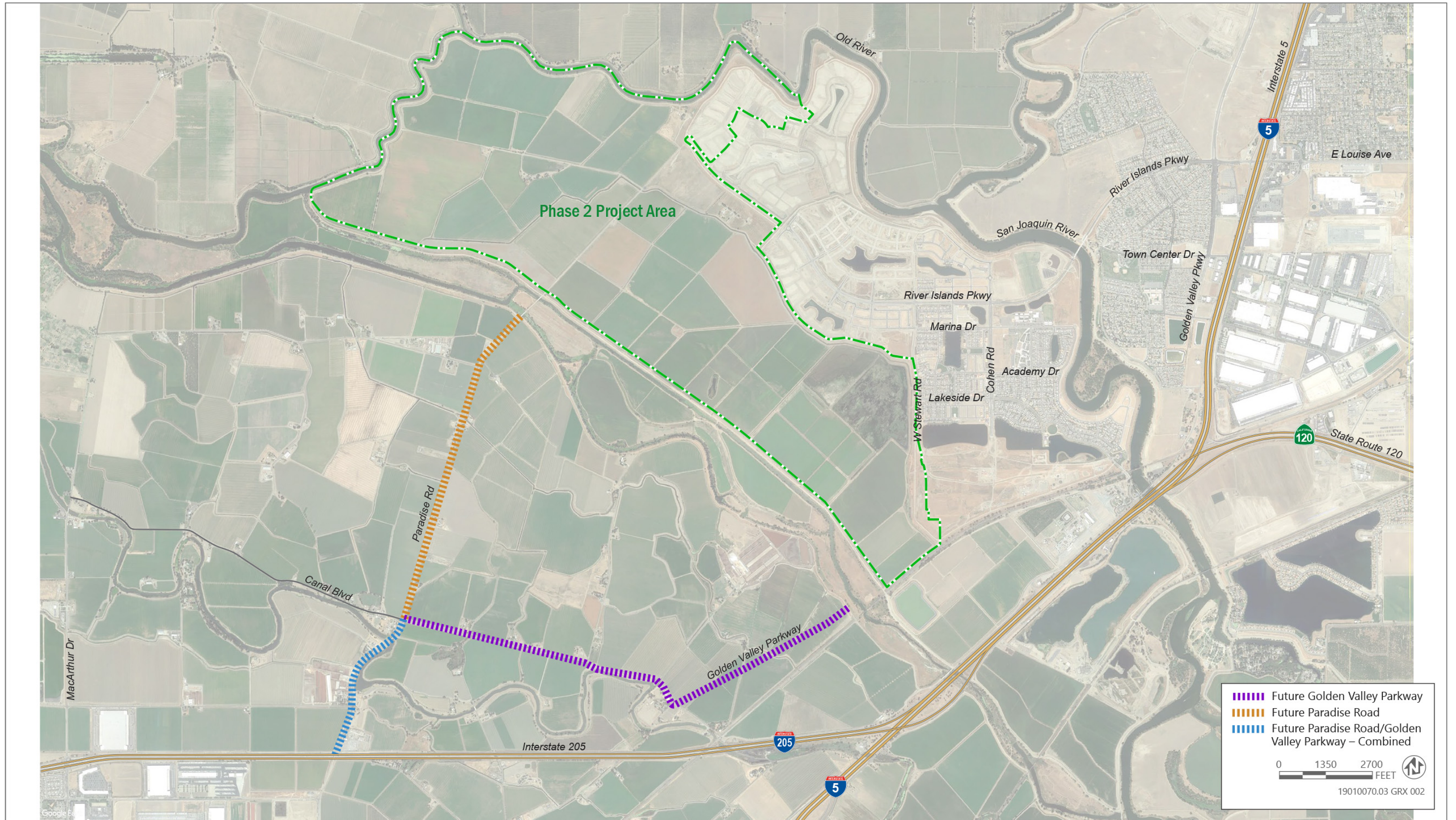
Typical construction activities would include demolition of any existing structures, grubbing/clearing of onsite areas, excavation and relocation of soil on the site, backfilling and compaction of soils, creation of lakes and other water features, construction of utilities (i.e., potable water conveyance, wastewater conveyance, storm water drainage facilities, underground electrical, and natural gas facilities), and construction of proposed buildings.

Construction equipment would vary day-to-day depending on the activities occurring, but would involve operation of scrapers, dozers, compactors, excavators, loaders, haul trucks, water trucks, and pickup trucks. Construction workers would access the site via River Islands Parkway, Paradise Road, Stewart Road, and Manthey Road.



Source: Provided by River Islands in 2020

Figure 3-6 Phase 2 Proposed Street System



Source: Image produced by Ascent Environmental in 2021

Figure 3-7 Potential Offsite Elements

Construction activities are anticipated to require up to an estimated 224 construction workers during peak construction (i.e., when individual construction crews would be needed for mass grading, underground utilities, finish grading, and homebuilding simultaneously). Construction activities would take place from Monday through Friday during normal daytime working hours (7:00 a.m. to 5:00 p.m.) for the majority of the construction activities; however, it may be occasionally necessary to conduct some activities on Saturdays. Examples of activities that may necessitate Saturday construction include mass grading and homebuilding. Construction would not occur on Sundays.

Material import or export is not necessary for Phase 2 construction, as any clean excess fill generated by project-related grading/excavation would be reused on the project site.

At buildout, about 75,000 trees will have been planted at the River Islands Project site as part of Phases 1 and 2. This includes trees in front of homes, along major roads, and in landscaped areas including parks and other recreational facilities. Approximately 16.2 trees per acre have been and will continue to be planted.

## 3.6 POTENTIAL PERMITS AND APPROVALS REQUIRED

The following is a list of approvals and/or permits that may be required to implement the project:

### 3.6.1 State

- ▶ California Department of Fish and Wildlife: Section 2081 Permit based on San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).
- ▶ California Department of Education: Approval of site acquisition and construction plans for proposed non-charter school facilities. Such approvals may also include review by the State Division of the State Architect and State Office of Public School Construction.
- ▶ California Department of Transportation (Caltrans): Review of mitigation measures related to Manthey Road/Mossdale Road Interchange and the closure of Stewart Road, as well as any impacts to the overall State highway system.
- ▶ Central Valley Regional Water Quality Control Board: Clean Water Act Section 401 water quality certification; construction activity stormwater permit; possible National Pollutant Discharge Elimination System permit. It should be noted that the project lies within the City of Lathrop and is currently governed by the City's coverage under the State of California's Phase II Small Municipal Separate Storm Sewer System (MS4) Program.

### 3.6.2 Regional and Local

- ▶ San Joaquin County: Approval of an encroachment permit for the widening of Paradise Road from the Lathrop City limits (project boundary) to the Paradise Road/Chrisman Road Interchange with I-205.
- ▶ San Joaquin Council of Governments: Compliance with the SJMSCP.
- ▶ San Joaquin Valley Air Pollution Control District: Authority to Construct/Permit to Operate.
- ▶ Banta Elementary School District: Approval of site acquisition and construction plans for proposed K-8 school facilities and possibly the proposed high school facilities should BESD's bid for unification be approved.
- ▶ Tracy Unified School District: Approval of site acquisition and construction plans for proposed high school facilities if the proposed unification of BESD does not take place.
- ▶ Tri-Valley - San Joaquin Valley Regional Rail Authority (Valley Link): Approval of proposed Valley Link transit station facility (northern portion).

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# 4 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

## 4.1 APPROACH TO THE ENVIRONMENTAL ANALYSIS

This draft subsequent environmental impact report (Draft SEIR) evaluates and discloses the environmental impacts associated with the modified Phase 2 Project, in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000, et seq.) and the State CEQA Guidelines (California Code of Regulation, Title 14, Chapter 3, Section 1500, et seq.).

Sections 4.2 through 4.20 of this Draft SEIR present a discussion of the regulatory setting, environmental setting, environmental impacts associated with construction and operation of the project, mitigation measures to reduce the level of impact, and residual level of significance (i.e., after application of mitigation, including impacts that would remain significant and unavoidable after application of all feasible mitigation measures). Issues evaluated in these sections consist of the environmental topics identified for review in the Notice of Preparation (NOP) prepared for the project (see Appendix A of this Draft SEIR).

Chapter 5, "Cumulative Impacts," presents an analysis of the project's impacts considered together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. Chapter 8, "Alternatives Analysis," presents a reasonable range of alternatives to the project and evaluates the environmental effects of those alternatives relative to the proposed project, as required by Section 15126.6 of the State CEQA Guidelines. Chapter 6, "Growth-Inducing Impacts," includes an analysis of the project's growth inducing impacts, as required by Section 21100(b)(5) of CEQA.

Sections 4.2 through 4.20 of this Draft SEIR each include the following components.

**Regulatory Setting:** This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from the federal, state, and local levels are each discussed as appropriate. The regulatory setting provided in this Draft SEIR provides an update of information from the 2003 SEIR and reflects the current regulatory setting.

**Environmental Setting:** This subsection presents the existing environmental conditions on the project site and in the surrounding area as appropriate, in accordance with State CEQA Guidelines Section 15125. Within each section, reference is made to the environmental setting provided in the 2003 SEIR because it is relevant to understanding the potential impacts associated with the modified Phase 2 Project. The environmental setting provided in this Draft SEIR provides an update of information from the 2003 SEIR and reflects the current environmental setting. The discussions of the environmental setting focus on information relevant to the issue under evaluation. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macroscale) as well as the site vicinity (microscale), whereas transportation and traffic impacts are assessed for the project site vicinity only.

**Environmental Impacts and Mitigation Measures:** This subsection presents thresholds of significance and discusses potentially significant effects of the modified Phase 2 Project on the existing environment, including the environment beyond the project boundaries, in accordance with State CEQA Guidelines Section 15126.2. The methodology for impact analysis is described, including technical studies upon which the analyses rely. The thresholds of significance are defined. The 2003 SEIR used thresholds appropriate at the time of document preparation. While some of the thresholds remain appropriate and have not been changed, there are additional thresholds that are applicable to the modified Phase 2 Project that relate to changes in environmental conditions, regulations or the CEQA Guidelines.

The thresholds shown in this SEIR include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and text additions shown in underline. Thresholds for which the project would have no impact are disclosed and dismissed from further evaluation. Project impacts and mitigation

measures are numbered sequentially in each subsection (Impact 4.2-a, Impact 4.2-b, Impact 4.2-c, etc.) consistent with the presentation in the 2003 SEIR. A summary impact statement precedes a more detailed discussion of the environmental impact. The discussion first summarizes the impact analysis from the 2003 SEIR, and then describes the impact of the modified Phase 2 Project, including the analysis, rationale, and substantial evidence upon which conclusions are drawn. The focus of the analysis is on whether new significant impacts would be created, above those that were already identified in the 2003 SEIR. The determination of level of significance of the impact is defined in bold text. Mitigation measures are identified, as feasible, to avoid, minimize, rectify, reduce, or compensate for significant or potentially significant impacts, in accordance with the State CEQA Guidelines Section 15126.4. Where mitigation measures would be the same as those identified in the 2003 SEIR, this Draft SEIR uses the title, "Adopted Mitigation Measure"; where mitigation measures would be modified from those identified in the 2003 SEIR, this Draft SEIR uses the title, "Modified Mitigation Measure"; and where mitigation measures would be new, this Draft SEIR uses the title, "New Mitigation Measure." As each mitigation measure is identified throughout the SEIR, the discussion will also note whether the measure has been implemented during Phase 1 and will continue to be implemented during Phase 2.

Where an existing law, regulation, or permit specifies mandatory and prescriptive actions about how to fulfill the regulatory requirement as part of the project definition, leaving little discretion in its implementation, and would avoid an impact or maintain it at a less-than-significant level, the environmental protection afforded by the regulation is considered before determining impact significance. Where existing laws or regulations specify a mandatory permit process for future projects, performance standards without prescriptive actions to accomplish them, or other requirements that allow substantial discretion in how they are accomplished, or have a substantial compensatory component, the level of significance is determined before applying the influence of the regulatory requirements. In this circumstance, the impact would be potentially significant or significant, and the regulatory requirements would be included as a mitigation measure.

This subsection also describes whether mitigation measures would reduce project impacts to less-than-significant levels. Significant and unavoidable impacts are identified as appropriate in accordance with State CEQA Guidelines Section 15126.2(b). Significant and unavoidable impacts are also summarized in Chapter 7, "Significant and Unavoidable Impacts."

For each resource section, there is a separate analysis of the future widening and improvement of Paradise Road. The primary environmental impact analysis, which is described above, is presented at a project level of detail. Following the primary analysis, a secondary analysis is presented at a program level of detail that describes environmental impacts that may result from the potential widening and improvements to Paradise Road outside of the Phase 2 area. It is anticipated that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes on Paradise Road that will trigger the widening of the road from a two-lane rural road to a four-lane arterial from the project site to the connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7 in Chapter 3, "Description of the Proposed Project"). Between the intersection with Golden Valley Parkway and Interstate 205 (I-205), six lanes would be needed to accommodate combined traffic volumes from Paradise Road and Golden Valley Parkway. This program-level analysis is presented under the heading, "Paradise Road Widening." Mitigation measures, including performance standards, are identified for significant and potentially significant impacts. Also, see Section 1.2, "Type and Purpose of this Draft Subsequent EIR," which describes why this SEIR evaluates the modified Phase 2 Project at a project level and the potential widening and improvements to of Paradise Road at a program level.

As identified in Section 4.4, "Traffic and Transportation," other transportation system improvements and new transportation facilities planned outside the River Islands Project site will carry traffic generated by the River Islands Project. These new and modified facilities, such as Golden Valley Parkway and the proposed Paradise Road/Chrisman Road/I-205 interchange are included in various local and regional planning documents and programs such as San Joaquin County's Regional Transportation Improvement Fee (RTIF) program, the San Joaquin Council of Governments (SJCOG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), and the City of Lathrop General Plan. Unlike Paradise Road, where traffic on the roadway will be primarily associated with the River Islands Project, these other new and modified transportation facilities will be part of San Joaquin County's inter-regional system accommodating traffic from development throughout the County and beyond. These regional facilities are

planned for construction whether or not the modified Phase 2 Project proceeds. Without further development of the River Islands Project, there may not be sufficient traffic volumes on Paradise Road in the future to warrant additional lanes. This distinction is why the environmental effects of improvements to Paradise Road are specifically analyzed in this SEIR and other offsite roadway improvements are not. However, regional transportation facilities outside the River Islands Project site are assumed to be in place and functioning as development of the River Islands Project proceeds consistent with the City of Lathrop Travel Demand Model, the SJCOG Regional Travel Demand Model, and the 2040 cumulative scenarios analyzed in Section 4.4, "Traffic and Transportation."

**References:** The full references associated with the parenthetical references found throughout Sections 4.2 through 4.20 can be found in Chapter 9, "References," organized by section number.



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## 4.2 LAND USE

This land use analysis evaluates consistency of the modified Phase 2 Project with applicable land use plans and policies. The physical environmental effects associated with the project, many of which pertain to issues of land use compatibility (e.g., noise, aesthetics, air quality) are evaluated in other sections of Chapter 4.

Section 4.2, "Land Use," of the 2003 SEIR evaluated the potential land use effects of the River Islands Project. The discussion did not individually evaluate the two phases, but instead analyzed both Phase 1 and Phase 2 at a project level of detail. The 2003 SEIR concluded that there would be a less-than-significant impact related to conflicts with the Lathrop General Plan and West Lathrop Specific Plan (WLSP) (Impact 4.2-a).

### 4.2.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws related to land use are applicable to the modified Phase 2 Project.

#### STATE

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of the City or County and of any land outside its boundaries that, in the City's or County's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the City's or County's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (California Government Code Section 65860[c]).

#### LOCAL

##### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* (2004) is the plan that is currently in effect and is the document used for this SEIR. One of the primary goals of the General Plan relates to the urban development of Stewart Tract as a means of achieving long-term community, economic, and other benefits. When the General Plan was originally prepared, the project envisioned for Stewart Tract, known as Califia/Gold Rush City, was an entertainment-oriented complex that included at least one theme park; resort lodging; commercial uses; other associated entertainment-oriented uses; and a variety of recreation-oriented housing types, including retirement homes, time-share single-family units, and condominiums, and second homes. One of the residential elements envisioned for the project site in the 1991 General Plan was a village concept, under which three

or four villages, each made up of two or more neighborhoods, would each be served by a village center with a neighborhood shopping center and community services, one or more elementary schools, and parks.

In 2003, the General Plan was amended to accommodate the River Islands Project. Specifically, the amendments included removal of the theme parks and resort hotels while adding additional housing units and a business/employment center. The amendment also removed the concept of multiple village centers and replaced them with a single town center to serve approximately 30,000 residents.

The General Plan does not specifically identify any goals or objectives related to land use. Section A of the Community Development Element of the General Plan sets forth the policies and proposals that provide the basis for the zoning and development of all available public and private land in the community. The discussion is divided according to the three sub-plan areas that make up the General Plan planning area. The portion of the planning area on Stewart Tract (where the River Islands Project is located) is identified as Sub-plan Area #3. The section also establishes the various land uses and land use standards, primarily building and population densities, associated with the project proposed for Stewart Tract. Because land use-related goals and objectives are not identified in the General Plan, goals and objectives of the General Plan are not discussed further in this section.

The modified Phase 2 Project would amend the General Plan Land Use and Circulation elements commensurate with its changes to the roadway system, land use designations and standards, and similar issues. Two new land use designations would also be added (TOD-RI and OS/PU-RI) that are more fully described below.

### City of Lathrop Zoning Code

The City's Zoning Code is found in Title 17 of the Lathrop Municipal Code. The current zoning districts identified in the Phase 2 area are described below.

- ▶ CN-RI: Neighborhood Commercial-River Islands Zoning District. The CN-RI zoning district is intended to provide a variety of commercial uses that will include convenience-oriented retail stores, offices, and service establishments.
- ▶ CR-RI: Regional Commercial-River Islands Zoning District. The CR-RI zoning district is intended to provide primarily office and employment-generating uses.
- ▶ RCO-RI: Resource Conservation-River Islands Zoning District. The resource conservation and open space zoning district is intended to provide for habitat restoration and preservation-related activities within Paradise Cut.
- ▶ RH-RI: Residential High Density-River Islands Zoning District. The Residential High (RH-RI) Density zoning district is intended to provide for and protect neighborhoods comprised of single-family dwellings, two-family residences, multi-family residences, water-oriented residential uses, and residential use types compatible with higher density neighborhoods.
- ▶ RL-RI: Residential Low Density-River Islands Zoning District. The Residential Low (RL-RI) zoning district is intended to provide for and protect neighborhoods comprised of single-family dwellings, two-family residences, duplexes, water-oriented residential uses, and residential use types compatible with single-family neighborhood communities.
- ▶ RM-RI: Residential Medium Density-River Islands Zoning District. The Residential Medium (RM-RI) zoning district is intended to provide for and protect neighborhoods comprised of single-family dwellings, two-family residences, multi-family residences, water-oriented residential uses, and residential use types compatible with medium density neighborhoods.

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

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a 50-year plan to provide a strategy for balancing the desires to conserve open space in San Joaquin County, maintain the agricultural economy, and allow development of more than 109,300 acres of open space (San Joaquin County 2000:1). The City of Lathrop adopted the SJMSCP on January 16, 2001 and has signed the implementation agreement. Among other purposes, the SJMSCP addresses potential impacts on nearly 100 special-status plant, fish, and wildlife species in 52

vegetative communities scattered throughout San Joaquin County. Projects that would cause impacts associated with these resources are required to implement mitigation measures to avoid or lessen the impacts and provide compensation through payment of fees (or in-lieu land dedication) for conversion of open space lands. These fees are to be used to fund the purchase of conservation easements on agricultural lands and the preservation and creation of natural habitats to be managed in perpetuity through the establishment of habitat preserves. Paradise Cut has been identified in the SJMSCP as a potential preserve area where conservation easements may be purchased, or property may be purchased in fee title for addressing impacts on some of the biological resources located elsewhere in San Joaquin County. If Paradise Cut were an SJMSCP conservation area, existing agricultural activities may be maintained, and habitat restoration and enhancement activities may be implemented in the cut. Final management of SJMSCP conservation areas is determined by the San Joaquin Council of Governments (SJCOG).

The project applicant began construction of urban development in the Phase 1 area with flood protection improvements in 2005. Since that time, the overall River Islands Project has participated in the SJMSCP, implementing Incidental Take Minimization Measures (ITMMs) and paying over \$15 million in mitigation fees. A phased program of ITMM issuance and mitigation fees will continue during Phase 2 as each development area (planning district or sub-district) is graded and urban construction begun.

### **West Lathrop Specific Plan Habitat Management Plan and Section 2081 Management Agreement for Swainson's Hawk**

The WLSP Habitat Management Plan and Section 2081 Management Agreement for Swainson's Hawk (HMP) was prepared in 1995 to address adverse impacts on the Swainson's hawk attributable to buildout of the WLSP. The document was developed for use by the City in negotiating with the California Department of Fish and Wildlife (CDFW) for California Endangered Species Act Section 2081 permitting that would authorize the City, in cooperation with Stewart Tract applicants, to manage Swainson's hawk in conjunction with development under the WLSP. The Section 2081 permit was issued by CDFW to the City in 2002.

As noted above, the project applicant chose to implement the SJMSCP and utilize the Incidental Take Permit and ITMM process of that program. As such, the WLSP HMP will not be utilized.

## **4.2.2 Environmental Setting**

The environmental setting provided on page 4.2-11 of the 2003 SEIR is relevant to understanding the potential land use impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

The River Islands Project is a master planned community, on approximately 4,905 acres on Stewart Tract and Paradise Cut. Much of the Phase 1 area has been or is being constructed with residential dwelling units, a Town Center, a portion of a Business Park, lakes, parks, schools, and other open space. The Phase 2 area is currently mostly undeveloped, with mostly agricultural lands, with the exception of 420 lots within the Stage 2B area which are in various stages of residential development. The project site also contains the Central Drainage Ditch, a long agricultural ditch that bisects Stewart Tract, along with a small pond located on Stewart Tract near Paradise Cut, both are considered waters of the United States and are protected in place from development activities. Flood protection improvements consisting of levees surrounding both the Phase 1 area and Phase 2 development area have been completed, consistent with existing plans and entitlements.

## **4.2.3 Environmental Impacts and Mitigation Measures**

### **METHODOLOGY**

The information presented in this section is based on review of relevant literature and adopted plans, including the City of Lathrop General Plan and associated EIR, the WLSP and associated EIR, the Lathrop City Zoning Ordinance, the SJMSCP, and the HMP.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. These thresholds are similar to the current CEQA Guidelines and need not be changed to adequately consider land use impacts. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strikethrough~~.

The modified Phase 2 Project would cause a significant impact related to land use if it would:

- ▶ physically divide an established community; ~~or~~
- ▶ conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect; ~~or~~
- ▶ ~~conflict with any applicable habitat conservation plan or natural community conservation plan.~~

## ISSUES NOT DISCUSSED FURTHER

As discussed on pages 4.2-12 and 4.2-13 of the 2003 SEIR, the River Islands Project would be located in an underdeveloped area southwest of the developed City of Lathrop and Mossdale Village and would not divide an established community. On all but the northeastern and eastern sides of the Phase 2 area, the project would be surrounded by agricultural land. It would be adjacent to existing Phase 1 development, beyond which lies Mossdale Village. The modified Phase 2 Project itself would not create a division in a community as it would develop agricultural land adjacent to Phase 1. The project would establish a new community within the WLSP area. Because the modified Phase 2 Project would not divide an established community, this issue is not evaluated further in this SEIR.

As noted on page 4.2-13 of the 2003 SEIR, the River Islands Project would be located within San Joaquin County in the area covered by the SJMSCP and the project would not conflict with the SJMSCP. Participation in the SJMSCP is voluntary; therefore, the City's and project applicant's decision on whether or not to use the SJMSCP for this project. The project applicant has utilized coverage under the SJMSCP for Phase 1 and has indicated to both the City and SJCOG that it intends to pay mitigation fees established by the SJMSCP program for Phase 2; SJMSCP fees have been paid for construction of levees in the Phase 2 area (Boyd, pers. comm., 2019).

Paradise Cut is one of the areas identified in the SJMSCP as a potential conservation area for addressing impacts on biological resources located elsewhere in San Joaquin County. Under the modified Phase 2 Project, Paradise Cut would remain as Resource Conservation, providing potential habitat for various special-status species identified in the SJMSCP, including the riparian brush rabbit, western pond turtle, and Swainson's hawk. Thus, the modified Phase 2 Project is consistent with the SJMSCP's goal of using this location as a conservation area. Because the modified Phase 2 Project would not conflict with the SJMSCP, this issue is not evaluated further in this SEIR.

As noted on page 4.2-13 of the 2003 SEIR, the River Islands Project would be located in the area addressed by the HMP and would not conflict with the HMP. Under the modified Phase 2 Project, Paradise Cut would remain as Resource Conservation, providing potential permanent nesting and foraging habitat for the Swainson's hawk. As noted above, the project applicant has chosen to implement the Section 2081 Permit and other provisions of the SJMSCP and not the HMP. Because the modified Phase 2 Project would not conflict with the HCP, this issue is not evaluated further in this SEIR.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.2-a: Conflict with the Lathrop General Plan and West Lathrop Specific Plan

As determined in the 2003 SEIR, potential inconsistencies, by themselves, would not cause any physical environmental impacts. Since certification of the 2003 SEIR, the general plan and WLSP have been amended to reflect the River Islands at Lathrop project, including Phase 1 and Phase 2. The proposed project would increase the number and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would be consistent with the proposed amendments to the Lathrop General Plan and the WLSP. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

Impact 4.2-a of the 2003 SEIR evaluated whether the River Islands Project would conflict with the Lathrop General Plan and WLSP. The analysis noted that the River Islands Project differed substantially from the entertainment-oriented, theme park-centered development envisioned in the WLSP and general plan. The analysis noted that none of the physical impacts of the proposed changes would conflict with the City's adopted environmental goals. The analysis noted the general plan and WLSP would be revised by the River Islands Project and that the land use and zoning revisions described for the general plan and WLSP would not themselves be considered environmental impacts. Therefore, the impact was concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would increase the number and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would result in changed land uses as compared to those analyzed in the 2003 SEIR.

The modified Phase 2 Project would amend the City's Zoning Code to remove the CN-RI: Neighborhood Commercial-River Islands Zoning District and would replace it with the MU-RI zoning district that applies to the Phase 1 Town Center. The new MU-RI zoning district would allow the development of a larger, more diverse mixed-use area (Paradise Cut Village Center). The modified Phase 2 Project would also include a Zoning Map and Text Amendment to add the following zoning districts:

- ▶ TOD-RI: Transit Oriented Development-River Islands Zoning District. The TOD-RI zoning district is intended to provide for uses similar in character to the MU-RI zoning district, in that it allows for a combination of high density residential uses and supporting service retail, as well as office uses and parking facilities, meant to complement the future Valley Link transit station. The Valley Link transit station would "straddle" the Employment Center District, with parking areas also located in the Southeast Stewart Tract sub-planning area outside of River Islands. These parking areas are allowed in the Southeast Stewart Tract sub-planning area and are not part of the modified Phase 2 Project.
- ▶ OS/PU-RI: Open Space/Public Uses-River Islands Zoning District. The OS/PU-RI zoning district differs from the RCO-RI district in that it limits new uses within its boundaries to certain public uses (e.g., utility infrastructure) and protects wetlands and other open space area that are outside of Paradise Cut. In contrast, the RCO-RI district is meant to exclusively protect existing and future habitat, agricultural and similar uses within Paradise Cut only.

Chapter II of the General Plan includes annexation through phased development as one of the major policies and proposals of the document. As discussed on page 4.2-14 of the 2003 SEIR, the River Islands Project is consistent with that policy as it included Phase 1 and Phase 2. Phase 1 has been under construction for many years, and the proposed Phase 2 modifications includes changes only to Phase 2. Because development of the modified Phase 2 Project would follow development of the majority of Phase 1, the project is consistent with this major policy of the General Plan regarding annexation through phased development.

The proposed changes to development in Phase 2 involve the following WLSP objectives: 1A, 2A, 3B, 3I, and 4B. Objective 1A directs projects in the WLSP to add to the economic vitality of Lathrop by providing more local jobs, homes, and revenue-generating land uses. The allowance of additional housing, denser housing development, and

additional retail and commercial development are consistent with this objective. Objective 2A directs development to provide diverse types of housing. By allowing additional residential uses at increased densities, the modified Phase 2 Project is consistent with this objective. Objective 3B seeks to provide central areas that act as focal points for community events, social gatherings, and convenient shopping. By allowing development of apartments and other housing units within the employment center and providing a community center within the Phase 2 area, the modified Phase 2 Project meets this objective. Objective 3I seeks to ensure that new development expands the housing, employment, and recreation resources of the city. The modified Phase 2 Project meets this objective by proposing additional housing opportunities, increased density of housing, and additional retail and commercial space. Objective 4B encourages development to concentrate higher density residential areas within easy walking distance of the village or town center areas and/or other commercial areas. By allowing apartments and additional housing in the employment center, the modified Phase 2 Project meets this objective.

As stated above in the summary of the analysis from the 2003 SEIR, at that time, the River Islands Project that was evaluated differed substantially from the entertainment-oriented, theme park-centered development envisioned in the WLSP and general plan in effect at that time. However, the analysis in the 2003 SEIR noted that none of the physical impacts of the proposed changes would conflict with the City's adopted environmental goals. In addition, it was noted that the general plan and WLSP would be revised by the River Islands Project and that the land use and zoning revisions described for the general plan and WLSP would not themselves be considered environmental impacts. This same approach applies to the modified Phase 2 Project, although the proposed changes from current applicable planning documents are much less than considered in 2003. In 2003, the proposed River Islands Project differed across the entire project site, and many land uses were completely different, changing from an entertainment-oriented, theme park-centered development to a mixed-use residential/commercial development. In the case of the modified Phase 2 Project, only a portion of the overall project site is considered (i.e., the Phase 2 Area) and land uses remain within the general mixed-use residential/commercial categories already approved. As indicated in the impact analyses provided in this SEIR, the modified Phase 2 Project results in environmental effects consistent with those identified in the 2003 SEIR; therefore, the physical impacts of the modified Phase 2 Project would continue to be consistent with the City's adopted environmental goals. In addition, like the 2003 SEIR, the general plan and WLSP would be revised by the modified Phase 2 project but the land use and zoning revisions described for the general plan and WLSP would not themselves be considered environmental impacts. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed. It should be noted however, that the TOD-RI (Transit Oriented Development) would remain unchanged in this scenario.

The area around Paradise Road is primarily agricultural, with a few scattered residences and agricultural buildings. The Paradise Road expansion would propose to widen and improve an existing 2-lane road to 4 or 6 lanes and would not physically divide an established community because the scattered residences and agricultural buildings adjacent to the existing roadway do not constitute an established community in the context of this CEQA threshold. As with the modified Phase 2 Project, no impacts related to this issue would occur.

Similar to the modified Phase 2 Project, the roadway widening and improvement falls in the area covered by the SJMSCP; however, the area around Paradise Road is not within a designated conservation area under these plans. Additionally, participation in the SJMSCP is voluntary; therefore, the County's and applicant's decision on whether or not to use the SJMSCP for the Paradise Road widening and improvement does not determine consistency with the plan. Because the widening and improvement would not conflict with the SJMSCP, there would be no impact. For the land use analysis, the CEQA threshold of significance is related to whether the project would conflict with implementation of the SJMSCP. Potential use of the SJMSCP and potential effects on biological resources are addressed in Sections 4.14, "Terrestrial Biology," and 4.15, "Fisheries."

Consistency with the Lathrop General Plan and West Lathrop Specific Plan are discussed under Impact 4.2-a for the modified Phase 2 Project (less than significant); however, Paradise Road is located within San Joaquin County, not the City of Lathrop. Paradise Road and the surrounding area is designated as General Agriculture (A/G) under the San Joaquin County 2035 General Plan and is zoned AG-40 (General Agriculture with 40-acre minimum parcel sizes). The A/G designation provides for large-scale agricultural production and associated processing, sales, and support uses. The designation generally applies to areas outside areas planned for urban development where soils are capable of producing a wide variety of crops and/or support grazing. Typical building types include low-intensity structures associated with farming and agricultural processing and sales. Widening and improvement of the existing road would not conflict with the existing land use and zoning designations. Therefore, the widening and improvement of Paradise Road would remain consistent with the land use and zoning designation of the site. There would be no impact related to a conflict with a land use policy. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.



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## 4.3 POPULATION, EMPLOYMENT, AND HOUSING

This section addresses the potential impacts of the modified Phase 2 Project with respect to population, employment, and housing in the City of Lathrop and San Joaquin County. It describes the existing population, employment, and housing characteristics of the project area and identifies applicable federal and state plans, policies, and laws and local plans, policies, and regulations.

Additional analysis of potential growth inducement caused by the project is presented in Chapter 6, "Growth-Inducing Impacts," of this Draft SEIR.

Section 4.3, "Population, Employment, and Housing," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to population, employment, and housing in the City of Lathrop and San Joaquin County. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information available. The 2003 SEIR concluded that there would be less-than-significant impacts related to temporary population growth and housing demand during construction (Impact 4.3-a), long-term population growth (Impact 4.3-b), housing demand from project development (Impact 4.3-c), housing displacement (Impact 4.3-d), and consistency with General Plan housing policies (Impact 4.3-e). No mitigation measures were required.

### 4.3.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws are applicable to this discussion of population, employment, and housing for the modified Phase 2 Project.

#### STATE

State law requires each local government in California to adopt a comprehensive, long-term general plan for the physical development of its city or county, and the housing element is one of seven mandated elements of the general plan. Housing elements address the existing and projected housing needs of all economic segments of the community.

State law sets out a process for determining each local jurisdiction's fair share of regional housing needs (e.g., California Government Code section 65584). As a first step in the process, the California Department of Housing and Community Development assigns each regional council of governments a required number of new housing units for that region, including affordable housing. The council of governments (the San Joaquin Council of Governments [SJCOG] in the project area), in turn, allocates the region's share to cities and counties in the region. SJCOG is discussed further below as a local agency.

#### LOCAL

##### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Community Development Element, Section C Housing, of the *City of Lathrop General Plan*, commonly known as the Housing Element, has been the only element of the Lathrop General Plan regularly amended since the General Plan's initial adoption in 1991 to meet State law regarding certification by the State's Housing and Community Development Department (HCD). In December 2019, the City updated its Housing Element and HCD reviewed and certified the document in February 2020.

The following are policies of the Housing Element/General Plan (City of Lathrop 2019) that are applicable to the project:

### **Housing Policies (2020 Housing Element)**

- 1-1 Facilitate the construction of a variety of housing types affordable to all income levels.
- 1-5 Encourage development of housing that has, to the extent possible, a support structure of shopping, services, and jobs within easy access.
- 1-6 Provide home ownership opportunities whenever possible.
- 1-8 Encourage mixed-use developments that provide a high-density residential component.
- 6-1 Promote the use of energy conservation features in the design of new residential development.
- 6-2 Ensure that development projects meet or exceed state standards, including the California Energy Code and CalGreen, regarding energy conservation.
- 6-3 Promote energy conservation activities in all residential neighborhoods and encourage improved energy conservation in residential uses.

The Community Development Element, Section A Land Use, of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

### **Housing Programs (2020 Housing Element)**

- 1b Continue to monitor the amount of land zoned for both single family and multifamily development and ensure that land use and zoning decisions do not reduce sites available for affordable housing. In order to ensure that adequate sites continue to be provided for affordable housing, the City shall:
  - ▶ Require development to meet the minimum development densities established for each residential zoning district.
  - ▶ Evaluate each rezone, change in allowed density, or other action that would reduce residential densities or the residential capacity of site and ensure adequate actions and/or findings are provided to ensure consistency with Government Code Section 65863.
  - ▶ As part of any entitlements for or amendments associated with River Islands/West Lathrop Specific Plan development, ensure that the Specific Plan and associated maps maintain a minimum of 45.67 acres of high-density residential sites in River Islands that allow development at 20 to 40 du/ac.
  - ▶ As part of the development review process for any amendment to existing specific plans that include residential land use designations, encourage re-designation of additional sites to High Density Residential (15-40 du/ac) land uses or to mixed use designations that 50% of the site to be developed with residential uses at a minimum density of 20 du/ac and encourage increasing Medium Density Residential densities to a minimum of 10 to 12 du/ac.

The Community Development Element, Section A Land Use, of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

### **Land Use Policies**

- 2.2 Residential development within Sub-Plan Area #3 shall provide a variety of housing types and a range of lot sizes throughout the Stewart Tract.<sup>1</sup>
- 2.3 Housing diversity within Sub-Plan Area #3 shall be encouraged through a mix of housing types and sizes, attractive design, innovation in site planning and design, and housing opportunities for a variety of income levels.

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<sup>1</sup> Note: The *City of Lathrop General Plan* divides the General Plan area into three sub-plan areas, one of which (Sub-Plan Area #3) includes Stewart Tract, which is where the River Islands Project is located.

- 2.4 The City shall promote residential project design within Sub-Plan Area #3 which reflects and considers natural features, noise exposure of residents, visibility of structures, circulation, access, and the relationship of the project to surrounding uses. Residential densities and lot patterns will be determined by these and other factors.
- 2.7 Generally, areas proposed for Lower Density Residential Development in Sub-Plan Area #3 should be located along the San Joaquin River and along Paradise Cut where lower density is compatible with these natural habitat areas. They would also be located in the western part of the Stewart Tract in proximity to golf course and other open space amenities. The Low-Density housing environment will be given specific physical dimension as part of the Specific Plan for West Lathrop.
- 2.8 Areas proposed for Higher Density in Sub-Plan Area #3 should be located within and nearby the town center, central canal or lake and employment center, as well as near convenience retail or other workplaces.
- 3.1 An employment center on the Stewart Tract shall be developed at a minimum FAR of .25 and a maximum FAR of .5 (1 to 10 stories).
- 3.2 An employment center shall be designed to support a variety of employment-generating, commercial uses, including, but not limited to R&D, office, and administrative uses.
- 3.3 Commercial development within Sub-Plan Area #3 shall be designed to encourage and facilitate pedestrian circulation within and between commercial sites and nearby residential areas.
- 5.1 The City shall encourage the location of new neighborhood commercial development within Sub-Plan Area #3 near residential neighborhoods, the town center, and/or major transportation corridors.

#### **Executive Summary Policies**

- 2 Residential expansion should reflect the considerable variety of housing types that comprise the residential market of the region. In addition to conventional single-family detached housing, there is a strong market for small lot detached and attached (townhouse) single-family purchase housing for entry level buyers as an alternative to multi-family rentals. As an alternative to large multifamily rental projects, there also is a market for owner-occupied multi-plexes. Other alternatives are the purchase and rental condominium, the single-story garden apartment and well-designed mobile home park. As an overall standard, the City should seek to maintain a 70% to 30% ratio in the combined variety of single-family units provided as compared to the combined variety of multifamily units. This percentage is a fair reflection of regional characteristics of housing market demand, and will assure that Lathrop will meet its fair share of the regional market for housing to meet the needs of low and low-moderate income households.

### **San Joaquin Council of Governments Regional Housing Needs Assessment**

Preparation of the Regional Housing Needs Assessment (RHNA) is mandated by California Government Code section 65584. The law requires that the California Department of Housing and Community Development, in consultation with SJCOG, establish a county-wide housing construction target. SJCOG is mandated to develop the methodology and adopt the allocation outcomes of the housing targets to the incorporated cities and the unincorporated areas within the county by family income categories over a 10-year period. The current RHNA was adopted in August 2014 and covers the ten-year period of 2014 to 2023.

## **4.3.2 Environmental Setting**

The environmental setting provided on pages 4.3-2 through 4.3-6 of the 2003 SEIR is relevant to understanding the potential population, employment, and housing impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

## POPULATION

The U.S. Census Bureau estimates that the population of San Joaquin County was 762,148 in July of 2019 (U.S. Census Bureau 2020). Population growth for San Joaquin County is detailed in Table 4.3-1. From 1990 to 2020, the population of San Joaquin County increased from 480,628 to 773,889, or approximately 60 percent over the 30-year period (U.S. Census Bureau 2012, 2020; SJCOG 2020a). Population in the County is expected to reach approximately 1 million by 2040.

**Table 4.3-1 San Joaquin County Population Data**

	1990 <sup>1</sup>	2000 <sup>1</sup>	2010 <sup>1</sup>	2015 <sup>2</sup>	2020 <sup>2</sup>	2025 <sup>2</sup>	2040 <sup>2</sup>
Population	480,628	563,598	685,306	723,724	773,889	829,129	1,004,094
Percent change	--	17.3%	21.6%	5.3%	6.5%	7.1%	21.1%

<sup>1</sup> Information obtained from U.S. Census Bureau.

<sup>2</sup> Information obtained from SJCOG.

Sources: U.S. Census Bureau 2012, 2020; SJCOG 2020a

At the time of the 2010 Census, the population of Lathrop was 18,023; the State Department of Finance (DOF) estimates that the population of the City of Lathrop was 24,936 in 2019. This is an increase of approximately 38 percent over nine years, or an average population increase of approximately 768 individuals annually (City of Lathrop 2019:22). The DOF official population estimate for the City as of May 2020 is 26,833 (DOF 2020a). Table 4.3-2 shows the population projections for Lathrop, which is expected to reach 60,883 by 2040.

**Table 4.3-2 Lathrop Population Projections**

	2020	2025	2030	2035	2040
Population	26,833	37,723	45,443	53,163	60,883
Percent change	—	29.9%	17.0%	14.6%	12.7%

Sources: California Department of Finance 2020a; City of Lathrop 2016:2-21

## EMPLOYMENT

The State of California, Employment Development Department compiles current and historical employment data for California counties and metropolitan areas. Table 4.3-3 provides data related to employment sectors in San Joaquin County from 1990 through 2020 (EDD 2020). As shown, the majority of workers in the county are employed by trade, transportation, and utilities, followed by government agencies, and educational and health services. From 1990 to February 2020, employment opportunities increased by over 100,000 jobs. San Joaquin County is expected to employ 270,185 people by 2025 and 314,544 by 2040 (SJCOG 2020b).

**Table 4.3-3 Employment by Industry in San Joaquin County 1990 – 2020**

Industry Sector	1990	1995	2000	2005	2010	2019	2020
Farm	9,200	10,600	12,700	11,800	11,500	13,000	11,100
Mining and Logging	100	100	100	200	100	100	100
Construction	9,300	5,800	10,200	15,100	7,300	12,300	12,600
Manufacturing	22,800	21,000	22,800	19,600	17,100	18,900	18,600
Trade, Transportation and Utilities	28,900	35,700	40,000	47,100	46,000	67,900	70,900
Information	2,600	2,700	3,000	2,700	2,100	1,700	1,600
Financial Activities	9,200	8,300	8,500	9,600	7,900	7,800	8,000
Professional & Business Services	9,100	11,300	16,300	18,200	15,700	19,300	20,100
Educational & Health Services	16,800	20,000	23,000	28,700	33,500	39,300	38,800

Industry Sector	1990	1995	2000	2005	2010	2019	2020
Leisure & Hospitality	11,300	12,700	13,800	16,500	15,700	22,100	22,500
Other Services	4,600	5,100	5,700	6,300	6,900	7,600	7,900
Government	33,400	34,200	36,500	40,200	39,300	45,400	46,100
<b>Total, All Industries</b>	<b>157,300</b>	<b>167,500</b>	<b>192,600</b>	<b>216,000</b>	<b>203,100</b>	<b>255,400</b>	<b>258,300</b>

Source: EDD 2020

As of 2019, the City of Lathrop contains approximately 6,000 total jobs, with major distribution facilities for large national companies making up the largest employers. The UPS Distribution Center employs an estimated 850 employees; the U.S. Army Airforce Exchange Services employs approximately 800; the Tesla Distribution Center employs approximately 730; and the Super Store Industries Distribution Center employs approximately 450 (City of Lathrop 2019:1-33). Lathrop is expected to employ 8,629 people by 2025 and 11,805 by 2040 (Eberhardt School of Business 2016:13).

## HOUSING

The California Department of Finance defines housing units as a house, an apartment, a mobile home or trailer, a group of rooms, or a single room that is occupied and intended as separate living quarter. Table 4.3-4 summarizes the growth of San Joaquin County's housing stock from 2010 to 2019. The number of housing units has increased from 233,755 in 2010 to 246,521 in 2019. While the population grew approximately 12 percent between 2010 and 2019, the growth in housing units was only approximately 5 percent. Conversely, the City of Lathrop shows aligned growth in both population (38 percent) and housing units (31 percent) during the same time period. However, as seen in Table 4.3-5, Lathrop had a much higher increase in its vacancy rate than the overall County.

Preparation of a RHNA requires that HCD project housing construction needs at the county level. In consultation with SJCOG staff, HCD determined that San Joaquin County must plan for 40,360 housing units over the 10-year planning period (2014-2023). For this planning period, HCD included an adjustment recognizing a high housing vacancy rate owing to the prolonged effects of the national recession that began in 2008. The RHNA determined that of the 40,360 housing units needed, 23.5 percent should be very low income, 16 percent should be low income, 17.5 percent should be moderate, and 43 percent should be above moderate (SJCOG 2014:3).

**Table 4.3-4 San Joaquin County Housing Units: 2010 to 2020**

Year	Population	Total Housing Units	Occupied	Vacancy Rate	Persons per Household
2010	685,306	233,755	215,007	8.02%	3.121
2011	693,114	234,343	215,843	7.89%	3.146
2012	700,519	234,992	217,061	7.63%	3.164
2013	706,418	235,906	219,589	6.92%	3.159
2014	713,315	236,943	219,372	7.42%	3.187
2015	724,859	237,905	219,684	7.66%	3.232
2016	736,027	239,405	222,491	7.07%	3.240
2017	747,579	241,021	221,029	8.29%	3.314
2018	757,279	243,420	222,240	8.70%	3.340
2019	770,385	246,521	225,087	8.69%	3.352
2020	773,632	249,058	234,766	5.7%	3.23

Source: DOF 2020b

**Table 4.3-5 City of Lathrop Housing Units: 2010 to 2020**

Year	Population	Total Housing Units	Occupied	Vacancy Rate	Persons per Household
2010	18,023	5,261	4,782	9.10%	3.766
2011	18,695	5,399	4,917	8.93%	3.800
2012	19,100	5,447	4,995	8.30%	3.821
2013	19,692	5,535	5,159	6.79%	3.815
2014	20,024	5,650	5,200	7.96%	3.848
2015	20,698	5,801	5,301	8.62%	3.902
2016	22,220	6,091	5,679	6.76%	3.911
2017	22,821	6,313	5,702	9.68%	4.000
2018	23,711	6,580	5,879	10.65%	4.031
2019	24,936	6,895	6,160	10.66%	4.046
2020	26,833	7,284	6,894	5.4%	3.89

Source: DOF 2020b

## JOBS:HOUSING BALANCE

The jobs:housing balance is defined as the ratio of the number of jobs to the number of housing units in an area. Jobs and housing are balanced when there are an equal number of employed residents and jobs in an area, with a ratio of approximately 1.0.

As shown in Table 4.3-6, there were an estimated 255,400 jobs and 246,521 housing units in San Joaquin County in 2019. Therefore, the County's jobs:housing balance was approximately 1.0 job for every one housing unit. In 2015, there were an estimated 5,984 jobs in the City of Lathrop and 5,801 housing units; therefore, the City's jobs:housing balance in 2015 (the latest year for which all data is available) was also approximately 1.0 job for every one housing unit.

**Table 4.3-6 Jobs:Housing Balance**

	San Joaquin County 2019	City of Lathrop 2015
Number of Jobs	255,400	5,984
Number of Housing Units	246,521	5,801
Jobs:Housing Ratio	1.0:1.0	1.0:1.0

Sources: EDD 2020; DOF 2020b; City of Lathrop 2019:1-34

## 4.3.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

The examination of population, employment, and housing conditions presented in this section is based on review of the following information and data sources:

- ▶ 2003 SEIR for the River Islands Project;
- ▶ available population, housing, and employment projections from the City of Lathrop, San Joaquin County, DOF, the U.S. Census Bureau, and other sources; and
- ▶ applicable elements and policies from the City of Lathrop General Plan and the West Lathrop Specific Plan (WLSP).

This analysis focuses on the population growth expected from buildout of the modified Phase 2 Project. The total number of new dwelling units included in the modified Phase 2 Project under buildout conditions is calculated based

on the number of acres of each land use designation and the number of dwelling units assumed per acre permitted by the land use category (see Table 3-1 in Chapter 3, "Description of the Proposed Project"). Based on the density of the various residential uses, the number of new residents is calculated using generation rates based on housing type, City of Lathrop population data, and persons per household (PPH) data from occupied homes in the River Islands Phase 1 area. The available data indicates that, on the River Islands project site, low-density residential units generate more persons per household than high-density residential units, with occupancy across various categories of housing types ranging from 2.5 to 3.77 PPH. Based on the type and distribution of housing types included in the proposed project, an average of 3.0 PPH for the Phase 2 area is used in this analysis (Gebhardt, pers. comm., 2020). The housing and population estimates for the modified Phase 2 Project are presented in the analysis of Impact 4.3-b, below, in Table 4.3-7.

The calculation of new employment opportunities generated by the project is based on applying commonly used rates of the number of employees per square foot of non-residential development. Employee generation rates vary based on the type of non-residential uses. For example, retail uses would be expected to have more employees per square foot than warehouse uses. Thus, a general industry average of 4.0 employees per 1,000 square feet of non-residential floor area, which does not conflict with an evaluation of existing job generation rates in Lathrop, is used in this analysis. The number of jobs that would be expected under buildout of the modified Phase 2 Project is shown in the analysis of Impact 4.3-c, below, in Table 4.3-8.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project, and some thresholds that have been deleted, because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would cause a significant impact related to population, employment, and housing if it would:

- ▶ induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure); or
- ▶ ~~generate a substantial demand for new housing, the construction of which could cause significant environmental impacts;~~
- ▶ displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere;~~or~~
- ▶ ~~result in employment or housing conditions inconsistent with goals, policies, or objectives in the City of Lathrop General Plan or the West Lathrop Specific Plan.~~

## ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussions below.



## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.3-a: Population Growth and Housing Demand During Construction

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The 2003 SEIR evaluated the potential for construction of the River Islands Project to generate temporary population growth and demand for housing. The modified Phase 2 Project would generate a temporary increase in employment of an estimated 224 construction jobs during the peak construction period. Existing construction personnel in the region would be sufficient to meet demand associated with the project; therefore, this temporary increase in employment is not expected to generate substantial new population growth in the area or generate the need for substantial additional housing for construction workers. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.3-a of the 2003 SEIR evaluated the potential for construction of the River Islands Project to generate temporary population growth and demand for housing. The analysis noted that the existing number of residents in the City and County who are employed in the construction industry would be sufficient to meet the demand for construction workers that would be generated by the River Islands Project (estimated to be 300 construction jobs during peak periods). Therefore, substantial population growth or increases in housing demand in the region as a result of these jobs was not anticipated. This impact was concluded to be less than significant, and no mitigation was required.

The modified Phase 2 Project would require a similar level of construction as evaluated under the 2003 SEIR. Construction of the modified Phase 2 Project would begin in 2021, with buildout expected to be complete by December 2040. For the purposes of this SEIR, it is assumed that there would be a steady pace of construction over this approximately 20-year or 240-month period. Construction activities are anticipated to require up to an estimated 224 construction workers during peak construction. As shown in Table 4.3-3, San Joaquin County had 12,600 people employed in the construction industry as of February 2020. This would be sufficient to meet the demand for construction workers that would be generated by the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Construction of the project site would not contribute to substantial population growth or increases in housing demand in the region and this impact would remain **less than significant** as identified in the 2003 SEIR.

#### Mitigation Measures

No mitigation is required.

### Impact 4.3-b: Population Growth

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The 2003 SEIR evaluated the potential for the River Islands Project to generate long-term population growth. The modified Phase 2 Project would enable the development of additional new homes compared to the project evaluated in the 2003 SEIR, which would result in direct increases in population. The estimated increases in population exceed planned growth anticipated in the General Plan, the WLSP, and the Master Plan. However, the increase in planned and anticipated population growth as described here would not, on its own, cause significant environmental effects. Direct impacts associated with the development associated with increased population growth are evaluated in appropriate sections of this SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.3-b of the 2003 SEIR evaluated the potential for the River Islands Project to generate long-term population growth. The analysis noted that the River Islands Project would develop new housing, which would directly result in increases in population, with Phase 1 and Phase 2 housing units generating an estimated 12,412 and 19,268 additional new residents, respectively, for a total of 31,680 project residents. The project's projected population growth was determined to exceed the population growth projected for the City as a whole in the General Plan as well as the population growth planned for in the WLSP and the Master Plan. The 2003 SEIR noted that population growth by

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itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to accommodate this growth can have significant impacts on the environment through land conversions and other mechanisms; these impacts were evaluated throughout the 2003 SEIR. This impact was concluded to be less than significant, and no mitigation was required. Following preparation of the SEIR, the City updated its General Plan, and the population growth associated with the Phase 1 and 2 development aligned with City population growth expectations. Since then, population projections have continued to change, and updates to the City's Municipal Service Review and General Plan Housing Element continue to be made to reflect these population changes and trends.

Phase 2 of the approved project included 6,716 dwelling units and an estimated population of 19,268. The proposed Phase 2 modifications would densify the Phase 2 area by including additional multi-family dwellings as well as more attached single-family residences that are similar to units already constructed as part of Phase 1. The modified development would also create a smaller "village center" mixed-use area at Paradise Road (Paradise Cut Village Center) and a mixed-use Transit Oriented Development (TOD) area that would be intended to complement the future planned Valley Link transit station. The modified Phase 2 Project would result in 10,726 dwelling units and an estimated 32,178 new residents based on a project average of 3 persons per house (PPH). Thus, the modified Phase 2 Project would result in 4,010 additional dwelling units and 12,910 additional residents beyond what was identified in the 2003 SEIR.

Although the modified Phase 2 Project would generate population growth that exceeds estimates in existing planning documents for the City of Lathrop, development of the modified Phase 2 Project would help fulfill SJCOG's RHNA, which calls for 40,360 housing units over the 10-year planning period (2014–2023) within San Joaquin County (SJCOG 2014). As described in the 2003 SEIR, population growth by itself is not considered a significant environmental impact and direct impacts associated with development needed to accommodate increased population are evaluated in appropriate sections in this SEIR (e.g., Section 4.4, "Traffic and Transportation"; Section 4.10, "Public Services"; Section 4.11, "Public Utilities"; Section 4.14, "Terrestrial Biology"). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.3-c: Housing Demand from Project Development

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The 2003 SEIR evaluated the potential for the River Islands Project to generate long-term demand for housing. Project development would increase the number of housing units and jobs. The modified Phase 2 Project would have a jobs:housing balance of approximately 0.74, indicating that the proposed development would be housing-rich. The project is, therefore, not expected to induce substantial new housing demand. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.3-c of the 2003 SEIR evaluated the potential for the River Islands Project to generate long-term demand for housing. The analysis noted that project development would increase the number of housing units by 11,000 and jobs by 16,751. This was determined to result in a jobs:housing balance of 0.62 at the end of Phase 1 and 0.76 at the end of Phase 2 (project buildout), which indicates that the project would be job-rich and could generate demand for new housing in the region. Because the County was considered to be "job-poor" with substantial numbers of County residents commuting outside the County for jobs, and the number of commuters projected to increase over time, jobs generated by the project (during Phase 1 and Phase 2) were expected to be filled in large part by the existing resident labor pool in the region. Because the project was anticipated to generate little to no demand for new housing, this impact was concluded to be less than significant, and no mitigation was required.

The modified Phase 2 Project would include 1,837,500 square feet of non-residential floor area; using the industry standard of 4 employees per 1,000 square feet of non-residential floor area, this would result in 7,963 new jobs. The

modified Phase 2 Project would also include 10,726 dwelling units. Therefore, the modified Phase 2 Project would have a jobs:housing ratio of approximately 0.74:1, making it housing-rich. As shown in Table 4.3-6, in 2019 the County's jobs:housing balance was approximately 1.0 job for every one housing unit. The City's jobs:housing balance in 2015 was also approximately 1.0 job for every one housing unit. Because the City and County have a balanced jobs:housing ratio and the modified Phase 2 Project is housing-rich, there would be no additional housing demand generated by the project beyond the housing that would be provided by the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.3-d: Housing Displacement

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The 2003 SEIR evaluated the potential for the River Islands Project to displace existing housing. Fewer than 10 existing residents would be displaced by the entirety of the project (Phase 1 and Phase 2) and most are already owned by the project applicant. However, there are fewer existing residences in the Phase 2 area (less than five). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.3-d of the 2003 SEIR evaluated the potential for the River Islands Project to displace existing housing. The analysis noted that the project site is currently (as of 2003) used for agricultural production and contains fewer than 10 existing farm-related residences. Several of these were being used as temporary migrant housing rather than as full-time residences. Most of the onsite residences were already owned by the project applicant. As such, development of the project site was determined to result in only minimal housing displacement. This impact was concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR, with three houses potentially displaced in the Phase 2 area. As with the 2003 SEIR, some of the remaining onsite residences are already owned by the project applicant. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Development of the project site would result in only minimal housing displacement and this impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.3-e: Inconsistency with Housing Policies

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The 2003 SEIR evaluated whether the River Islands Project was consistent with the adopted housing policies of the General Plan. The modified Phase 2 Project would densify the Phase 2 area by including additional multi-family dwellings as well as more attached single-family residences similar to units already constructed as part of Phase 1. The General Plan contains various policies and implementation guidelines related to the provision of affordable housing, housing for the elderly and handicapped, and multifamily housing (e.g., apartments). Although the modified Phase 2 Project may not meet the desired availability and ratio of these housing elements at all times, the overall project would be consistent with housing policies in the General Plan. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.3-e of the 2003 SEIR evaluated whether the River Islands Project was consistent with the adopted housing policies of the General Plan. In particular, General Plan policies call for maintaining a citywide ratio of 70 percent single-family residences to 30 percent multifamily residences. The 2003 SEIR analysis noted that project development

would include a mix of single-family and multifamily housing (some of which would also be considered affordable housing), as well as active adult dwelling units for a total of 11,000 housing units. The 2003 SEIR concluded that although the project may not meet the City's desired availability and ratio of multifamily and affordable housing elements during Phase 1a, the overall project (at full buildout) was considered to be consistent with the City's housing policies. This impact was concluded to be less than significant, and no mitigation was required.

The 2019 Housing Element polices encourage mixed use and multi-family-oriented development. To meet the City's housing element objectives for higher density housing, it has set objectives for the River Islands project to designate land uses that allow development at 20 to 40 residential units to the acre (du/ac). Specifically, Program 1b of the adopted Lathrop Housing Element states:

- ▶ Continue to monitor the amount of land zoned for both single family and multifamily development and ensure that land use and zoning decisions do not reduce sites available and sites continue to be provided for affordable housing; and
- ▶ As part of any entitlements for, or amendments associated with, River Islands/West Lathrop Specific Plan development, ensure that the Specific Plan and associated maps maintain a minimum of 45.67 acres of high-density residential sites in River Islands that allow development at 20 to 40 du/ac.

With the existing mixed use Town Center within Phase 1 there are 668 multifamily units including 425 apartments (approximately 17.7 net acres at 24 du/ac) and 243 townhomes (approximately 21 net acres at 11.6 du/ac).

For Phase 2 approximately, 28 acres will need to be developed to meet the housing element goals, where high density housing of 20 du/ac or more is developed. To ensure compliance with the housing element objectives, specific sites have been identified within the modified Phase 2 area including Paradise Cut Village and the Transit Oriented Development District to accommodate the stated General Plan Housing Policy. As development occurs within the modified Phase 2 area, options are available to shift the assigned 28 acres of multi-family sites within the Phase 2 planning area through the adoption of Planned Development Plans (PDPs), Neighborhood Development Plans (NDPs), and associated architectural guidelines and development standards (AG/DS). The Lathrop Planning Division will be responsible for tabulating the number of acres proposed and developed for high density housing of 20 du/acre or greater. As development continues over time, City Planning staff will track this requirement to provide high density Multi-Family housing. The PDP and associated NDP and AG/DS documents drafted for individual districts or sub-districts shall detail the number, location, and anticipated density of proposed high density multi-family units. The PDP shall provide the acreages and densities of such units and the NDP and AG/DS shall detail the specific development standards for these units, including proposed layouts and unit types. The approval of subsequent PDPs and each NDP will be contingent on the implementation of the provisions of this obligation. The City will not agree to process future PDPs and/or NDPs unless or until the 28 acres designated for Multi-family development of equal to or greater than 20 du/ acre can be guaranteed through designation to either the original sites or alternative sites at the developer's discretion.

Executive Summary Policy 2 of the General Plan Land Use section identifies a regional need for small lot detached and attached (townhouse) single-family purchase housing for entry level buyers and condominiums. The policy also states that the City should seek to maintain a 70 percent to 30 percent ratio of single-family units provided as compared to multi-family units. The approved River Islands Project included a mix of housing types, ranging from single-family-detached homes to condominiums, townhouses, apartments, and potential for active adult (senior-oriented) housing. These same housing types are retained in the modified Phase 2 Project, but with 4,010 units added to the Phase 2 area resulting in 15,010 total housing units. The modified Phase 2 Project would densify the Phase 2 area by including additional multi-family dwellings (condominiums, apartments, etc.) as well as more attached single-family residences. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because the project is generally consistent with the applicable General Plan policies, impacts related to General Plan consistency would remain **less than significant** as identified in the 2003 SEIR.

## Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

Population growth and housing demand during construction is discussed under Impact 4.2-a for the modified Phase 2 Project (less than significant). The widening of Paradise Road is a smaller construction undertaking; therefore, this temporary increase in employment would not generate substantial new population growth in the area or generate the need for substantial additional housing for construction workers above what is analyzed for the modified Phase 2 Project.

The Paradise Road expansion is a road widening project that would not result in the construction of any residences or employment centers and therefore would not increase the population or housing demands in the area (Impacts 4.3-b and 4.3-c). The widening and improvement of Paradise Road would not conflict with any housing policies the San Joaquin County 2035 General Plan (Impact 4.3-e). Therefore, no impacts related to these issues would occur.

Although the exact corridor for the widening of Paradise is not yet known, it is assumed that generally the centerline of the 184-foot disturbance corridor between Paradise Cut and the future connection to Golden Valley Parkway would align with the centerline of the existing Paradise Road. The centerline of the segment between the connection with Golden Valley Parkway and I-205 is assumed to also generally align with the existing Paradise Road centerline, but the disturbance corridor would be 250 feet because six lanes would be constructed. In almost all areas, there is an opportunity to shift the road centerline towards agricultural land to avoid a homesites or other structures. However, there are locations where this might not be possible, including the reach south of the Paradise Slough crossing between the Paradise Slough bridge and Arbor Boulevard. Therefore, approximately five to six homes and some agricultural facilities might be adversely affected to accommodate the road widening. If housing displacement were to occur, a fair market price for the lost residences and use of land would be required to be paid by the implementing entity. Compared to the Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.

## 4.4 TRAFFIC AND TRANSPORTATION

This section describes the regulatory and environmental setting for transportation and circulation in the River Islands Project and Phase 2 area, analyzes effects on transportation and circulation that would result from implementation of the modified Phase 2 Project, and provides mitigation measures to reduce the effects of any potentially significant impacts.

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process that fundamentally changed transportation impact analysis as part of CEQA compliance. As discussed further below in Section 4.4.1, "Regulatory Setting," these changes include *elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion* as a basis for determining significant impacts under CEQA. In the amended CEQA Guidelines, the Governor's Office of Planning and Research (OPR) selected vehicle miles traveled (VMT) as the preferred transportation impact metric and applied their discretion to recommend its use statewide. Therefore, this section analyzes the project's effects on VMT, and summaries of LOS and impacts from the original 2003 SEIR are not provided.

SB 743 took full effect on July 1, 2020; after that time, all transportation impact analysis for CEQA must rely on VMT. CEQA Statute Section 21099(b)(2) states that upon certification of the 2018 CEQA Guidelines, LOS shall not be considered a significant impact on the environment. CEQA transportation studies should continue to evaluate the effect of a project on transit, pedestrian, and bicycle service or facilities as well as safety. It should be noted that the City of Lathrop will continue to use LOS in the analysis of AM and PM Peak Hour Conditions to determine improvements for the Capital Facilities Fee and Capital Improvement Program, and to determine when those improvements would be required. The California Department of Transportation (Caltrans) does require a Safety Review of potential impacts upon the State Highway System and that review may consider congestion as a safety issue. Such a Safety Review is included in this section.

### 4.4.1 Regulatory Setting

The following describes the current regulatory setting applicable to the Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws related to transportation and circulation are applicable to the project.

#### STATE

The State of California has enacted several pieces of legislation that outline the state's commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to reductions in greenhouse gas (GHG) emissions in line with state climate goals. The legislation with applicability to the analysis of the Phase 2 Project includes:

- ▶ Assembly Bill (AB) 32 (2006),
- ▶ SB 375 (2008), and
- ▶ SB 743 (2013).

#### Assembly Bill 32

AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 also requires that "(a) the statewide GHG emissions limit shall remain in effect unless otherwise amended or repealed; (b) it is the intent of the Legislature that the statewide GHG emissions limit continues in existence and be

used to maintain and continue reductions in emissions of GHGs beyond 2020; (c) the California Air Resources Board (CARB) shall make recommendations to the Governor and the Legislature on how to continue reductions of GHG emissions beyond 2020.” Vehicle emissions are a significant source of GHGs; therefore, GHG reduction targets include reductions in vehicle emissions, providing a nexus between AB 32 and transportation analyses.

### **Senate Bill 375**

SB 375 requires metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their regional transportation plans (RTPs). The SCS demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions from automobiles and light trucks in accordance with targets set by the CARB.

In 2017, the State Legislature passed SB 150, which requires CARB to prepare a report beginning in 2018 and every four years thereafter analyzing the progress made by each MPO in meeting the regional GHG emission reduction targets.

The San Joaquin Council of Governments (SJCOG) serves as the MPO for Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, Tracy, and San Joaquin County. River Islands is located in the City of Lathrop and therefore is within the SJCOG MPO.

SB 375 also provides streamlining (i.e., limited CEQA review) for certain transit priority projects that are consistent with the SCS.

### **Senate Bill 743**

SB 743 creates or encourages several statewide changes to the evaluation of transportation and traffic impacts under CEQA. First, it directs OPR to amend the CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the new metrics beyond TPAs. The California Natural Resources Agency certified and adopted the amended CEQA Guidelines in December 2018. In the amended CEQA Guidelines, OPR selected VMT as the preferred transportation impact metric and applied their discretion to recommend its use statewide. The amended CEQA Guidelines state that “generally, VMT is the most appropriate measure of transportation impacts” and the provisions requiring the use of VMT shall apply statewide as of July 1, 2020. The amended CEQA Guidelines further state that land use “projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less-than-significant transportation impact.”

Second, SB 743 establishes that aesthetic and parking impacts of a residential, mixed-use residential, or employment center projects on an infill site within a TPA shall not be considered significant impacts on the environment.

Third, SB 743 added section 21099 to the Public Resources Code, which states that automobile delay, as described by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment upon certification of the CEQA Guidelines by the Natural Resources Agency. Since the amended CEQA Guidelines were certified in December 2018, LOS or similar measures of vehicular capacity or traffic congestion are not considered a significant impact on the environment under CEQA.

Lastly, SB 743 establishes a new CEQA exemption for a residential, mixed-use, and employment center project (a) within a TPA, (b) consistent with a specific plan for which an EIR has been certified, and (c) consistent with an SCS. This exemption requires further review if the project or circumstances changes significantly.

### **Technical Advisory on Evaluating Transportation Impacts in CEQA**

To aid in SB 743 implementation, in December 2018 OPR released a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Technical Advisory). The Technical Advisory provides advice and recommendations to CEQA lead agencies on how to implement the SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches.

The Technical Advisory identifies “screening thresholds” to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The Technical Advisory suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT.

- ▶ Small projects – projects consistent with a SCS and local general plan that generate or attract fewer than 110 trips per day.
- ▶ Projects near major transit stops – certain projects (residential, retail, office, or a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- ▶ Affordable residential development – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- ▶ Local-serving retail – local-serving retail development tends to shorten trips and reduce VMT. The Technical Advisory encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The Technical Advisory suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant).
- ▶ Projects in low VMT areas – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The Technical Advisory also identifies recommended numeric VMT thresholds for residential, office, and retail projects, as described below.

- ▶ Residential development that would generate vehicle travel exceeding 15 percent below (i.e., greater than 85 percent of) existing (baseline) residential VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as a regional VMT per capita or as city VMT per capita.
- ▶ Office projects that would generate vehicle travel exceeding 15 percent below (i.e., greater than 85 percent of) existing regional VMT per employee may indicate a significant transportation impact.
- ▶ Retail projects (and other non-residential/non-office projects) that results in a net increase in total VMT may indicate a significant transportation impact.

For mixed-use projects, the Technical Advisory suggests evaluating each component independently and applying the significance threshold for each project type included. Alternatively, the lead agency may consider only the project’s dominant use.

The Technical Advisory also provides guidance on impacts to transit. Specifically, the Technical Advisory suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the Technical Advisory suggests that “an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.”

## California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS within the study area would need to be approved by Caltrans.

The following Caltrans planning documents emphasize the State of California’s focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development:

- ▶ Smart Mobility Framework (Caltrans February 2010a),
- ▶ Complete Streets Implementation Action Plan (Caltrans 2010b),
- ▶ California Transportation Plan 2040 (Caltrans 2016),
- ▶ Strategic Management Plan 2015-2020 – 2019 Update (Caltrans 2019a), and
- ▶ State Highway System Management Plan (Caltrans 2019b).



### **VMT-Focused Transportation Impact Study Guide**

On May 20, 2020, the VMT-Focused Transportation Impact Study Guide (TISG) was adopted by Caltrans. The TISG provides guidance on how Caltrans will review land use projects, with focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals; as well as identifying land use projects' possible transportation impacts to the State Highway System and potential non-capacity increasing mitigation measures.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus, and references OPR's Technical Advisory as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the Technical Advisory for land use projects. The TISG also references the Technical Advisory for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

### **Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance**

On July 2, 2020, Caltrans released the Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance. The purpose of the interim guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the State Highway System (SHS) and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically Local Roadway Safety Plans (LRSPs) and Systemic Safety Analysis Reports (SSARs), as a model for safety analysis of the local transportation network. This guidance supports implementation of SB 743 and complements the "VMT-Focused TISG" dated May 20, 2020. The new guidance has two main parts:

- ▶ Reactive: a review of Caltrans safety monitoring program data to see what known safety issues may be affected by the project; and
- ▶ Systemic: a review of LRSPs, SSARPs, and other plans and assessments to see what safety patterns and improvements may be applicable to Caltrans facilities in the study area.

## **LOCAL**

### **City of Lathrop General Plan**

The City of Lathrop is currently updating its General Plan; therefore, the existing *City of Lathrop General Plan* is currently in effect and is the document used for this SEIR. The Transportation and Circulation section of the *City of Lathrop General Plan* (2004) contains the following policies that may apply to the project:

#### **Goal No.6**

It is a goal of the General Plan to guide and provide for the development of an integrated system of transportation and internal circulation, and to provide access to other parts of San Joaquin County and the region. This goal is intended to benefit all citizens of Lathrop, including the young, the elderly and the physically handicapped, by seeking the following:

- ▶ Increased transportation safety for citizens.
- ▶ The efficient movement of people and goods.
- ▶ Lower vehicle operating costs.
- ▶ Lower vehicle miles traveled with consequent reduction in vehicle emissions.
- ▶ Economy in street construction and maintenance.
- ▶ A circulation system correlated and consistent with the land use patterns fostered by the General Plan.
- ▶ Avoidance of the disruption of residential areas caused by through traffic on minor streets.
- ▶ Protection of rights-of-way needed for future Arterial and Collector street widening in developed areas.
- ▶ Access to boat docking facilities.

The General Plan provides specific policies for the four categories of roadway addressed in the plan: freeways, arterial streets, collector streets, and minor streets. Many of these policies related specifically to roadway design elements, such as number of lanes, landscaping, types of pedestrian corridors, spacing between intersections, and presence/absence of on-street parking. General Plan policies that relate to circulation and traffic patterns, roadway improvements to accommodate anticipated increases in traffic, and methods to minimize traffic impacts are listed below.

#### Freeway Policies:

- ▶ **Policy 1:** The City should protect the through traffic functions of Interstate and State Route Freeways serving the Lathrop area by planning arterial street alignments which will avoid the need or desire to utilize freeway sections for short, local area interval trips as if they were elements of the local arterial street system.
- ▶ **Policy 2:** Land use designations along freeway sections should take into consideration the existing visual and noise impacts associated with existing and future traffic levels on these major traffic carrying facilities.
- ▶ **Policy 3:** Freeway interchanges should be improved to carry the demands of traffic generated by Lathrop's development, with new freeway interchanges and additional interchange ramps being added where necessary and practical in consideration of the need for fair apportionment of traffic to existing and future regional demands.

#### Arterial Streets Policies:

- ▶ **Policy 1:** Arterials constructed to boulevard standards are to be the principal carriers of north-south and east-west traffic through Sub-Plan Areas (SPA's) #2 and #3<sup>1</sup>.

#### Collector Street Policies:

- ▶ **Policy 3:** The high costs of converting a deficient Collector street to the appropriate standards required for existing and projected traffic should be limited to only those streets where either: a) high current and projected volumes of traffic are involved; b) joint funding is possible; c) significant contributions of private or assessment district funds are involved as part of the cost of developing adjacent lands; or d) where the rate of serious accidents has been high and where hazards to public safety are great.

#### Minor Street System Policies:

- ▶ **Policy 3:** In view of deficiencies in existing Minor streets, the City should consider forms of funding which include direct public sources (e.g., through redevelopment or assessment districts) as a means of overcoming Minor street deficiencies. Curb, gutter, sidewalk and paving needs along Minor streets might alternatively be made the responsibility of affected property owners. Under this approach, the City could assume responsibility for engineering services and additional costs occasioned by higher standards of street construction and drainage than were involved at the time of original street construction. The City might also share equally in total costs where a majority of property owners are willing to accept assessment proceedings or another appropriate method of collective project financing.
- ▶ **Policy 4:** Policies for Minor streets are intended to reflect options for reducing through traffic on minor streets between intersections with Arterials. This policy seeks to eliminate the use of Minor streets as thoroughfares through residential areas where they extend parallel to nearby Arterials or Collectors for many blocks and are often used as substitutes for Arterials or Collectors.

### **City Council Resolution No. 20-4784**

City Council Resolution No. 20-4784: A Resolution of the City Council of The City of Lathrop to Find The Action Exempt From The California Environmental Quality Act ("CEQA"), Adopt The Proposed Thresholds of Significance and Screening Criteria for The Purpose of Analyzing Transportation Impacts Under CEQA Related to Vehicle Miles Traveled ("VMT") was adopted on September 14, 2020 (City of Lathrop 2020). Consistent with State CEQA Guidelines

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<sup>1</sup> The River Islands project is located within SPA #3.

section 15064.3, the City of Lathrop adopted project baselines and thresholds of significance to guide in determining when a project will have a significant transportation impact in a CEQA document:

- ▶ Residential Project – A proposed project exceeding a level of 15 percent below existing (baseline) city-wide VMT per household or per resident would indicate a significant transportation impact;
- ▶ Office Project – A proposed project exceeding a level of 15 percent below existing (baseline) city-wide VMT per employee would indicate a significant transportation impact;
- ▶ Retail Project – A proposed project resulting in a net increase in existing (baseline) city-wide VMT per employee would indicate a significant transportation impact. This metric reflects the nature of most local-serving retail to distribute existing vehicle trips, rather than generate or induce new vehicle trips and would apply to retail and food projects; and
- ▶ Mixed-Use Project - The City will apply the above applicable residential, office, or retail thresholds for mixed-use projects. Each of the primary land uses would be evaluated independently by applying the relevant threshold above.
- ▶ Proposed changes to a previously approved project – For projects that have been approved prior to the adoption of this resolution, and changes to the project description are proposed, then a VMT analysis will be completed. The VMT analysis will be completed for both the approved project and the proposed project. A net increase in VMT per household, VMT per capita, VMT per employee for any applicable project type (residential, office, retail, or mixed-use) would indicate significant transportation impact.

It should be noted that Baseline VMT is defined as the average VMT per project type for the City of Lathrop under Baseline Year 2020 conditions using the City of Lathrop Travel Demand Model.

## 4.4.2 Environmental Setting

### EXISTING CONDITIONS

The existing conditions section provided on pages 4.4-6 through 4.4-23 of the 2003 SEIR includes a comprehensive description of the roadways in the River Islands Development (RID) Area. The following information updates the information from the 2003 SEIR.

#### Roadways

Since the City certified the 2003 SEIR, several major roadways in the Phase 1 area have been constructed including:

- ▶ River Islands Parkway, south half of the street between McKee Boulevard and Somerston, and full street from Somerston to Norbeck Drive;
- ▶ The first two lanes of the Bradshaw's Crossing bridge;
- ▶ Somerston Parkway between Outrigger Drive and Lakeside Drive;
- ▶ Dell'Osso Drive between River Islands Parkway and Lakeside Drive; and
- ▶ Lakeside Drive between Dell'Osso Drive and Stewart Road.

The remaining major roadway segments that will be constructed in the future include the second structure of Bradshaw's Crossing bridge which consists of a separate two-lane bridge paralleling the current bridge, the Golden Valley Parkway bridge over the San Joaquin River and over Paradise Cut, and a second two-lane bridge for Paradise Road across Paradise Cut. The City of Lathrop is currently pursuing the construction of the first two lanes of the Golden Valley Parkway bridge over the San Joaquin River under a separate City project subject to project level CEQA/NEPA review.

The existing access to the MacArthur Drive/Interstate 205 (I-205) interchange via Paradise Road has been retained during project development. During Phase 1 construction in 2019, access between Phase 1 and Paradise Road was temporarily closed to public use. This access was recently reopened to public use. For the purpose of the transportation impact analysis, the travel model is calibrated to reflect a best estimate of existing traffic expected on this connection.

There is currently no designated truck route in the RID area. Truck routes will be designated on roadways that provide access to the employment and commercial areas within the RID area.

### **Bicycle and Pedestrian Facility**

The River Islands Project trail system being implemented as the Phase 1 Project is developed consists of an interconnected, hierarchical system of trails for pedestrians and bicyclists that provides access to the project neighborhoods and districts. The trail system for Phase 1, when complete, will connect to existing and planned trails in Lathrop and surrounding areas via pedestrian/bicycle lanes incorporated into project bridges over the San Joaquin River. The two main components of the trail system are the levee system, along both non-Project and Project levee segments and the internal trails along Dell'Oso Drive, the Central Drainage Ditch and other areas that interface with internal bike lanes, paths and routes within the interior of the overall Project. The Phase 2 Project expands and builds upon the existing plans following the same principals for function, connectivity, and general location.

### **Transit System**

There is currently no transit stop located in the RID area. The San Joaquin Regional Transit District (San Joaquin RTD) provides bus transit service in the City of Lathrop. Bus route 90 provides weekday bus service in cities of Lathrop and Tracy. Bus route 797 provides weekend service in cities of Tracy, Lathrop, Stockton, and Manteca. Major arterial streets in Phase 1 of River Islands (River Islands Parkway, Somerston Parkway) have bus turnouts constructed to accommodate future bus service. The Phase 2 Project will also contain bus turnouts along major arterials.

The Altamont Corridor Express (ACE) is a commuter rail service connecting Stockton and San Jose. The closest ACE station is the Lathrop / Manteca station located in the City of Lathrop near the West Yosemite Avenue / Shideler Parkway intersection.

The future Valley Link commuter rail service, currently undergoing the planning phase, would provide rail service from the existing Dublin/Pleasanton BART station to the proposed North Lathrop/ACE station, and ultimately connect to the Stockton ACE/San Joaquin Stations. The planned River Islands station would be located partially in the southwest corner of the RID area (see Chapter 3, "Description of the Proposed Project"), with the remainder on the southeast side of the Union Pacific Railroad (UPRR) tracks adjacent to the RID area, near the I-5 / Manthey Road / Mossdale Road interchange.

### **Vehicle Travel**

Consistent with the discussion of SB 743 provided above in Section 4.4.1, "Regulatory Setting," vehicle travel is evaluated using VMT as the primary metric. The following describes the baseline VMT levels in the RID area and the City of Lathrop. The baseline VMT is developed using the City of Lathrop travel demand model, which was derived the SJCOG Travel Demand Model. The model was developed in 2020 and calibrated to adjusted pre COVID-19 traffic counts. It should be noted that the base year model was modified to reflect current roadway and land use in the RID area, including the Paradise Road Bridge that was recently reopened.

A model-wide analysis was performed to obtain daily trips and travel distance by all Transportation Analysis Zones (TAZs), and the product of daily trips and travel distance was summed up to obtain VMT estimates. Tables 4.4-1 and 4.4.2 display modeled 2020 VMT per household, VMT per capita, and VMT per employee for both River Islands Phase 1 development and citywide for City of Lathrop. Citywide for City of Lathrop includes existing River Islands Phase 1 development. Refer to Appendix B for model results and technical calculations.

**Table 4.4-1 River Islands and City of Lathrop Residential VMT – Existing Conditions**

Land Use	River Islands Dwelling Units	River Islands Population	River Islands Total Residential Daily VMT	River Islands VMT Per Household	Baseline Citywide VMT Per Household	River Islands VMT Per Capita	Baseline Citywide VMT Per Capita
Total Residential Dwelling Units	1,069	3,382	134,391	125.7	113.8	39.7	28.3

Note: For 2020 residential units built, 90% are assumed to be occupied.

Citywide VMT includes River Islands.

Source: Data provided by Fehr & Peers in 2020

**Table 4.4-2 River Islands and City of Lathrop Non-Residential VMT – Existing Conditions**

Land Use	River Islands Employees	River Islands Total Employee Daily VMT	River Islands VMT Per Employee	Citywide VMT Per Employee
Food	9	1226	136.2	243.5
Retail + Hotel	N/A	N/A	N/A	153.0
Office	5	222	44.4	39.9
School	152	13621	89.6	130.7

Note: Food, retail, hotel, and office "Employees" and "VMT per Employee" includes employees, customers, and visitors (see Appendix B-1)

School VMT includes staff, administration and student vehicle trips.

Citywide VMT includes River Islands.

Source: Data provided by Fehr & Peers in 2020

### 4.4.3 Environmental Impacts and Mitigation Measures

This section describes the environmental impacts associated with transportation and circulation that would result from implementation of the modified Phase 2 Project. It describes the methods used to determine the effects of the project and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts are provided. As described above in the introduction to this chapter and in Section 4.4.1, "Regulatory Setting," changes in CEQA traffic impact analyses as a result of SB 743 have eliminated auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts under CEQA. OPR has selected VMT as the preferred transportation impact metric. Therefore, this section analyzes the Project's effects on VMT and impacts related to LOS and similar congestion measures are not evaluated under this CEQA analysis.

## METHODOLOGY

### VMT Impact Assessment

The 2003 SEIR used LOS for transportation impact assessment. As discussed above, LOS can no longer be used for evaluating project traffic impacts under CEQA with the enactment of SB 743 and adoption of the amended CEQA Guidelines implementing SB 743 (see CEQA Guidelines Section 15064.3). Therefore, the approach and analysis in the 2003 SEIR cannot be used, and any significant LOS impacts identified in the 2003 SEIR can no longer be considered as significant impacts in this SEIR.

Per CEQA Guidelines Section 15064.3, subdivision (c), the provisions in Section 15064.3 recommending VMT as the primary metric for analyzing traffic impacts shall apply on July 1, 2020.

This analysis relies on guidance provided in the OPR Technical Advisory and City Council Resolution No. 20-4784 to assess the project's VMT impact. Specifically, this analysis considers the following:

- ▶ Does the project meet one or more of the "screening thresholds" identified in the Technical Advisory, such that a detailed analysis is not necessary?
  - If so, what information or data is available to support the conclusion that the project meets the screening threshold and should be considered to have a less-than-significant transportation impact?
- ▶ If the project does not meet one or more of the "screening thresholds," the analysis would proceed to a detailed analysis of the project's VMT impact. This includes quantifying the project's VMT generation and determining whether this VMT generation would meet the thresholds of significance identified in the City Council Resolution No. 20-4784.

### **VMT Screening Analysis**

The OPR Technical Advisory identifies "screening thresholds" to identify at a screening level when a project should be expected to cause a less-than-significant impact without conducting a detailed study. As described in the Regulatory Setting section above, the Technical Advisory suggests the following projects should be expected to have a less-than-significant impact on VMT:

- ▶ Small projects
- ▶ Projects near existing major transit stops
- ▶ Affordable residential development
- ▶ Local-serving retail
- ▶ Projects in low VMT areas

Of these project types, only the criterion for projects located near major transit stops are codified addressed in the updated State CEQA Guidelines. The State CEQA Guidelines does not address the remaining criteria for small projects, affordable residential development, local-serving retail, or projects in low VMT areas even though the applicable thresholds are suggested by OPR based on research cited in the Technical Advisory. Regardless, the project does not meet these criteria as it is not a small project, and although it is likely to contain some affordable residential development and local-service retail, the Phase 2 Project includes other components that would exceed the small project criterion. Based on the existing VMT data provided in Tables 4.4-1 and 4.4-2, the project does not occur in a low VMT area.

The Technical Advisory states that "retail development including stores larger than 50,000 square feet might be considered regional-serving." The Phase 2 Project includes over 660,000 gross square feet of food, retail, and hotel use. It is unknown whether any retail store would be larger than 50,000 square feet, although at least some stores exceeding this size limit are likely.

The State CEQA Guidelines Section 15064.3, subdivision (b)(1), states that lead agencies should generally presume projects within ½-mile of an existing major transit stop or a stop along an existing high-quality transit corridor will have a less-than-significant transportation impact. Although the Valley Link rail service station is sited on, and immediately adjacent to the RID area, this transit service is currently in the planning phase and the transit stop does not currently exist.

Based on the project characteristics, the project does not meet the screening thresholds for a project that should be identified at a screening level as causing a less-than-significant impact related to VMT.

### **VMT Analysis**

The project does not meet the screening criteria for a project that should be identified as causing a less-than-significant impact related to VMT; therefore, a detailed VMT analysis was conducted for both the modified Phase 2 Project and the currently Approved River Islands Project (i.e., the project in the certified 2003 SEIR and subsequent addendums. Referred to as the "Approved Project" for the remainder of this analysis.). In addition, a modified Phase 2

Project Without Valley Link scenario is also analyzed as the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. The VMT generation of the modified Phase 2 Project (With Valley Link and Without Valley Link) is compared to that of the Approved Project to determine the relative change in VMT as a result of the modified Phase 2 Project.

The VMT impact analysis used the City of Lathrop Travel Demand Model that was derived from the SJCOG Regional Travel Demand Model. The model was developed in 2020 and calibrated to adjust to pre COVID-19 traffic counts. The base year model was modified to reflect current roadway and land use in the RID area, including the Paradise Road Bridge that was recently re-opened to traffic.

Roadway improvements and land use projections consistent with the SJCOG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), City of Lathrop General Plan, Central Lathrop Specific Plan, and City of Manteca General Plan are added into the model by phase. The cumulative year model was modified to reflect the Approved Project and Proposed Phase 2 Project roadway improvements and land use projections. Major transportation improvements in the cumulative year model include:

- ▶ construction of Golden Valley Parkway between Brookhurst Boulevard and Paradise Road;
- ▶ construction of the Chrisman Road/I-205 interchange;
- ▶ construction of High Occupancy Vehicle (HOV) lanes along I-205, I-5, and SR 120 in the San Joaquin County; and
- ▶ Paradise Road widening to 6 lanes south of Canal Boulevard, and 4 lanes north of Canal Boulevard.

## Safety Assessment

The Caltrans Safety Review Practitioners Guidance specifies that CEQA lead agencies (and by extension, their consultants) perform various safety-related reviews and investigations as part of the CEQA process. Lead agencies should address the following general safety topics:

- ▶ Identify plans and programs relevant to the proposed project area.
- ▶ Identify safety issues (e.g., high injury network, systemic crash history or typologies in the project area), actions, or projects in the area affecting the State Highway System.
- ▶ Address any safety comments provided by Caltrans.
- ▶ Determine if the proposed land use project would adversely impact safety, safety actions, or safety projects.
- ▶ Prioritize vulnerable road users and communities where tradeoffs may be required.
- ▶ Determine whether the project's contribution to the adverse impacts identified through the above review constitutes a significant impact under CEQA, and if so, recommend roughly proportional, nexus-based mitigations for those impacts.

The Caltrans guidance identifies that the CEQA lead agency has discretion to determine their own methodology for safety impact review, though Caltrans recommends their guidance as a starting point of reviewing various safety-related plans.

The following specific types of safety related investigations were completed for this CEQA document:

- ▶ review of planned traffic safety improvements in the vicinity of the project area;
- ▶ change in traffic mix such as an increase in bicyclists or pedestrians where multi-modal facilities do not exist or are inconsistent with facility design (sidewalks, bike and multi-user paths, multimodal roadways, etc.);
- ▶ increased multi-modal conflicts at interchanges;
- ▶ increased traffic volumes or vehicle speeds;
- ▶ freeway off-ramp queuing spilling back from interchanges, causing stopped traffic on the freeway mainline and/or speed differentials; and
- ▶ freeway weaving that results in increased service volume and speed differential.

## Other Impacts

Evaluation of potential transportation impacts related to conflict with existing and planned facilities, transportation hazards, emergency access, and construction activity are based on a review of project changes to the transportation network and a qualitative assessment of whether those changes would conflict with applicable standards or result in detrimental conditions based on the thresholds of significance.

## CUMULATIVE SCENARIOS

The cumulative scenarios analyze VMT generation under future year 2040 scenarios. VMT generation, or vehicle trip lengths, is largely determined by the quantity and location of trip-generating land uses in the region surrounding the project area; therefore, planned land use growth from 2020 to 2040 is incorporated in the cumulative scenarios' analysis.

The City of Lathrop Travel Demand Model was used to analyze the cumulative scenarios. The model has a cumulative year corresponding to 2040. The cumulative year model reflects roadway improvements and land use projections consistent with the SJCOG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), City of Lathrop General Plan, Central Lathrop Specific Plan, and the City of Manteca General Plan. Depending on the analysis scenario, the Approved Project land use or the Proposed Phase 2 Project land use is also input into the model. See Appendix B for model results and technical calculations for all cumulative scenarios.

Tables 4.4-3 and 4.4-4 compare the land use totals within the City of Lathrop for the primary trip-generating land use types and projected VMT by land use under the base and cumulative year models. These tables provide an overview of the City of Lathrop city-wide VMT characteristics under base year and cumulative conditions, which serves as context for the subsequent project-specific analysis. For the 2040 analysis, growth from the Approved Project is included in the city-wide analysis.

Tables 4.4-3 and 4.4-4 summarize the following findings:

- ▶ According to the Lathrop Travel Demand Model, the City is projected to add approximately 16,100 new dwelling units between 2020 and 2040. The total number of residential units in the City would increase by 242 percent between 2020 and 2040.
- ▶ According to the Lathrop Travel Demand Model, the City is projected to add approximately 40,700 new jobs between 2020 and 2040. The total number of employees in the City would increase by 534 percent between 2020 and 2040. New office employees totaling 22,473 would be the largest contributor, representing 46 percent of the total employees in the City in 2040. Note that in the context of these VMT calculations, the term "employees" includes the actual employees at a location, as well customers, visitors, deliveries, and other service-oriented trips. This approach is taken so that all VMT generating trips attributable to the land use. Therefore, the numbers of "employees" identified in Table 4.4-4 and elsewhere in the VMT analysis are much higher than simply individuals employed at a particular land use. See the detailed description of the VMT calculation methodology provided in Appendix B-1 for more information.

**Table 4.4-3 City of Lathrop City-Wide Residential VMT**

Land Use	Baseline 2020				2040 With Approved Project					
	Dwelling Units	Population	VMT Per Household	VMT Per Capita	Dwelling Units	Population	VMT Per Household	VMT Per Household Percentage Change from Baseline	VMT per Capita	VMT Per Capita Percentage Change from Baseline
Total Residential Dwelling Units	6,666	26,833	113.8	28.3	22,788	78,616	74.6	-34.4%	21.6	-23.5%

Note: Citywide VMT includes River Islands.

Other Residential Dwelling Units include active adult age restricted housing, mobile home, and other types of housing.

Source: Data provided by Fehr & Peers in 2020



**Table 4.4-4 City of Lathrop City-Wide Non-Residential VMT**

Land Use	Baseline 2020		2040 With Approved Project		
	Employees	VMT per Employee	Employees	VMT per Employee	Percentage Change from Baseline City-Wide Average
Food	344	243.5	1,909	278.0	14.2%
Retail + Hotel	647	153.0	10,637	257.5	68.3%
Office	928	39.9	22,473	50.8	27.2%
School	474	130.7	1,062	133.5	2.1%
Government	81	114.7	81	142.3	24.1%
Industrial	5,085	86.8	12,150	85.2	-1.9%
Medical	55	63.9	55	83.0	30.0%
Agricultural	18	21.9	6	25.6	16.6%

Note: Food, retail, hotel, and office "Employees" and "VMT per Employee" includes employees, customers, and visitors (see Appendix B-1)

School VMT includes staff, administration and student vehicle trips

Citywide VMT includes River Islands.

Source: Data provided by Fehr & Peers in 2020

Under Baseline Year 2020 Conditions, the City of Lathrop has an overall jobs-housing ratio of 1.14 (based on 6,666 total dwelling units and 7,632 total jobs). With the projected residential and non-residential growth in the City over the next 20 years, the jobs-housing ratio of the City is expected to almost double to about 2.12 by 2040 showing a much more rapid increase in the number of jobs compared to the number of housing units.

As shown in Table 4.4-3 and 4.4-4, under 2040 With Approved River Islands Phase 2 Project scenario, city-wide average residential VMT per household and VMT per capita are projected to decrease by 34.4 and 23.5 percent compared to baseline city-wide average, respectively. However, under 2040 With Approved River Islands Phase 2 Project scenario, most non-residential VMT per employee estimates are projected to increase. With the exception of Industrial uses, non-residential VMT per employee in each employment category is projected to increase by 2.1 percent to 68.3 percent compared to baseline city-wide averages by employment category. The increase in non-residential VMT is partially attributed to the increased jobs-housing ratio. With over twice as many jobs as residents in the city, more employees and customers are projected to commute to the City of Lathrop from the surrounding cities (Manteca and Ripon) and region (Stockton, Tracy, Modesto, etc.), resulting in longer driving distances and higher VMT generated per employee.

### Cumulative Plus Approved Phase 2 Project Conditions

As described above, the Cumulative Plus Approved Phase 2 Project scenario represents a combination of the Approved Project land use, planned 2040 roadway improvements, and land use projections in the City of Lathrop and the surrounding region under 2040 conditions. The Cumulative Plus Approved Phase 2 Project scenario focuses on the project-level VMT generation associated with the Approved Project. This is equivalent to a "Cumulative No Project (i.e., implement already approved project with no modification)" scenario that provides a point of comparison for the subsequent Cumulative Plus Proposed Phase 2 Project scenarios.

For VMT analysis, the Approved Phase 2 Project land use and roadway configuration was entered into the cumulative year City of Lathrop Travel Demand Model. Fehr & Peers performed a model-wide analysis to obtain daily trips and travel distance by all TAZs, and totaled the product of daily trips and travel distance to obtain VMT estimates. Table 4.4-5 and 4.4.6 display VMT per household and VMT per employee for the River Islands project as a whole under the Cumulative Plus Approved Phase 2 Project scenario and compare them to the 2020 baseline for each land use category.

**Table 4.4-5 River Islands Residential VMT – Cumulative Plus Approved Phase 2 Project Conditions**

Land Use	River Islands Dwelling Units	River Islands Population	River Islands Total Residential Daily VMT	River Islands VMT Per Household	VMT Per Household Percentage Change from Baseline	River Islands VMT Per Capita	VMT Per Capita Percentage Change from Baseline
Total Residential Dwelling Units	11,000	33,000	914,837	83.2	-26.9%	27.7	-2.0%

Source: Data provided by Fehr & Peers in 2020

**Table 4.4-6 River Islands Non-Residential VMT – Cumulative Plus Approved Phase 2 Project Conditions**

Land Use	River Islands Employees	River Islands Total Employee Daily VMT	River Islands VMT Per Employee	Percentage Change from Baseline City-Wide Average
Food	530	164,128	309.7	27.2%
Retail + Hotel	1,934	555,599	287.3	87.8%
Office	13,578	712,688	52.5	31.6%
School	546	65,696	120.3	-7.9%

Note: Food, retail, hotel, and office "Employees" and "VMT per Employee" includes employees, customers, and visitors (see Appendix B-1).

School VMT includes staff, administration and student vehicle trips.

Source: Data provided by Fehr & Peers in 2020

Tables 4.4-5 and 4.4-6 summarize the following key findings:

- ▶ Under Cumulative Plus Approved Phase 2 Project conditions, residential uses in the RID area generate VMT per household that is 26.9 percent below baseline conditions.
- ▶ Under Cumulative Plus Approved Phase 2 Project conditions, residential uses in the RID area generate VMT per capita that is 2.0 percent below baseline conditions.
- ▶ Under Cumulative Plus Approved Phase 2 Project conditions, food, retail (including hotel), and office uses in the RID area generate VMT per employee that is 27.2 percent, 87.8 percent, and 31.6 percent above baseline conditions, respectively. As discussed under "Cumulative Scenarios," this increase in VMT per employee reflects City of Lathrop's high jobs-housing ratio that would increase VMT per employee city-wide in 2040.
- ▶ Under Cumulative Plus Approved Phase 2 Project conditions, education use in the RID area generate VMT per employee that is 7.9 percent below baseline conditions.

### Cumulative Plus Proposed Phase 2 Project Conditions (Without Valley Link)

The Cumulative Plus Proposed Phase 2 Project (Without Valley Link) scenario represents a combination of the Proposed Phase 2 Project land use but without the proposed Valley Link station in place, planned 2040 roadway improvements, and land use projections in the City of Lathrop and the surrounding region. The Proposed Phase 2 Project (Without Valley Link) scenario is analyzed as the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. The project-level VMT associated with the Proposed Phase 2 Project (Without Valley Link) is compared to that of the Approved Project,

In the Cumulative Plus Proposed Phase 2 Project (With and Without Valley Link) scenarios, the circulation pattern would be modified from the adopted WLSP and Lathrop General Plan circulation system, with River Islands Parkway, Lakeside Drive, and Paradise Road shifting locations based on the updated land use pattern, and new arterials and collector streets added (see Figure 3-6) to serve the mix of proposed Phase 2 Project land uses. Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the Approved Phase 2 Project.

An additional arterial from the existing terminus of Golden Valley Parkway in the Employment Center would continue into the Phase 2 area for internal circulation.

In both the Cumulative Plus Proposed Phase 2 Project Without Valley Link and With Valley Link (see below) scenarios, River Islands Parkway, Golden Valley Parkway, and Paradise Road will provide external access to the RID area. The existing external access to Manthey Road via Lakeside Drive would be eliminated based on agreements established between the City of Lathrop and Caltrans. In the initial phase of the Phase 2 Project, access to the Employment Center will be primarily provided via. In later phases, Somerston Parkway will primarily provide access to the Employment Center. Potential offsite improvements include an extension of Golden Valley Parkway that would connect to I-205 via the proposed Paradise Road/Chrisman Road interchange, as well as widening of Paradise Road from a two-lane rural road to a four-lane arterial from the project site to I-205.

For VMT analysis, the Proposed Phase 2 Project (Without Valley Link) land use and roadway configuration was entered into the cumulative year City of Lathrop travel demand model. A model-wide analysis generated daily trips and travel distance by all TAZs, and the product of daily trips and travel distance was summed up to obtain VMT estimates. Table 4.4-7 and 4.4.8 display VMT per household, VMT per capita, and VMT per employee for the River Islands Project as a whole under the Cumulative Plus Proposed Phase 2 Project (Without Valley Link) scenario.

**Table 4.4-7 River Islands Residential VMT – Cumulative Plus Proposed Phase 2 Project (Without Valley Link) Conditions**

Land Use	River Islands Dwelling Units	River Islands Population	River Islands Total Residential Daily VMT	River Islands VMT Per Household	VMT Per Household Percent Change from Baseline	VMT Per Household Percentage Change from Approved Project	River Islands VMT Per Capita	VMT Per Capita Percent Change from Baseline	VMT Per Capita Percentage Change from Approved Project
Total Residential Dwelling Units	15,010	45,030	1,205,844	80.3	-29.4%	-3.4%	26.8	-5.3%	-3.4%

Source: Data provided by Fehr & Peers in 2020

**Table 4.4-8 River Islands Non-Residential VMT – Cumulative Plus Proposed Phase 2 Project (Without Valley Link) Conditions**

Land Use	River Islands Employees	River Islands Total Employee Daily VMT	River Islands VMT Per Employee	Percentage Change from Baseline City-Wide Average	Percentage Change from Approved Project
Food	596	184,354	309.3	27.0%	-0.1%
Retail + Hotel	2,173	620,844	285.7	86.8%	-0.5%
Office	12,782	657,959	51.5	29.0%	-1.9%
School	750	89,978	120.0	-8.2%	-0.3%

Note: Food, retail, hotel, and office “Employees” and “VMT per Employee” includes employees, customers, and visitors (see Appendix B-1).

School VMT includes staff, administration and student vehicle trips.

Source: Data provided by Fehr & Peers in 2020

Tables 4.4-7 and 4.4-8 summarize the following key findings:

- ▶ Under Cumulative Plus Proposed Phase 2 Project (Without Valley Link) conditions, residential uses in the RID area generate VMT per household that is 3.4 percent lower than under Cumulative Plus Approved Project conditions.

- ▶ Under Cumulative Plus Proposed Phase 2 Project (Without Valley Link) conditions, residential uses in the RID area generate VMT per capita that is 3.4 percent lower than under Cumulative Plus Approved Project conditions.
- ▶ Under Cumulative Plus Proposed Phase 2 Project (Without Valley Link) conditions, food, retail (including hotel), and office uses in the RID area generate VMT per employee that is 0.1 percent, 0.5 percent, and 1.9 percent lower than under Cumulative Plus Approved Project conditions, respectively.
- ▶ Under Cumulative Plus Proposed Phase 2 Project (Without Valley Link) conditions, education use in the RID area generate VMT per employee that is 0.3 percent lower than under Cumulative Plus Approved Project conditions.

**Cumulative Plus Proposed Phase 2 Project Conditions (With Valley Link)**

The Cumulative Plus Proposed Phase 2 Project (With Valley Link) scenario represents a combination of the Proposed Phase 2 Project land use, planned 2040 roadway improvements, and land use projections in the City of Lathrop and the surrounding region. The Proposed Phase 2 Project (With Valley Link) scenario analyzes the Phase 2 Project VMT in a scenario where Valley Link is implemented as planned. The project-level VMT associated with the Proposed Phase 2 Project (With Valley Link) is compared to that of the Approved Project.

In the Cumulative Plus Proposed Phase 2 Project (With Valley Link) scenario, the Valley Link Rail Project would provide rail service from the existing Dublin/Pleasanton BART Station to the ACE North Lathrop Station. Eight stations have been planned along the proposed transit route, with four stations in San Joaquin County (Mountain House, Tracy, River Islands and North Lathrop). Both the River Islands station and the North Lathrop station would be located in the City of Lathrop. Ridership on Valley Link was projected to be an estimated 28,000 San Joaquin County riders per day in 2040<sup>2</sup>. Based on the location of stations, it is estimated that one fourth (25%) of the Valley Link ridership will come from each of the four stations in San Joaquin County; therefore, the Cumulative Plus Proposed Phase 2 Project With Valley Link conditions model was modified to incorporate a reduction of 7,000 single-occupancy vehicle trips that travel to and from the San Francisco Bay Area via I-205 with those drivers instead riding Valley Link and accessing the train system from the River Islands and North Lathrop stations.

Of these 7,000 single-occupancy vehicle trips, 24 percent would originate from the RID Area, and the remaining 76 percent would come from other parts of the City of Lathrop and adjacent cities of Manteca and Ripon. Pedestrian, bicycle trips, or short vehicle trips to the River Islands Valley Link Station would replace RID vehicle trips. The remaining vehicle trips would use the I-5 / Manthey Road / Mossdale Road interchange to the River Islands Station.

A model-wide analysis generated daily trips and travel distance by all TAZs, and the product of daily trips and travel distance totaled the corresponding VMT estimates. Table 4.4-9 and 4.4.10 display VMT per household, VMT per capita, and VMT per employee for the River Islands Project under the Cumulative Plus Proposed Phase 2 Project (With Valley Link) scenario.

**Table 4.4-9 River Islands Residential VMT – Cumulative Plus Proposed Phase 2 Project (With Valley Link) Conditions**

Land Use	River Islands Dwelling Units	River Islands Population	River Islands Total Residential Daily VMT	River Islands VMT Per Household	VMT Per Household Percent Change from Baseline	VMT Per Household Percentage Change from Approved Project	River Islands VMT Per Capita	VMT Per Capita Percent Change from Baseline	VMT Per Capita Percentage Change from Approved Project
Total Residential Dwelling Units	15,010	45,030	1,172,867	78.1	-31.4%	-6.0%	26.0	-7.9%	-6.0%

Source: Data provided by Fehr & Peers in 2020

<sup>2</sup> Tri-Valley San Joaquin Valley Regional Rail Authority, *Project Feasibility Report (Per Assembly Bill 758)*, October 2019

**Table 4.4-10 River Islands Non-Residential VMT – Cumulative Plus Proposed Phase 2 Project (With Valley Link) Conditions**

Land Use	River Islands Employees	River Islands Total Employee Daily VMT	River Islands VMT Per Employee	Percentage Change from Baseline City-Wide Average	Percentage Change from Approved Project
Food	596	182,857	306.8	26.0%	-0.9%
Retail + Hotel	2,173	615,411	283.2	85.1%	-1.4%
Office	12,782	627,150	49.1	23.0%	-6.5%
School	750	89,323	119.1	-8.9%	-1.0%

Note: School VMT includes staff, administration and student vehicle trips

Source: Data provided by Fehr & Peers in 2020

Tables 4.4-9 and 4.4-10 summarize the following key findings:

- ▶ Under Cumulative Plus Proposed Phase 2 Project (With Valley Link) conditions, residential uses in the RID area generate VMT per household that is 6.0 percent lower than under Cumulative Plus Approved Project conditions.
- ▶ Under Cumulative Plus Proposed Phase 2 Project (With Valley Link) conditions, residential uses in the RID area generate VMT per capita that is 6.0 percent lower than under Cumulative Plus Approved Project conditions.
- ▶ Under Cumulative Plus Proposed Phase 2 Project (With Valley Link) conditions, food, retail (including hotel), and office uses in the RID area generate VMT per employee that is 0.9 percent, 1.4 percent, and 6.5 percent lower than under Cumulative Plus Approved Project conditions, respectively.
- ▶ Under Cumulative Plus Proposed Phase 2 Project (With Valley Link) conditions, education use in the RID area generate VMT per employee that is 1 percent lower than under Cumulative Plus Approved Project conditions.

### Safety Assessment Analysis

This section describes the methods used for assessment of potential safety impacts associated with transportation and circulation that could result from implementation of the Phase 2 Project. It describes the safety-related reviews, investigations, and analysis that was completed for Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project scenarios. The safety assessment is included this SEIR in compliance with the Caltrans Safety Review Practitioners Guidance.

### Planned Traffic Safety Improvements in the Project Area

Documents related to the following City of Lathrop, City of Manteca, City of Tracy, San Joaquin County, San Joaquin Council of Governments, and Caltrans transportation facility projects in the vicinity of the proposed project were reviewed for traffic safety improvements:

- 1) I-205 Managed Lanes Improvement Project – This project would add a High Occupancy Vehicle / High Occupancy Toll Lane on I-205 between the San Joaquin County / Alameda County line and I-5. In addition, the I-205 / MacArthur Drive interchange would be improved to provide additional travel lanes for vehicles (cars and trucks) and sidewalks with ADA compliant ramps and crosswalks for pedestrians.
- 2) I-205 / Chrisman Road Interchange Project – This project would construct a new interchange to provide improved local access to I-205. The interchange would provide sidewalks with ADA compliant ramps and crosswalks for pedestrians.
- 3) I-5 Improvement Project – This project would add either a Mixed Flow or High Occupancy Vehicle / High Occupancy Toll Lane on I-5 between SR 120 and State Route 4.
- 4) Mossdale Y Improvement Project – This project would add a High Occupancy Vehicle / High Occupancy Toll Lane on I-5 from I-205 to SR 120.

- 5) I-5 / Louise Avenue / River Islands Parkway Interchange Project – This interchange would be improved to provide additional travel lanes for vehicles (cars and trucks), and sidewalks with ADA compliant ramps and crosswalks for pedestrians. A Project Report / Environmental Document will be prepared by the City of Lathrop in 2021 and the interchange improvements are included in the City of Lathrop Capital Facility Fee (CFF).
- 6) SR 120 Improvement Project – This project would add a High Occupancy Vehicle / High Occupancy Toll Lane on SR 120 from I-5 to State Route 99
- 7) Valley Link Rail Project – This project would construct a high-capacity commuter rail service station directly west of I-5 and adjacent to River Islands.

The Proposed Phase 2 Project does not consist of any improvements or physical changes to freeway mainline, freeway interchange, or other SHS facilities. A detailed review of the facility design of the seven projects listed above confirmed that the Proposed Phase 2 Project would not physically disrupt any existing multi-modal facility or interfere with the implementation of planned traffic safety improvements. The Proposed Phase 2 Project also supports implementation of several of the project listed above, for example, providing for a rail station associated with the Valley Link Rail Project and paying fees to assist in funding highway improvements.

Both the Approved Phase 2 Project and the Proposed Phase 2 Project consist of a mix of residential, education, office, and commercial uses. Implementation of the Proposed Phase 2 Project would result in changes in traffic volumes on local roadways, freeway mainline segments, and interchange ramp intersections around the RID area; however, based on the similar land use types, the mix of pedestrian, bicycle, and motor vehicle travel would not change, and the traffic mix would remain compatible with existing and planned facility design.

#### **Freeway Interchange Operations Analysis**

The following four interchanges in the vicinity of the RID area were analyzed in the certified 2003 SEIR and subsequent addendums. Therefore, the same four interchanges were analyzed for Cumulative Plus Approved Phase 2 Project, Cumulative Plus Proposed Phase 2 Project (Without Valley Link), and Cumulative Plus Proposed Phase 2 Project (With Valley Link) during AM and PM Peak Hour Conditions:

- ▶ I-5 / Louise Avenue / River Islands Parkway Interchange;
- ▶ I-5 / Manthey Road / Mossdale Road Interchange;
- ▶ I-205 / MacArthur Drive Interchange; and
- ▶ I-205 / Chrisman Road Interchange.

The Synchro software package was used to analyze the ramp terminal intersections. The Synchro program is consistent with the technical approach documented in the *Highway Capacity Manual – 6<sup>th</sup> Edition* (Transportation Research Board 2016) for calculating delay and vehicle queues at both unsignalized and signalized intersections. The software considers roadway design, intersection geometries, turn pocket storage lengths, intersection control, volumes (cars, trucks, and pedestrians) on intersection delays, and vehicle queues. Table 4.4.11 presents the delay range associated with each LOS category for unsignalized and signalized intersections.

**Table 4.4-11 Intersection Level of Service (LOS) Criteria**

Level of Service	Average Control Delay (seconds per vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	≤ 10
B	> 10 to 20	> 10 to 15
C	> 20 to 35	> 15 to 25
D	> 35 to 55	> 25 to 35
E	> 55 to 80	> 35 to 50
F	> 80	> 50

Source: Transportation Research Board 2016

Based on consultations with Caltrans Traffic Operations staff, intersections within the Caltrans right-of-way should operate at LOS D or better.

Per SB 743, LOS and other similar measures of vehicular capacity or traffic congestion may no longer be used as basis for determining significant impacts under CEQA. However, as part of the safety analysis, LOS is used to provide context to traffic volumes or vehicle speeds at the study intersections.

Table 4.4-12 summarizes the results of the Freeway Interchange Operations Analysis during the AM Peak Hour. As shown, during the AM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (Without Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 360 vehicles and No Change in LOS F operations;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 440 vehicles and change from LOS D to LOS E operations;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 20 vehicles No Change in LOS A operations;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 10 vehicles and No Change in LOS B operations;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 20 vehicles and No Change in LOS C operations;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Increase of 10 vehicles and No Change in LOS A operations;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 530 vehicles and No Change in LOS B operations; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Increase of 280 vehicles and Change from LOS B to LOS C operations.

**Table 4.4-12 Freeway Interchange Operations Analysis – AM Peak Hour**

Intersection	Control	Cumulative Plus Approved Project			Cumulative Plus Proposed Project (Without Valley Link)			Cumulative Plus Proposed Project (With Valley Link)		
		Volume	Delay	LOS	Volume	Delay	LOS	Volume	Delay	LOS
1. NB I-5 Ramps / Louise Avenue	Signal	5,830	93.6	F	6,190	115.6	F	6,190	115.6	F
2. SB I-5 Ramps / Louise Avenue	Signal	6,970	51.3	D	7,410	68.9	E	7,410	68.9	E
3. NB I-5 Ramps / Mossdale Road	SSSC	270	9.9	A	290	9.9	A	381	10.2	B
4. SB I-5 Ramps / Manthey Road	SSSC	300	11.9	B	310	12.2	B	607	12.6	B
5. WB I-205 Ramps / MacArthur Drive	Signal	760	20.0	C	780	20.0	C	757	29.9	B
6. EB I-205 Ramps / MacArthur Drive	Signal	1,210	9.9	A	1,220	9.3	A	1,220	9.3	A
7. WB I-205 Ramps / Chrisman Road	Signal	3,610	12.4	B	4,140	13.2	B	4,101	13.1	B
8. EB I-205 Ramps / Chrisman Road	Signal	3,310	18.6	B	3,590	24.2	C	3,590	24.2	C

Notes: The average delay reported for signalized intersections is for all vehicles passing through the intersection, whereas the average delay reported for unsignalized intersections is for the minor street movement with the greatest delay.

SSSC = Side-Street Stop Controlled

Source: Data provided by Fehr & Peers in 2020

Also shown in Table 4.4-12, during the AM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (With Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 360 vehicles and No Change in LOS F operations;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 440 vehicles and change from LOS D to LOS E operations;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 111 vehicles and change from LOS A to LOS B operations;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 307 vehicles and No Change in LOS B operations;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Decrease of 3 vehicles and change from LOS C to LOS B operations;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Increase of 10 vehicles and No Change in LOS A operations;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 491 vehicles and No Change in LOS B operations; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Increase of 280 vehicles and Change from LOS B to LOS C operations.

When comparing Cumulative Plus Proposed Phase 2 Project (With Valley Link) to Cumulative Plus Proposed Phase 2 Project (Without Valley Link) in Table 4.4-12, the results of the Freeway Interchange Operations Analysis during the AM Peak Hour are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – No Change in volumes and LOS F operations;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – No Change in volumes and LOS E operations;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 91 vehicles and change from LOS A to LOS B operations;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 297 vehicles and No Change in LOS B operations;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Decrease of 23 vehicles and change from LOS C to LOS B operations;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – No Change in volumes and LOS A operations;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Decrease of 39 vehicles and No Change in LOS B operations; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – No Change in volumes and LOS C operations.

Table 4.4-13 summarizes the results of the Freeway Interchange Operations Analysis during the PM Peak Hour. As shown, during the PM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (Without Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 320 vehicles and No Change in LOS F operations;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 420 vehicles and No Change in LOS F operations;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 30 vehicles and No Change in LOS A operations;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 30 vehicles and No Change in LOS A operations;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 330 vehicles and No Change in LOS B operations;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Increase of 240 vehicles and No Change in LOS B operations;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 430 vehicles and No Change in LOS C operations; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Increase of 190 vehicles No Change in LOS C operations.



**Table 4.4-13 Freeway Interchange Operations Analysis – PM Peak Hour**

Intersection	Control	Cumulative Plus Approved Project			Cumulative Plus Proposed Project (Without Valley Link)			Cumulative Plus Proposed Project (With Valley Link)		
		Volume	Delay	LOS	Volume	Delay	LOS	Volume	Delay	LOS
1. NB I-5 Ramps / Louise Avenue	Signal	7,160	113.8	F	7,480	144.2	F	7,480	144.2	F
2. SB I-5 Ramps / Louise Avenue	Signal	8,690	105.9	F	9,110	135.7	F	9,110	135.7	F
3. NB I-5 Ramps / Mossdale Road	SSSC	430	9.8	A	460	9.8	A	772	22.4	C
4. SB I-5 Ramps / Manthey Road	SSSC	170	7.6	A	200	7.6	A	317	8.5	A
5. WB I-205 Ramps / MacArthur Drive	Signal	940	24.8	B	1,270	13.4	B	1,300	14.8	B
6. EB I-205 Ramps / MacArthur Drive	Signal	1,340	10.6	B	1,580	16.4	B	1,580	15.9	B
7. WB I-205 Ramps / Chrisman Road	Signal	5,610	20.4	C	6,040	31.2	C	6,089	31.2	C
8. EB I-205 Ramps / Chrisman Road	Signal	4,900	25.7	C	5,090	26.2	C	5,090	25.7	C

Notes: The average delay reported for signalized intersections is for all vehicles passing through the intersection, whereas the average delay reported for unsignalized intersections is for the minor street movement with the greatest delay.

SSSC = Side-Street Stop Controlled

Source: Data provided by Fehr & Peers in 2020

Also shown in Table 4.4-13, during the PM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (With Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 320 vehicles and No Change in LOS F operations;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 420 vehicles and No Change in LOS F operations;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 342 vehicles and change from LOS A to LOS C operations;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 147 vehicles and No Change in LOS A operations;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 360 vehicles and No Change in LOS B operations;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Increase of 240 vehicles and No Change in LOS B operations;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 479 vehicles and No Change in LOS C operations; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Increase of 190 vehicles No Change in LOS C operations.

When comparing Cumulative Plus Proposed Phase 2 Project (With Valley Link) to Cumulative Plus Proposed Phase 2 Project (Without Valley Link) in Table 4.4-13, the results of the Freeway Interchange Operations Analysis during the PM Peak Hour are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – No Change in volumes and LOS F operations;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – No Change in volumes and LOS E operations;

- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 312 vehicles and change from LOS A to LOS C operations;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 117 vehicles and No Change in LOS A operations;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 30 vehicles and change from LOS C to LOS B operations;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – No Change in volumes and LOS B operations;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 49 vehicles and No Change in LOS C operations; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – No Change in volumes and LOS C operations.

Under Cumulative Conditions, as part of the planned improvements at the Golden Valley Parkway / Lakeside Drive intersection, direct traffic flow between the RID area and Manthey Road will be eliminated, and the Proposed Phase 2 Project traffic would not increase volumes at the Southbound I-5 Ramps / Manthey Road and the Northbound I-5 Ramps / Mossdale Road interchanges under Cumulative Plus Proposed Phase 2 Project (Without Valley Link) Conditions.

The projected volume increases and changes in operations at Southbound I-5 Ramps / Manthey Road and the Northbound I-5 Ramps / Mossdale Road interchanges under Cumulative Plus Proposed Phase 2 Project (With Valley Link) Conditions are attributed to vehicles accessing the future Valley Link station from the I-5 / Manthey Road / Mossdale Road interchange. Therefore, additional analysis will be completed as part of the Valley Link Project to determine the required improvements at the I-5 / Manthey Road / Mossdale Road interchange.

#### **Freeway Interchange Operations Analysis - Proposed Phase 2 Project (Without Valley Link)**

Based on the results of the Freeway Interchange Operations Analysis, the Proposed Phase 2 Project (Without Valley Link) would not result in substantial changes in traffic volume, traffic speed, or substantially degrade the safety of traffic operations at freeway interchange intersections when compared to the Approved Phase 2 Project at the following interchanges:

- ▶ I-5 / Mossdale Road / Manthey Road interchange;
- ▶ I-205 / MacArthur Drive interchange; and
- ▶ I-205 / Chrisman Road interchange.

The projected changes in traffic volumes as a result of the Proposed Phase 2 Project (Without Valley Link) at the I-5 / Louise Avenue interchange should be included in the Project Report / Environmental Document that will be prepared by the City of Lathrop to address the required modification to the interchange improvements included in the City of Lathrop Capital Facility Fee (CFF). These improvements included in the City's CFF are designed to improve the interchange operations to LOS D conditions or better during both AM and PM Peak Hour Conditions.

The Proposed Phase 2 Project (Without Valley Link) would not alter intersection facility design or change overall traffic mix by introducing additional pedestrian or bicyclists at freeway interchange intersections. Therefore, the Proposed Phase 2 Project (Without Valley Link) would not cause increase walking/biking and multi-modal conflicts at interchanges, and traffic generated by the Proposed Phase 2 Project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

#### **Freeway Interchange Operations Analysis - Proposed Phase 2 Project (With Valley Link)**

Based on the results of the Freeway Interchange Operations Analysis, the Proposed Phase 2 Project (With Valley Link) would not result in substantial changes in traffic volume, traffic speed, or substantially degrade the safety of traffic operations at freeway interchange intersections when compared to the Approved Phase 2 Project at the following interchanges:

- ▶ I-205 / MacArthur Drive interchange; and
- ▶ I-205 / Chrisman Road interchange.

The projected changes in traffic volumes as a result of the Proposed Phase 2 Project (With Valley Link) at the I-5 / Louise Avenue interchange should be included in the Project Report / Environmental Document that will be prepared by the City of Lathrop in 2021 and required modification to the interchange improvements included in the City of Lathrop Capital Facility Fee (CFF) to improve the interchange operations to LOS D conditions or better during both AM and PM Peak Hour Conditions.

The projected changes in traffic volumes as a result of the Proposed Phase 2 Project (With Valley Link) at the I-5 / Mossdale Road / Manthey Road interchange should be included in the Project Report / Environmental Document that is being prepared by the Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) to improve the interchange operations to LOS D conditions or better during both AM and PM Peak Hour Conditions.

The Proposed Phase 2 Project (With Valley Link) would not alter intersection facility design or change overall traffic mix by introducing additional pedestrian or bicyclists at freeway interchange intersections. Therefore, the Proposed Phase 2 Project (With Valley Link) would not cause increased walking/biking and multi-modal conflicts at interchanges, and traffic generated by the Proposed Phase 2 Project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

#### **Freeway Off-Ramp Queuing Analysis**

The Synchro software package was also used to analyze the freeway off-ramp queuing (95<sup>th</sup> Percentile) for Cumulative Plus Approved Phase 2 Project, Cumulative Plus Proposed Phase 2 Project (Without Valley Link), and Cumulative Plus Proposed Phase 2 Project (With Valley Link) AM and PM Peak Hour Conditions.

Table 4.4-14 summarizes the results of the Freeway Off-Ramp Queueing Analysis during the AM Peak Hour. As shown, during the AM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (Without Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 100 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet (i.e., queue will not exceed ramp storage length);
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 70 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 20 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 850 feet;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – No increase in off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 900 feet;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 10 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,300 feet;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – No increase in off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,200 feet;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 180 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,500 feet;
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Decrease of 70 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet.

**Table 4.4-14 Freeway Off-Ramp Queuing Analysis – AM Peak Hour**

Intersection	Ramp Storage Length (ft)	Movement	Cumulative Plus Approved Project		Cumulative Plus Proposed Project (Without Valley Link)		Cumulative Plus Proposed Project (With Valley Link)	
			Volume	95 <sup>th</sup> Percentile Queue (ft)	Volume	95 <sup>th</sup> Percentile Queue (ft)	Volume	95 <sup>th</sup> Percentile Queue (ft)
1. NB I-5 Ramps / Louise Avenue	1,400	NBL	1,420	901	1,520	988	1,520	988
		NBR	380	162	380	162	380	162
2. SB I-5 Ramps / Louise Avenue	1,400	SBL	530	275	530	275	530	275
		SBR	720	499	790	577	790	577
3. NB I-5 Ramps / Mossdale Road	850	EBL	30	25	30	25	30	25
		EBR	100	25	120	25	195	25
4. SB I-5 Ramps / Manthey Road	900	WBL	10	25	10	25	10	25
		WBR	100	25	100	25	383	50
5. WB I-205 Ramps / MacArthur Drive	1,300	WBL	150	101	150	101	155	103
		WBR	90	29	100	33	100	33
6. EB I-205 Ramps / MacArthur Drive	1,200	EBL	40	33	40	33	40	33
		EBR	400	59	400	59	395	39
7. WB I-205 Ramps / Chrisman Road	1,500	WBL	500	150	500	150	508	154
		WBR	750	171	930	231	930	217
8. EB I-205 Ramps / Chrisman Road	1,400	EBL	530	148	450	131	450	130
		EBR	510	33	520	32	512	32

Source: Data provided by Fehr & Peers in 2020

Also shown in Table 4.4-14 during the AM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (With Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 100 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet (i.e., queue will not exceed ramp storage length);
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 70 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 95 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 850 feet;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 283 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 900 feet;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 15 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,300 feet;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Decrease of 5 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,200 feet;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 188 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,500 feet; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Decrease of 78 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet.

When comparing Cumulative Plus Proposed Phase 2 Project (With Valley Link) to Cumulative Plus Proposed Phase 2 Project (Without Valley Link) in Table 4.4-14, the results of the Freeway Off-Ramp Queueing Analysis during the AM Peak Hour are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – No change in off-ramp vehicles or queueing analysis results;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – No change in off-ramp vehicles or queueing analysis results;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 75 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 850 feet;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 283 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 900 feet;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 5 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,300 feet;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Decrease of 5 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,200 feet;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 8 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,500 feet; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Decrease of 8 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet.

Table 4.4-15 summarizes the results of the Freeway Off-Ramp Queueing Analysis during the PM Peak Hour. As shown, during the PM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (Without Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 10 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet (i.e., queue will not exceed ramp storage length);
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 90 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 30 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 850 feet;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – No increase in off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 900 feet;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 10 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,300 feet;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Increase of 220 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,200 feet;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 360 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,500 feet; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Decrease of 150 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet.

**Table 4.4-15 Freeway Off-Ramp Queuing Analysis – PM Peak Hour**

Intersection	Ramp Storage Length (ft)	Movement	Cumulative Plus Approved Project		Cumulative Plus Proposed Project (Without Valley Link)		Cumulative Plus Proposed Project (With Valley Link)	
			Volume	95 <sup>th</sup> Percentile Queue (ft)	Volume	95 <sup>th</sup> Percentile Queue (ft)	Volume	95 <sup>th</sup> Percentile Queue (ft)
1. NB I-5 Ramps / Louise Avenue	1,400	NBL	1,180	898	1,190	910	1,190	910
		NBR	530	320	530	320	530	320
2. SB I-5 Ramps / Louise Avenue	1,400	SBL	330	178	330	178	330	178
		SBR	1,000	880	1,090	990	1,090	990
3. NB I-5 Ramps / Mossdale Road	850	EBL	70	25	70	25	70	25
		EBR	220	25	250	25	266	50
4. SB I-5 Ramps / Manthey Road	900	WBL	0	0	0	0	0	0
		WBR	0	0	0	0	22	25
5. WB I-205 Ramps / MacArthur Drive	1,300	WBL	150	109	150	109	186	129
		WBR	70	22	80	28	80	27
6. EB I-205 Ramps / MacArthur Drive	1,200	EBL	80	60	300	181	300	181
		EBR	390	62	390	54	354	52
7. WB I-205 Ramps / Chrisman Road	1,500	WBL	650	212	650	212	709	235
		WBR	1,200	561	1,560	847	1,560	847
8. EB I-205 Ramps / Chrisman Road	1,400	EBL	690	382	510	254	540	270
		EBR	650	126	650	108	591	107

Source: Data provided by Fehr & Peers in 2020

Also shown in Table 4.4-15 during the PM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (With Valley Link) are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – Increase of 10 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet (i.e., queue will not exceed ramp storage length);
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – Increase of 90 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 46 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 850 feet;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 22 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 900 feet;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 46 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,300 feet;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Increase of 184 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,200 feet;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 419 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,500 feet; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Decrease of 209 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet.

When comparing Cumulative Plus Proposed Phase 2 Project (With Valley Link) to Cumulative Plus Proposed Phase 2 Project (Without Valley Link) in Table 4.4-15, the results of the Freeway Off-Ramp Queuing Analysis during the PM Peak Hour are:

- ▶ At the NB I-5 Off-On Ramps at Louise Avenue – No change in off-ramp vehicles or queuing analysis results;
- ▶ At the SB I-5 Off-On Ramps at Louise Avenue – No change in off-ramp vehicles or queuing analysis results;
- ▶ At the NB I-5 Off-On Ramps at Mossdale Road – Increase of 16 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 850 feet;
- ▶ At the SB I-5 Off-On Ramps at Manthey Road – Increase of 22 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 900 feet;
- ▶ At the WB I-205 Off-On Ramps at MacArthur Drive – Increase of 36 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,300 feet;
- ▶ At the EB I-205 Off-On Ramps at MacArthur Drive – Decrease of 36 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,200 feet;
- ▶ At the WB I-205 Off-On Ramps at Chrisman Road – Increase of 59 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,500 feet; and
- ▶ At the EB I-205 Off-On Ramps at Chrisman Road – Decrease of 59 off-ramp vehicles will not result in vehicle queue extending back to off-ramp gore point distance of 1,400 feet.

#### **Freeway Off-Ramp Queuing Analysis - Proposed Phase 2 Project (Without Valley Link)**

Based on the Freeway Off-Ramp Queuing Analysis, the Proposed Phase 2 Project (Without Valley Link) would not result in freeway off-ramp queuing spilling back from interchanges and would not affect traffic operations on the freeway mainline. Traffic generated by the Proposed Phase 2 Project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

#### **Freeway Off-Ramp Queuing Analysis - Proposed Phase 2 Project (With Valley Link)**

Based on the Freeway Off-Ramp Queuing Analysis, the Proposed Phase 2 Project (With Valley Link) would not result in freeway off-ramp queuing spilling back from interchanges and would not affect traffic operations on the freeway mainline. Traffic generated by the Proposed Phase 2 Project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

#### **Mossdale “Y” Freeway Weaving Analysis**

The following four freeway weaving sections were analyzed in the certified 2003 SEIR relative to vehicle weaving operations. Therefore, the same four freeway sections were analyzed for Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project AM and PM Peak Hour Conditions:

- ▶ Northbound I-5 between I-205 on-ramp and Mossdale Road off-ramp;
- ▶ Northbound I-5 between Mossdale Road on-ramp and SR 120 off-ramp;
- ▶ Southbound I-5 between SR 120 on-ramp and Mossdale Road off-ramp; and
- ▶ Southbound I-5 between Mossdale Road on-ramp and I-205 off-ramp.

The Leisch Method for Weaving Analysis was used to analyze the freeway weaving sections On I-5 between I-205 and SR 120. Table 4.4.16 presents the service volume ranges associated with each LOS category for a freeway weaving section with a maximum capacity of 2,000 passenger car equivalents per hour per lane.

**Table 4.4-16 Freeway Weaving Section Level of Service (LOS) Criteria**

Level of Service	Service Volume (Passenger Cars Per Hour Per Lane)
A	≤ 895
B	> 895 to 1,265
C	> 1,265 to 1,530
D	> 1,530 to 1,740
E	> 1,740 to 2,000
F	> 2,000 or any $v_d/c$ ratio > 1.00 <sup>1</sup>

Notes: <sup>1</sup>  $v_d/c$  ratio = demand flow rate divided by the capacity of a given segment.

Source: Transportation Research Board 2016

Based on consultations with Caltrans Traffic Operations staff, freeway weaving sections should operate at LOS D or better. Per SB 743, LOS and other similar measures of vehicular capacity or traffic congestion may no longer be used as basis for determining significant impacts under CEQA. As part of the safety analysis, LOS is used to provide context to traffic volumes or vehicle speeds at the freeway weaving sections.

Table 4.4-17 summarizes the results of the Freeway Weaving Operations Analysis during the AM Peak Hour. As shown, during the AM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (Without Valley Link) are:

- ▶ On Northbound I-5 between the I-205 on-ramp and Mossdale Road off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume increase of 46 vehicles (+2.9%) and No Change in operations;
- ▶ On Northbound I-5 between the Mossdale Road on-ramp and SR 120 off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume increase of 48 vehicles (+3.0%) and No Change in operations;
- ▶ On Southbound I-5 between the SR 120 on-ramp and Manthey Road off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume increase of 28 vehicles (+1.6%) and No Change in operations; and
- ▶ On Southbound I-5 between the Manthey Road on-ramp and I-205 off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume decrease of 24 vehicles (-1.3%) and No Change in operations.

Also shown in Table 4.4-17 during the AM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (With Valley Link) are:

- ▶ On Northbound I-5 between the I-205 on-ramp and Mossdale Road off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume increase of 59 vehicles (+3.8%) and No Change in operations;
- ▶ On Northbound I-5 between the Mossdale Road on-ramp and SR 120 off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume increase of 49 vehicles (+3.1%) and No Change in operations;
- ▶ On Southbound I-5 between the SR 120 on-ramp and Manthey Road off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume increase of 61 vehicles (+3.4%) and No Change in operations; and
- ▶ On Southbound I-5 between the Manthey Road on-ramp and I-205 off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume decrease of 49 vehicles (-2.8%) and No Change in operations.



**Table 4.4-17 Freeway Weaving Operations Analysis – AM Peak Hour**

Weaving Section	Cumulative Plus Approved Project		Cumulative Plus Proposed Project (Without Valley Link)		Cumulative Plus Proposed Project (With Valley Link)	
	Service Volume	LOS	Service Volume	LOS	Service Volume	LOS
1. Northbound I-5 between I-205 on-ramp and Mossdale Road off-ramp	1,571	D	1,617	D	1,630	D
2. Northbound I-5 between Mossdale Road on-ramp and SR 120 off-ramp	1,576	D	1,624	D	1,625	D
3. Southbound I-5 between SR 120 on-ramp and Mossdale Road off-ramp	1,784	E	1,812	E	1,845	E
4. Southbound I-5 between Mossdale Road on-ramp and I-205 off-ramp	1,781	E	1,757	E	1,732	E

Source: Data provided by Fehr & Peers in 2020

Table 4.4-18 summarizes the results of the Freeway Weaving Operations Analysis during the PM Peak Hour. As shown, during the PM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (Without Valley Link) are:

- ▶ On Northbound I-5 between the I-205 on-ramp and Mossdale Road off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume decrease of 36 vehicles (-1.8%) and a change from unacceptable LOS F to unacceptable LOS E operations;
- ▶ On Northbound I-5 between the Mossdale Road on-ramp and SR 120 off-ramp weaving section – Valley Link will result in a service volume increase of 1 vehicle (+.1%) and No Change in operations;
- ▶ On Southbound I-5 between the SR 120 on-ramp and Manthey Road off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume increase of 21 vehicles (+1.3%) and No Change in operations; and
- ▶ On Southbound I-5 between the Manthey Road on-ramp and I-205 off-ramp weaving section – The Proposed Phase 2 Project will result in a service volume increase of 14 vehicles (+0.8%) and No Change in operations.

**Table 4.4-18 Freeway Weaving Operations Analysis – PM Peak Hour**

Weaving Section	Cumulative Plus Approved Project		Cumulative Plus Proposed Project (Without Valley Link)		Cumulative Plus Proposed Project (With Valley Link)	
	Service Volume	LOS	Service Volume	LOS	Service Volume	LOS
1. Northbound I-5 between I-205 on-ramp and Mossdale Road off-ramp	2,018	F	1,982	E	1,985	E
2. Northbound I-5 between Mossdale Road on-ramp and SR 120 off-ramp	1,983	F	1,984	F	2,105	F
3. Southbound I-5 between SR 120 on-ramp and Mossdale Road off-ramp	1,628	D	1,649	D	1,651	D
4. Southbound I-5 between Mossdale Road on-ramp and I-205 off-ramp	1,663	E	1,677	E	1,692	E

Source: Data provided by Fehr & Peers in 2020

Also shown in Table 4.4-18 during the PM Peak Hour, the projected changes between Cumulative Plus Approved Phase 2 Project and Cumulative Plus Proposed Phase 2 Project (With Valley Link) are:

- ▶ On Northbound I-5 between the I-205 on-ramp and Mossdale Road off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume decrease of 33 vehicles (-1.6%) and a change from unacceptable LOS F to unacceptable LOS E operations;
- ▶ On Northbound I-5 between the Mossdale Road on-ramp and SR 120 off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume increase of 122 vehicles (+6.2%) and No Change in operations;
- ▶ On Southbound I-5 between the SR 120 on-ramp and Manthey Road off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume increase of 23 vehicles (+1.4%) and No Change in operations; and
- ▶ On Southbound I-5 between the Manthey Road on-ramp and I-205 off-ramp weaving section – The Proposed Phase 2 Project (With Valley Link) will result in a service volume increase of 29 vehicles (+1.7%) and No Change in operations.

#### **Freeway Weaving Section Operations Analysis - Proposed Phase 2 Project (Without Valley Link)**

Based on the Mossdale "Y" Freeway Weaving Analysis, the Proposed Phase 2 Project (Without Valley Link) would not result in substantial change in freeway weaving section service volume or speed differential. The Proposed Phase 2 Project would not degrade traffic operations at weaving segments, and safety risks at the weaving section would remain at the same level when compared to the Approved Phase 2 Project.

#### **Freeway Interchange Operations Analysis - Proposed Phase 2 Project (With Valley Link)**

As mentioned previously, the Proposed Phase 2 Project traffic would not have direct access to the Southbound I-5 Ramps / Manthey Road and the Northbound I-5 Ramps / Mossdale Road interchanges, and volume increase at these two interchanges under the Cumulative Plus Proposed Phase 2 Project (With Valley Link) Conditions are attributed to vehicles accessing the future Valley Link station.

Based on the Mossdale "Y" Freeway Weaving Analysis, the Proposed Phase 2 Project would not result in substantial change in freeway weaving section service volume or speed differential. The Proposed Phase 2 Project would not degrade traffic operations at weaving segments, and safety risks at the weaving section would remain at the same level when compared to the Approved Phase 2 Project.

## **THRESHOLDS OF SIGNIFICANCE**

The 2003 SEIR used thresholds in effects at the time of document preparation, which included thresholds related to automobile delay measured by roadway and intersection LOS. With the certification of the amended CEQA Guidelines in December 2018, LOS or similar measures of vehicular capacity or traffic congestion are no longer considered a significant impact on the environment under CEQA. Therefore, thresholds pertaining to roadway and intersection LOS are no longer in effect. For this SEIR, VMT is the primary travel-related metric used to identify the project's transportation impacts. There are, however, additional thresholds applicable to other transportation topics such as safety and emergency vehicle access. The thresholds shown below entirely replace the thresholds from the 2003 SEIR and are reflective of current legal and professional standards for traffic impact analyses.

### **VMT Impacts**

CEQA Guidelines Section 15064.3, subdivision (b) outlines criteria for analyzing transportation impacts using VMT. For land use projects, VMT exceeding an applicable threshold of significance may indicate a significant impact. As described above in the discussion of Regulatory Setting, the City of Lathrop has formally adopted City Council Resolution No. 20-4784, which identifies thresholds of significance related to VMT impact analysis that are consistent with the OPR Technical Advisory. Therefore, this analysis relies on guidance from the City of Lathrop City Council Resolution No. 20-4784 and OPR Technical Advisory.

Per the City of Lathrop City Council Resolution No. 20-4784 and OPR Technical Advisory, a significant impact related to VMT would result if:

- ▶ Residential Project – A proposed project exceeds a level of 15 percent below existing (baseline) city-wide VMT per household or per resident;
- ▶ Office Project – A proposed project exceeds a level of 15 percent below existing (baseline) city-wide VMT per employee; and
- ▶ Retail Project – A proposed project results in a net increase in existing (baseline) city-wide VMT per employee. This metric reflects the nature of most local-serving retail to distribute existing vehicle trips, rather than generate or induce new vehicle trips and would apply to retail and food projects.

In addition:

- ▶ For a Mixed-Use Project, the applicable residential, office, or retail thresholds provided above will be applied. Each of the primary land uses would be evaluated independently by applying the relevant threshold above; and
- ▶ When evaluating a project that was approved prior to the adoption of City Council Resolution No. 20-4784, and changes to the project description are proposed, then a VMT analysis will be completed. The VMT analysis will be completed for both the approved project and the proposed project. In this scenario, only the following threshold will be applied. A net increase in VMT per household, VMT per capita, or VMT per employee for any applicable project type (residential, office, retail, or mixed-use) would indicate significant transportation impact.

As the River Islands Project was previously approved prior to adoption of City Council Resolution No. 20-4784, only the last threshold listed above, addressing evaluation of a previously approved project, applies to this analysis.

VMT is also used as an input into the air quality, energy, and GHG analyses to determine the impact of project's mobile emissions. The reader should refer to these other sections (4.5, 4.18, and 4.19 respectively) to understand how the project's travel characteristics affect those specific topics. Since each chapter is focused on a specific environmental effect with its own specific thresholds or significance, it is possible to have a different conclusion for transportation impacts than other topics that also reference project-related travel.

### **Conflict with Existing & Planned Facilities**

The project would result in a significant transportation impact if it would:

- ▶ permanently physically disrupt an existing bicycle facility, pedestrian facility, or transit service/facility;
- ▶ interfere substantially with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility; or
- ▶ cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

The OPR Technical Advisory suggests the addition of new transit riders or incurring additional delay from increased boarding and alighting is not considered an adverse impact. However, maintaining transit level and quality of service is necessary to retain and expand ridership. Failure to meet performance standards established by the transit operator could lead to losses of ridership and increases in travel by other modes (e.g., automobiles), which could result in environmental effects such as increased emissions.

### **Hazards Impacts**

The project would result in a significant transportation impact if it would:

- ▶ result in a geometric design feature that is inconsistent with applicable design standards; or
- ▶ result in a change to the volume, mix, or speed of traffic that is not compatible with the existing facility design.

## Emergency Access Impacts

The project would result in a significant transportation impact if it would:

- ▶ result in roadway or transportation facilities that substantially impedes access for emergency response vehicles.

## Construction Impacts

The project would result in a significant transportation impact if construction-related activity would:

- ▶ result in hazardous conditions for motorists, bicyclists, pedestrians, or transit users; or
- ▶ substantially inhibit access for emergency response vehicles.

## Safety Impacts

The project would result in a significant transportation safety impact if it would:

- ▶ physically disrupt an existing bicycle facility, pedestrian facility, or transit service/facility;
- ▶ interfere with the implementation of a planned traffic safety improvement;
- ▶ result in freeway off-ramp queuing spilling back from interchanges, causing stopped traffic on the freeway mainline and/or speed differentials; or
- ▶ result in increased service volume per lane and speed differential on freeway weaving sections.

# ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

## Impact 4.4-a: Vehicle Miles Traveled

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Implementation of the Proposed Phase 2 Project would generate additional vehicles traveled associated with proposed residential, office, food, retail, hotel, and education land uses. The improved mix of complementary residential, employment, and education uses would increase internal trip capture and reduce VMT generation when compared to the Approved Phase 2 Project. Furthermore, the proposed mix of non-residential uses would complement the existing residential uses (1,069 dwelling units) in the River Islands Phase 1 Area. As a result, the Proposed Phase 2 Project will result in vehicle travel that exhibits low-VMT characteristics, and the Proposed Phase 2 Project is projected to generate lower VMT per household, VMT per capita and VMT per employee compared to the Approved Phase 2 River Islands Project. Therefore, the impact of the Proposed Phase 2 Project would be **less than significant** when compared to the Approved Phase 2 Project.

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The Approved River Islands Project consists of a mix of residential, education, retail, employment, and other uses. The Proposed Phase 2 Project proposes a similar mix of residential, education, and employment uses in the RID area, as well as providing additional complementary uses, including a "town center" mixed-use area at Paradise Road and a mixed-use Transit Oriented Development area to complement the future planned Valley Link transit station. The mix of complementary land uses would increase internal trip capture within the RID area and reduce vehicle miles travelled when compared to the Approved Phase 2 Project. In addition, the future Valley Link transit station will provide an opportunity for residents and employees of the RID area to replace long distance home-based work single occupancy vehicle trips with high quality transit trips to and from the San Francisco Bay Area. As a result, VMT modelling for the Phase 2 Project indicate that the Project will result in vehicle travel that exhibits low-VMT characteristics.

The OPR Technical Advisory and City of Lathrop City Council Resolution No. 20-4784 identify recommended thresholds for four (4) project types: residential, office, retail, and mixed-use. The Technical Advisory further recommends that each component of a mixed-use project be evaluated independently and apply the significance threshold for each project type. Since the food, hotel, and education uses are similar to retail uses in that they typically include both employee and non-employee trips, the recommended thresholds for retail uses was applied to these additional Proposed Phase 2 Project land uses. In addition, as identified above in the discussion of thresholds of

significance, when evaluating a project that was approved prior to the adoption of City Council Resolution No. 20-4784, and changes to the project description are proposed, then a VMT analysis will be completed for both the approved project and the proposed project. In this scenario, which applies to the modified Phase 2 Project evaluated in this SEIR, only a net increase in VMT per household, VMT per capita, or VMT per employee resulting from the proposed project, compared to the previously approved project, would indicate a significant transportation impact. See Appendix B for model results and technical calculations.

### Residential Uses

With the implementation of the Proposed Phase 2 Project, the River Islands Project would consist of a total of 15,010 dwelling units, representing 4,010 additional units compared to the current Approved River Islands Project. The increase in residential units would add diverse housing types and complement the land use mix of the RID area (i.e., the mix of residential and non-residential uses facilitate shorter auto- and non-auto trips), as well as improve the City's jobs-housing balance in 2040.

As shown in Table 4.4-9, residential uses in the Proposed Phase 2 Project generate 78.1 VMT per household, which is 6 percent below the VMT per household under the Approved River Islands Project (83.2 VMT as shown in Table 4.4-5). Under the Proposed Phase 2 Project, the residential VMT per capita of 26.0 (Table 4.4-9) is also 6 percent lower than the residential VMT per capita under the Approved River Islands Project conditions (27.7 as shown in Table 4.4-5). The proposed Valley Link commuter rail project contributes to the reduction in VMT under the Proposed Phase 2 Project. However, as stated previously, the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. Therefore, the Phase 2 Project (Without Valley Link) scenario was also evaluated. Table 4.4-7 shows that under the Phase 2 Project (Without Valley Link) scenario, residential VMT per household would be 80.3 and VMT per capita would be 26.8. These remain below the corresponding values of 83.2 and 27.7 for the Approved Project shown in Table 4.4-5.

The City of Lathrop City Council Resolution No. 20-4784 states that for a project that was approved prior to the adoption of the resolution (which applies to the River Islands Project), a change in the project that results in a net increase in residential VMT per household, or per capita, would indicate a significant transportation impact. As described above, the Phase 2 Project, both with and without Valley Link in place, would result in per household and per capita residential VMT values below those for the previously Approved Project. Therefore, the proposed project changes do not result in an increase in residential VMT and this impact would be **less than significant** for this land use category.

### Office Uses

The Proposed Phase 2 Project proposes 1,176,138 gross square feet of office space, which is a reduction of 265,339 gross square feet compared to the Approved River Islands Project. As discussed in the Cumulative Scenarios section, the City of Lathrop is projected to have a jobs-housing ratio increasing from 1.14 in 2020 to 2.12 by 2040. As shown in Table 4.4-4, the city-wide VMT per employee for office uses is projected to increase by 27.2 percent.

By proposing less office square footage and corresponding office employment (coupled with the increase in housing units identified above), the Proposed Phase 2 Project will improve the City's jobs-housing balance and reduce VMT associated with employee commute trips from the surrounding region to the City of Lathrop. Within the RID area, office uses in the Proposed Phase 2 Project are located close to complementary land uses (residential, food, retail, education). The mix of land uses would increase internal trip capture and reduce VMT per employee. In addition, office uses in River Islands would be located close to the Valley Link transit station. The availability of high-quality transit would provide an opportunity for office employees to replace vehicle trips with transit trips, thereby reducing VMT per employee even more.

As shown in Table 4.4-10, office uses in the Phase 2 Project generate 49.1 VMT per employee, which is 6.5 percent below the 52.5 VMT per employee under the Approved River Islands Project scenario (Table 4.4-6). Table 4.4-8 shows that under the Phase 2 Project (Without Valley Link) scenario, VMT per employee for office uses would be 51.5, which is also below 52.5 VMT per employee value for the Approved Project.

The City of Lathrop City Council Resolution No. 20-4784 states that for a project that was approved prior to the adoption of the resolution (which is applicable to the River Islands Project), a change in the project that results in a

net increase in VMT per employee would indicate a significant transportation impact. As described above, the Phase 2 Project, both with and without Valley Link in place, would result in per employee VMT values for office land uses below those for the previously Approved Project. Therefore, the proposed project changes do not result in an increase in per employee VMT for office uses and this impact would be **less than significant** for this land use category.

### **Food, Retail, and Hotel Uses**

The Proposed Phase 2 Project proposes 661,362 gross square feet of food, retail, and hotel uses; an increase of 120,993 gross square feet compared to the Approved River Islands Project. The increase in food, retail, and hotel uses would add diversity and balance to the land use mix of the RID area and provide complementary land uses to the proposed residential and office uses. The mix of land uses would increase internal trip capture and reduce VMT per capita and VMT per employee to and from these complementary land uses. In addition, the proximity of these uses to the Valley Link transit station would provide an opportunity for employees and customers to replace vehicle trips with transit trips, thereby reducing total VMT and VMT by employee for these land uses.

As shown in Table 4.4-10, food and retail (including hotel) uses in the Phase 2 Project generate 306.8 and 283.2 VMT per employee, respectively, which is 0.9 percent and 1.4 percent below the VMT per employee under the Approved River Islands Project conditions, respectively 309.7 and 287.3 as shown in Table 4.4-6). Table 4.4-8 shows that under the Phase 2 Project (Without Valley Link) scenario, VMT per employee for food would be 309.3 and for retail (including hotel) would be 285.7, which are also below the per employee value for the Approved Project.

As stated previously, the City of Lathrop City Council Resolution No. 20-4784 states that for a project that was approved prior to the adoption of the resolution (which applies to the River Islands Project), a change in the project that results in a net increase in VMT per employee would indicate a significant transportation impact. As described above, the Phase 2 Project, both with and without Valley Link in place, would result in per employee VMT values for food and retail (including hotel) land uses below those for the previously Approved Project. Therefore, the proposed project changes do not result in an increase in per employee VMT for food and retail (including hotel) uses and this impact would be **less than significant** for this land use category.

### **Education Uses**

The Proposed Phase 2 Project proposes a total of 108.6 acres of schools in the Phase 2 area, an increase of 2.2 acres compared to the Approved River Islands Project. The increase in education employees would serve the K-12 students from the combined 4,010 additional housing units. As shown in Table 4.4-10, education (i.e., school) uses in the Phase 2 Project generate 119.1 VMT per employee, which is 1.0 percent below the 120.3 VMT per employee under the Approved Project (Table 4.4-6). Table 4.4-8 shows that under the Phase 2 Project (Without Valley Link) scenario, VMT per employee for education/school uses would be 120.0, which is below the 120.3 VMT per employee value for the Approved Project.

The City of Lathrop City Council Resolution No. 20-4784 indicates that for a project that was approved prior to the adoption of the resolution (e.g., the River Islands Project), a change in the project that results in a net increase in VMT per employee would indicate a significant transportation impact. As described above, the Phase 2 Project, both with and without Valley Link in place, would result in per employee VMT values for education/school land uses below those for the previously Approved Project. Therefore, the proposed project changes do not result in an increase in per employee VMT for education/school uses and this impact would be **less than significant** for this land use category.

### **Conclusion**

As identified above, the Proposed Phase 2 Project (either with, or without Valley Link in place) does not result in a net increase in VMT per household, VMT per capita, or VMT per employee for any applicable project type (residential, office, retail, or mixed-use) compared to the previously approved project. Therefore, impacts related to VMT would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.

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## Impact 4.4-b: Conflict with Existing and Planned Multi-Modal Facilities

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Implementation of the Proposed Phase 2 Project would not conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the project would not interfere with the implementation of a plan related to bicycle facilities, pedestrian facilities, or transit service/facilities. The project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator. The impact would be **less than significant**.

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As described in the Environmental Settings section, no existing pedestrian, bicycle, or transit service/facility extend within the undeveloped Phase 2 Project Area. The Approved River Islands Project trail system consists of an interconnected, hierarchical system of trails for pedestrians and bicyclists that provides access to the project neighborhoods and districts. The trail system would connect to existing and planned trails in Lathrop and surrounding areas via pedestrian/bicycle lanes incorporated into the project bridges over the San Joaquin River (the second Bradshaw's Crossing Bridge and the Golden Valley Parkway Bridge). The two main components of the trail system are the levee system, along both non-Project and Project levee segments and the internal trails along Dell'Oso Drive, the Central Drainage Ditch and other areas that interface with internal bike lanes, paths and routes within the interior of the overall Project. The Proposed Phase 2 Project expands and builds upon the existing plans for pedestrian and bicycle facilities, providing an integrated system for active travel options for residents and visitors to River Islands. The Phase 2 Project, in effect, implements bicycle and pedestrian facility plans applicable to the Phase 2 Area.

As described in the Environmental Settings section, no active transit stop exists in the RID area; however, the Approved River Islands Project and Proposed Phase 2 Project include design features that would accommodate and support local-oriented and commuter rail transit, such as bus turnouts. The Proposed Phase 2 Project includes an Employment Center District and a mixed-use Transit Oriented Development area that complement the future planned Valley Link transit station. The project's transportation and circulation system are designed to accommodate access to and from both sides of the planned Valley Link commuter rail transit station. The Valley Link transit service has recently completed their Initial Project Planning phase and is currently in the Environmental Analysis Phase that takes into consideration the projected ridership associated with the River Islands project and the 430 parking spaces for Valley Link commuter rail transit riders from outside of River Islands.

For the reasons described above, the Proposed Phase 2 Project would not conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility; would not interfere with the implementation of a plan related to these travel modes; and would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator. Therefore, this impact would be **less than significant**.

### Mitigation Measures

No mitigation is required.

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## Impact 4.4-c: Hazards Impacts

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Implementation of the Proposed Phase 2 Project would not result in a geometric design feature that is inconsistent with applicable City of Lathrop design standards. The project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design. Therefore, the impact would be **less than significant**.

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The Proposed Phase 2 Project includes new roadways and transportation facilities that are consistent with the City of Lathrop General Plan and the WLSP (as updated). Geometric design features of roadways and transportation facilities in the Phase 2 Project are consistent with the City of Lathrop Design & Construction Standards (City of Lathrop 2019). The Phase 2 Project proposes an increased land use density, which would result in increased travel activity, including bicycle, pedestrian, vehicle, and potential transit trips. These trips would be served by existing and planned facilities that are constructed to applicable design standards to serve these travel modes. As part of the project entitlement process, the City of Lathrop will evaluate the Phase 2 Project's effects on multi-modal transportation operation and implement measures to address any concerns related to traffic safety. The Phase 2 Project does not include any land

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uses that generate a vehicle mix or vehicle speeds different from what is currently found in the City of Lathrop and for which design standards are intended to accommodate. Phase 2 arterial roadways include the extension of River Islands Parkway and Lakeside Drive from the Phase 1 area, as well as a widening of a segment of existing Paradise Road. New arterial and collector streets planned for Phase 2 do not exceed right of way widths of existing Phase 1 streets and have the same design standards and design speeds found in Phase 1.

A safety analysis consistent with the Caltrans LDIGR Safety Review Practitioner's Guidance has been performed to evaluate the Phase 2 Project's potential safety impact affecting the SHS. As discussed in the Safety Impacts section, the Proposed Phase 2 Project would not physically disrupt an existing active transportation facility, transit service facility, or interfere with the implementation of planned traffic safety improvements. Compared to the Approved Phase 2 Project, the Proposed Phase 2 Project would not substantially change the traffic volume or the mix of transportation modes in and around the RID area. Lastly, the proposed project would not result in freeway off-ramp queue to spill back to block traffic on the freeway mainline or result in any speed differentials on freeway mainline or weaving sections.

For the reasons described above, the Proposed Phase 2 Project would not result in a change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned roadways and transportation facilities. Therefore, this impact would be **less than significant**.

### Mitigation Measures

No mitigation is required.

### Impact 4.4-d: Emergency Access Impacts

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Implementation of the Proposed Phase 2 Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The RID area roadway and transportation network is designed to maintain levels of accessibility for police and fire response times, which ensures vehicles have the necessary access when responding to an emergency. The impact would be **less than significant**.

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Several emergency services are located within the RID area. The Approved River Islands Project includes an existing, operating fire station (Lathrop-Manteca Fire Protection District Fire Station 35) in the Phase 1 area and a proposed site (Lathrop-Manteca Fire Protection District Fire Station 36) in the Phase 2 area adjacent to River Islands Parkway. A new Lathrop Police Station is located in the Phase 1 area near Bradshaw's Crossing bridge. Geometric design features of roadways and transportation facilities in the modified Phase 2 Project area are consistent with the City of Lathrop Design & Construction Standards (City of Lathrop 2019) and would not impede access for emergency response vehicles. The transportation network in the RID area is designed to maintain high levels of accessibility and mobility for emergency and non-emergency vehicles. The series of 4-lane arterial and major collector streets, 2-lane collector streets, and local streets throughout the RID area ensure vehicles have the necessary access when responding to an emergency. Emergency vehicles arriving from outside of the RID area may use the external access roads (River Islands Parkway, Golden Valley Parkway, and Paradise Road) when mutual aid is required. An emergency response/evacuation plan for the project site would continue to be updated as development of the Phase 2 Project area proceeds in coordination with local police, local fire departments, Stewart Tract reclamation districts (RD 2062 and RD 2107) as well as the San Joaquin County Office of Emergency Services to ensure that River Islands residents, employees and visitors would be quickly and safely evacuated in the event of a large-scale emergency or natural disaster. Therefore, this impact would be **less than significant**.

### Mitigation Measures

No mitigation is required.



## Impact 4.4-e: Construction Related Transportation Impacts

Implementation of the Proposed Phase 2 Project would involve construction activities that could cause temporary adverse effects to transportation facilities, including temporary roadway, bikeway, and sidewalk closures; degrading roadway pavement conditions; temporary degradation in traffic operations; and increasing potential for conflicts between construction vehicles and bicyclists and pedestrians. These conditions have the potential result in hazardous conditions for motorists, bicyclists, pedestrians, or transit users; and substantially inhibit access for emergency response vehicles. Therefore, this impact would be **significant**.

Impact 4.4-v of the 2003 SEIR evaluated the potential for construction traffic impacts. This impact focused on construction access to the overall project site from outside the project and was determined to be significant for Phase 1a because site access would be limited during this early phase of project development. The impact was less than significant for the remaining project phases. Implementation of Mitigation Measure 4.4-v reduced the impact to a less-than-significant level. Mitigation Measure 4.4-v requires, during Phase 1a of project construction, construction traffic access restrictions on identified roadways during identified time periods.

Implementation of the modified Phase 2 Project would consist of construction of residential, retail, education, and employment buildings and facilities that will span over several years. During construction of these projects, there will be periods of active construction in various portions of the RID Area, depending on the location of each project and the individual timelines for project components. The Phase 2 Project would result in development of the same footprint as evaluated in the 2003 SEIR with similar land uses. Compared to the Approved Phase 2 Project analyzed in the 2003 SEIR, there is little to no change in the impact. However, the updated significance thresholds provided above require additional evaluation of construction impacts on motorists, bicyclists, pedestrians, transit users, or emergency response vehicles. Construction activities related to the Phase 2 development could result in hazardous conditions for motorists, bicyclists, pedestrians, or transit users elsewhere in the RID area; and substantially inhibit access for emergency response vehicles. These effects could occur through temporary roadway, bikeway, and sidewalk closures; degrading roadway pavement conditions; temporary degradation in traffic operations; and increasing potential for conflicts between construction vehicles and bicyclists and pedestrians. Therefore, the modified Phase 2 Project would result in a **significant** impact.

### Modified Mitigation Measure 4.4-v: Construction Traffic (2007 Base Case + Project)

*Mitigation Measure 4.4-v shown below includes the original language from the measure as it was adopted, with revisions to more clearly apply to the Phase 2 Project since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

~~The project applicant shall agree to and implement timing and route conditions regulating construction traffic during Phase 1a construction activity.~~

OR

~~As alternative mitigation to the impact along Stewart Road, the project applicant is proposing to have construction traffic enter the site via Manthey Road and the Paradise Cut levee road via an existing private crossing of the UPRR tracks (formerly SPRR).~~

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.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.4-v would reduce potential transportation impacts during construction by limiting construction traffic on local roadways during peak traffic periods (if congestion is evident) and requiring the identification and implementation of measures to maintain emergency vehicle access and prevent hazardous conflicts with vehicles, bicyclists, and pedestrians. After mitigation, this impact would be **less than significant**.

#### **Impact 4.4-f: Safety Impacts of the Proposed Phase 2 Project (Without Valley Link)**

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Implementation of the Proposed Phase 2 Project (Without Valley Link) would not disrupt an existing multi-modal facility or interfere with the implementation of a planned traffic safety improvements. Implementation of the Proposed Phase 2 Project (Without Valley Link) would not degrade traffic operations or result in a multi-modal traffic mix that is incompatible with facility design at freeway interchange intersections or on freeway weaving sections. Therefore, the impact of the Proposed Phase 2 Project (Without Valley Link) would be **less than significant** when compared to the Approved Phase 2 Project.

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This impact discussion provides an analysis specific to the Proposed Phase 2 Project (Without Valley Link) scenario because the presence or absence of the Valley Link Station has a direct effect on the local transportation facilities addressed in the Safety Assessment Analysis required by Caltrans. An evaluation of the Proposed Phase 2 Project (With Valley Link) scenario as it pertains to the Safety Assessment Analysis is provided below in the discussion of Impact 4.4-g.

Both the Approved Phase 2 Project and the Proposed Phase 2 Project (Without Valley Link) consist of a mix of residential, education, office, and commercial uses. Implementation of the Proposed Phase 2 Project (Without Valley Link) would result in small changes in traffic volumes on local roadways, freeway mainline segments, and interchange ramp intersections around the RID area; however, based on the similar land use types, the mix of pedestrian, bicycle, and motor vehicles would not change appreciably and the traffic mix would remain compatible with existing and planned facility design.

The Proposed Phase 2 Project (Without Valley Link) does not consist of any improvements or physical changes to freeway mainline, freeway interchange, or other SHS facilities. Based on a review of planned traffic safety improvements in the vicinity of the project area, the Proposed Phase 2 Project (Without Valley Link) would not physically disrupt an existing bicycle facility or pedestrian facility, nor would it interfere with the implementation of a planned traffic safety improvements.

Based on the Freeway Interchange Operations Analysis provided above in the Safety Assessment section, the Proposed Phase 2 Project (Without Valley Link) would not result in substantial change in traffic volume, traffic speed, or traffic mix, nor would it alter the facility design at any freeway interchange intersection. Therefore, the Proposed Phase 2 Project (Without Valley Link) would not cause increased walking/biking and multi-modal conflicts at interchanges.

The projected changes in traffic volumes as a result of the Proposed Phase 2 Project (Without Valley Link) at the I-5 / Louise Avenue interchange should be included in the Project Report / Environmental Document that will be prepared by the City of Lathrop in 2021 and required modification to the interchange improvements included in the City of Lathrop Capital Facility Fee (CFF) to improve the interchange operations to LOS D conditions or better during both AM and PM Peak Hour Conditions.

The Proposed Phase 2 Project (Without Valley Link) would not alter intersection facility design or change overall traffic mix by introducing additional pedestrian or bicyclists at freeway interchange intersections. Therefore, the Proposed Phase 2 Project (Without Valley Link) would not cause increase walking/biking and multi-modal conflicts at interchanges, and traffic generated by the Proposed Phase 2 Project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

Based on the Freeway Off-Ramp Queuing Analysis, the Proposed Phase 2 Project (Without Valley Link) would not result in freeway off-ramp queuing spilling back from interchanges and would not affect traffic operations on the freeway mainline.

Based on the Mossdale "Y" Freeway Weaving Analysis, the Proposed Phase 2 Project (Without Valley Link) would not result in substantial change in freeway weaving section service volume or speed differential. The Proposed Phase 2 Project (Without Valley Link) would not degrade traffic operations at weaving segments, and safety risks at the weaving section would remain at the same level when compared to the Approved Phase 2 Project.

Based on the Safety Assessment, the transportation safety impact of the Proposed Phase 2 Project (Without Valley Link) would remain **less than significant** when compared to the Approved Phase 2 Project.

### Mitigation Measures

No mitigation is required.

### Impact 4.4-g: Safety Impacts of the Proposed Phase 2 Project (With Valley Link)

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Implementation of the Proposed Phase 2 Project (With Valley Link) would not disrupt an existing multi-modal facility or interfere with the implementation of a planned traffic safety improvements. Implementation of the Proposed Phase 2 Project (With Valley Link) would not degrade traffic operations or result in a multi-modal traffic mix that is incompatible with facility design at freeway interchange intersections or on freeway weaving sections. Therefore, the impact of the Proposed Phase 2 Project (With Valley Link) would be **less than significant** when compared to the Approved Phase 2 Project.

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Both the Approved Phase 2 Project and the Proposed Phase 2 Project (With Valley Link) consist of a mix of residential, education, office, and commercial uses. Implementation of the Proposed Phase 2 Project Proposed Phase 2 Project (With Valley Link) would result in small changes in traffic volumes on local roadways, freeway mainline segments, and interchange ramp intersections around the RID area; however, based on the similar land use types, the mix of pedestrian, bicycle, and motor vehicles would not change appreciably and the traffic mix would remain compatible with existing and planned facility design.

The Proposed Phase 2 Project (With Valley Link) does not consist of any improvements or physical changes to freeway mainline, freeway interchange, or other SHS facilities. Based on a review of planned traffic safety improvements in the vicinity of the project area, the Proposed Phase 2 Project (With Valley Link) would not physically disrupt an existing bicycle facility or pedestrian facility, nor would it interfere with the implementation of a planned traffic safety improvements.

Based on the Freeway Interchange Operations Analysis provided above in the Safety Assessment section, the Proposed Phase 2 Project (With Valley Link) would not result in substantial change in traffic volume, traffic speed, or traffic mix, nor would it alter the facility design at any freeway interchange intersection. Therefore, the Proposed Phase 2 Project (With Valley Link) would not cause increased walking/biking and multi-modal conflicts at interchanges.

The projected changes in traffic volumes as a result of the Proposed Phase 2 Project (With Valley Link) at the I-5 / Louise Avenue interchange should be included in the Project Report / Environmental Document that will be prepared by the City of Lathrop in 2021 and required modification to the interchange improvements included in the City of Lathrop Capital Facility Fee (CFF) to improve the interchange operations to LOS D conditions or better during both AM and PM Peak Hour Conditions.

The projected changes in traffic volumes as a result of the Proposed Phase 2 Project (With Valley Link) at the I-5 / Mossdale Road / Manthey Road interchange should be included in the Project Report / Environmental Document that is being prepared by the Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) to improve the interchange operations to LOS D conditions or better during both AM and PM Peak Hour Conditions.

The Proposed Phase 2 Project (With Valley Link) would not alter intersection facility design or change overall traffic mix by introducing additional pedestrian or bicyclists at freeway interchange intersections. Therefore, the Proposed Phase 2 Project (With Valley Link) would not cause increase walking/biking and multi-modal conflicts at interchanges, and traffic generated by the Proposed Phase 2 Project would remain compatible with the planned traffic safety improvements in the vicinity of the project.

Based on the Freeway Off-Ramp Queuing Analysis, the Proposed Phase 2 Project (With Valley Link) would not result in freeway off-ramp queuing spilling back from interchanges and would not affect traffic operations on the freeway mainline.

As mentioned previously, the Proposed Phase 2 Project traffic would not have direct access to the Southbound I-5 Ramps / Manthey Road and the Northbound I-5 Ramps / Mossdale Road interchanges, and volume increase at these two interchanges under the Cumulative Plus Proposed Phase 2 Project (With Valley Link) Conditions are attributed to vehicles accessing the future Valley Link station.

Based on the Mossdale "Y" Freeway Weaving Analysis, the Proposed Phase 2 Project (With Valley Link) would not result in substantial change in freeway weaving section service volume or speed differential. The Proposed Phase 2 Project (With Valley Link) would not degrade traffic operations at weaving segments, and safety risks at the weaving section would remain at the same level when compared to the Approved Phase 2 Project.

Based on the Safety Assessment, the transportation safety impact of the Proposed Phase 2 Project (With Valley Link) would remain **less than significant** when compared to the Approved Phase 2 Project.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

With respect to VMT, the traffic model used to generate VMT values incorporates roadway network conditions under cumulative scenarios that include the widening and improvement of Paradise Road. Therefore, the discussion of Impact 4.4-a addresses the effects of a widened and improved Paradise Road being in place. As identified in the discussion of Impact 4.4-a, the modified Phase 2 Project (which would occur with a widened and improved Paradise Road) does not result in a significant VMT impact.

Potential issues related to multi-modal facilities, roadway hazards, and emergency access identified for the modified Phase 2 Project under Impacts 4.4-b through 4.4-d could occur as part of the expansion of Paradise Road if the design and construction of the roadway did not follow applicable standards and regulations. However, such a

scenario is highly unlikely for this type of public civil works transportation project and impacts related to these issues would remain less than significant.

Like the modified Phase 2 Project, the Paradise Road expansion would have the potential to generate hazardous conditions during construction (Impact 4.4-e) because construction would occur in areas where motorists, bicyclists, pedestrians, or transit users could be present and could disrupt emergency vehicle access to some areas. Implementation of Modified Mitigation Measure 4.4-v identified above for the modified Phase 2 Project would be required if the entity implementing the Paradise Road widening uses this SEIR for CEQA compliance. This mitigation measure would be equally effective at reducing potential conflicts between Paradise Road expansion construction and nearby motorists, bicyclists, pedestrians, transit users, and emergency responders to a less-than-significant level for both the Paradise Road widening and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road widening would have no new significant transportation impact and the impacts are not substantially more severe.

## 4.5 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential construction and operational air quality impacts caused by proposed development of the modified Phase 2 Project. Mitigation measures from the 2003 SEIR has been incorporated into this analysis, and new mitigation has been developed as necessary to reduce significant air quality impacts to the extent feasible.

Section 4.5, "Air Quality," of the 2003 SEIR evaluated the potential air quality impacts that could occur from implementation of the River Islands Project. The 2003 SEIR concluded that there would be a less-than-significant impact related to operational emissions of odors (Impact 4.5-b), stationary source toxic air contaminants (TACs) (Impact 4.5-c), local mobile source carbon monoxide (CO) concentrations (Impact 4.5-e), and consistency with air quality plans (Impact 4.5-g). The 2003 SEIR concluded that impacts related construction-generated emissions of criteria air pollutants and ozone precursors (Impact 4.5-a) would be reduced to a less-than-significant level through implementation of Mitigation Measure 4.5-a, which requires application of feasible control measures that would reduce construction emissions. Impacts related to mobile-source TACs (Impact 4.5-d) were concluded to be significant and unavoidable because when the original SEIR was certified in 2003, mobile source TACs were a relatively new concern for the California Air Resources Board (CARB) and no feasible mitigation was available at the time to reduce the impact to a less-than-significant level. Long-term regional emissions of criteria air pollutants and precursors (Impact 4.5-f) were determined to be potentially significant and Mitigation Measure 4.5-f was adopted; however, the 2003 SEIR concluded that Mitigation Measure 4.5-f was not sufficient to minimize impacts to less-than-significant levels, and this impact was therefore concluded to be significant and unavoidable.

### 4.5.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

Air quality in the project area is regulated through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policy making, education, and a variety of programs. These agencies include, but are not limited to, at the federal level, the U.S. Environmental Protection Agency (EPA); at the state level, CARB; and at the local level, the San Joaquin Valley Air Pollution Control District (SJVAPCD).

The 2003 SEIR included a summary of the relevant regulations and programs that regulate air quality within the U.S., California, and the San Joaquin Valley Air Basin (SJVAB) in effect at that time. This discussion is hereby incorporated by reference; however, where appropriate, new regulatory developments since the certification of the 2003 SEIR, as well as other pertinent information omitted in the 2003 SEIR, are summarized below.

## FEDERAL

### U.S. Environmental Protection Agency

EPA has been charged with implementing national air quality programs. EPA's air quality mandates draw primarily from the federal Clean Air Act (CAA), which was enacted in 1970. The most recent major amendments made by Congress in 1990.

#### Criteria Air Pollutants

The CAA required EPA to establish national ambient air quality standards (NAAQS) for six common air pollutants found all over the U.S. referred to as criteria air pollutants (i.e., ozone, nitrogen dioxide [NO<sub>2</sub>], sulfur dioxide [SO<sub>2</sub>], respirable particulate matter with an aerodynamic diameter of 10 microns or less [PM<sub>10</sub>], fine particulate matter with an aerodynamic diameter of 2.5 or less [PM<sub>2.5</sub>], and lead). The NAAQS are periodically updated; the most recent update occurred in 2015 to the 8-hour ozone standard of 0.70 parts per million (ppm), which superseded the

previous 2008 standard of 0.75 ppm average over an 8-hour period. The most recent iteration of the NAAQS are shown in Table 4.5-1.

The CAA requires each state to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. California's SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, EPA may prepare a federal implementation plan that imposes additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

In October 2012, EPA and the National Highway Traffic Safety Administration, on behalf of the U.S. Department of Transportation, issued final rules to reduce air pollution and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register [FR] 62624). These rules would increase fuel economy to the equivalent of 54.5 miles per gallon (mpg) for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630).

However, on April 2, 2018, the EPA administrator announced a final determination that the current standards should be revised. On August 2, 2018, the U.S. Department of Transportation and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks through retaining the current model year 2020 standards through model year 2026 and establish new standards covering model years 2021 through 2026 (NHTSA 2018).

The CAA grants California the ability to enact and enforce more strict fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the state applies to EPA for a preemption waiver for those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revokes California's existing waiver to establish a nation-wide standard (84 FR 51310). At the time of preparing this environmental document, the implications of the SAFE Rule on California's future emissions are contingent upon a variety of unknown factors, including the outcome of legal challenges and policy directives by the federal government. However, the impact analysis included in this chapter assumes that the SAFE Rule would continue to be implemented, and uses emissions factors developed by CARB that account for the potential for a less fuel-efficient future vehicle fleet as a result of the SAFE Rule (CARB 2019a).

**Table 4.5-1 National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California (CAAQS) <sup>a,b</sup>	National (NAAQS) <sup>c</sup>	
			Primary <sup>b,d</sup>	Secondary <sup>b,e</sup>
Ozone	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	—	Same as primary standard
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (137 µg/m <sup>3</sup> )	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	Same as primary standard
	8-hour	9 ppm <sup>f</sup> (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	
Nitrogen dioxide (NO <sub>2</sub> )	Annual arithmetic mean	0.030 ppm (57 µg/m <sup>3</sup> )	53 ppb (100 µg/m <sup>3</sup> )	Same as primary standard
	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )	100 ppb (188 µg/m <sup>3</sup> )	—
Sulfur dioxide (SO <sub>2</sub> )	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m <sup>3</sup> )
	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	75 ppb (196 µg/m <sup>3</sup> )	—
Respirable particulate matter (PM <sub>10</sub> )	Annual arithmetic mean	20 µg/m <sup>3</sup>	—	Same as primary standard
	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Fine particulate matter (PM <sub>2.5</sub> )	Annual arithmetic mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
	24-hour	—	35 µg/m <sup>3</sup>	Same as primary standard
Lead <sup>f</sup>	Calendar quarter	—	1.5 µg/m <sup>3</sup>	Same as primary standard
	30-Day average	1.5 µg/m <sup>3</sup>	—	—
	Rolling 3-Month Average	—	0.15 µg/m <sup>3</sup>	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m <sup>3</sup> )	No national standards	
Sulfates	24-hour	25 µg/m <sup>3</sup>		
Vinyl chloride <sup>f</sup>	24-hour	0.01 ppm (26 µg/m <sup>3</sup> )		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m<sup>3</sup> = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million

- <sup>a</sup> California standards for ozone, carbon monoxide, SO<sub>2</sub> (1- and 24-hour), NO<sub>2</sub>, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- <sup>b</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- <sup>c</sup> National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM<sub>10</sub> 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. The PM<sub>2.5</sub> 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.
- <sup>d</sup> National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- <sup>e</sup> National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- <sup>f</sup> The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Sources: EPA 2016, CARB 2016



### **Hazardous Air Pollutants and Toxic Air Contaminants**

TACs, or in federal parlance, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the NAAQS and California ambient air quality standards (CAAQS) have been established (Table 4.5-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

## **STATE**

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required CARB to establish the CAAQS (Table 4.5-1).

### **Criteria Air Pollutants**

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources. The CCA also provides air districts with the authority to regulate indirect sources.

### **Toxic Air Contaminants**

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, particulate matter (PM) exhaust from diesel engines (diesel PM) was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

AB 617 of 2017 aims to help protect air quality and public health in communities around industries subject to the state's cap-and-trade program for greenhouse gas (GHG) emissions. AB 617 imposes a new state-mandated local program to address non-vehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and TACs. The bill requires CARB to identify high-pollution areas and directs air districts to focus air quality improvement efforts through adoption of community emission reduction programs within these identified areas. Currently, air districts review individual sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. This bill addresses the cumulative and additive nature of air pollutant health effects by requiring community-wide air quality assessment and emission reduction planning.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB 2020). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

## LOCAL

### San Joaquin Valley Air Pollution Control District

#### Criteria Air Pollutants

SJVAPCD is the primary agency responsible for planning to meet NAAQS and CAAQS in the SJVAB, in which the project site is located. SJVAPCD works with CARB and EPA to maintain the region's portion of the SIP for ozone and PM<sub>2.5</sub>. The SIP is a compilation of plans and regulations that govern how the region and state will comply with the federal CAA requirements to attain and maintain the NAAQS for ozone and PM<sub>2.5</sub>. The SJVAB has been designated as nonattainment with respect to the NAAQS and CAAQS for ozone and PM<sub>2.5</sub> (Table 4.5-2) (SJVAPCD 2015a).

SJVAPCD also enforces air quality regulations, educates the public about air quality, and implements a number of programs to provide incentives for the replacement or retrofit of older diesel engines and to influence land use development in the SJVAB.

All projects are subject to adopted SJVAPCD rules and regulations in effect at the time of construction. Specific rules applicable to the project may include but are not limited to the following:

- ▶ **Regulation VIII—Fugitive Dust PM<sub>10</sub> Prohibitions:** Rules 8011–8081 are designed to reduce PM<sub>10</sub> emissions (predominantly dust and dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, and landfill operations. Compliance with Regulation VIII is mandatory, so compliance by the project proponent is assumed in this analysis.
- ▶ **Rule 2010—Permits Required:** This rule applies to anyone who plans to or does operate, construct, alter, or replace any source operation that may emit air contaminants or may reduce the emission of air contaminants. The project would be subject to SJVAPCD permitting requirements for stationary sources such as boilers or back-up generators.
- ▶ **Rule 2201—New and Modified Stationary Source Review Rule:** This rule applies to all new stationary sources and all modifications of existing stationary sources. Stationary sources are subject to SJVAPCD permit requirements if, after construction, they emit or may emit one or more affected pollutant.

- ▶ **Rule 2550—Federally Mandated Preconstruction Review for Major Sources of Air Toxics:** This rule applies to applications to construct or reconstruct a major air toxics source.
- ▶ **Rule 3135—Dust Control Plan Fee:** This rule requires applicants to submit a fee in addition to a dust control plan. The purpose of this fee is to recover SJVAPCD's cost for reviewing such plans and conducting compliance inspections.
- ▶ **Rule 4002—National Emissions Standards for Hazardous Air Pollutants:** This rule applies to all sources of hazardous air pollutants and requires them to comply with the standards, criteria, and requirements set forth therein.
- ▶ **Rule 4101—Visible Emissions:** This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.
- ▶ **Rule 4102—Nuisance:** This rule applies to any source operation that emits or may emit air contaminants or other materials. If such emissions create a public nuisance, the owner/operator could be in violation and be subject to enforcement action by SJVAPCD.
- ▶ **Rule 4601—Architectural Coatings:** This rule limits volatile organic compounds from architectural coatings by specifying storage, cleanup, and labeling requirements for architectural coatings.
- ▶ **Rule 4641—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations:** This rule applies to the manufacture and use of the aforementioned asphalt types for paving and maintenance operations.
- ▶ **Rule 9510—Indirect Source Review:** Also known as the Indirect Source Rule (ISR), this rule is intended to reduce or mitigate emissions of NO<sub>x</sub> and PM<sub>10</sub> from the construction- and operation-related emissions of new land use development in the SJVAPCD. This rule requires specific percentage reductions in estimated onsite construction and operation emissions, and/or payment of a prescribed off-site mitigation fee for required reductions that cannot be met on the project site. Construction emissions of NO<sub>x</sub> and PM<sub>10</sub> exhaust must be reduced by 20 percent and 45 percent, respectively. Operational emissions of NO<sub>x</sub> and PM<sub>10</sub> must be reduced by 33.3 percent and 50 percent, respectively. The rule applies to commercial development projects of 2,000 square feet and larger, so the proposed development would be subject to the ISR. Per Section 4.4.3 of Rule 9510, any project whose primary functions are subject to Rules 2010 and 2201 is exempted from Rule 9510. Therefore, SJVAPCD determined that the project would be subject to Rule 9510. The provisions of Rule 9510 are described in more detail in the analysis of environmental impacts and mitigation measures.

In addition, if modeled construction- or operation-related emissions for a project exceed SJVAPCD's mass emission thresholds for criteria air pollutants and precursors then SJVAPCD recommends implementing mitigation to reduce these emissions. As a form of mitigation, a project proponent may enter into a Voluntary Emission Reduction Agreement (VERA) with SJVAPCD to reduce the project related impact on air quality to a less-than-significant level. A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that funds and implements emission reduction projects (SJVAPCD 2015a). Section 4.5.3, "Environmental Impacts and Mitigation Measures," presents SJVAPCD's mass emission thresholds.

### Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures. Under SJVAPCD Rule 2010 ("Permits Required"), Rule 2201 ("New and Modified Stationary Source Review"), and Rule 2550 ("Federally Mandated Preconstruction Review for Major Sources of Air Toxics"), all sources that possess the potential to emit TACs are required to obtain permits from SJVAPCD. SJVAPCD may issue permits to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SJVAPCD limits emissions and public exposure to TACs through multiple programs. SJVAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., residences, schools, hospitals), that may experience adverse effects from unhealthful concentrations of air pollutants.

### Odors

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SJVAPCD. SJVAPCD Rule 4102 (“Nuisance”) regulates odorous emissions.

### **City of Lathrop General Plan**

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The following policies from the “Air Quality and Solid Waste Management Policies” section of the *City of Lathrop General Plan* (2004) may apply to the project:

- ▶ **Policy 1:** Mitigation of air quality impacts is to be achieved in part through the design and construction of an efficient system of arterial and collector streets and interchange and freeway improvements that will assure high levels of traffic service and the avoidance of unmanageable levels of traffic congestion.
- ▶ **Policy 3:** The City shall adopt standards which require industrial process analysis before the fact of site and building permit approval to assure compliance with State air quality and water quality standards. Standards shall provide for periodic monitoring of industrial processes which could have an adverse impact on water or air quality. Industrial process review that may be required should be conducted as part of environmental assessment by an engineer licensed in California having demonstrated experience in the industrial process involved.
- ▶ **Policy 4:** The City shall require positive control of dust particles during project construction activities, including watering or use of emulsions, parking of heavy equipment on paved surfaces, prohibition of land grading operation during days of high wind (beginning at 10 mph, with gusts exceeding 20 mph), and prohibitions of burning on vacant parcels. The City should seek the cooperation of agricultural operators to refrain from the plowing of fields on windy days, and to keep loose soils under control to the extent reasonable to avoid heavy wind erosion of soils.

## **4.5.2 Environmental Setting**

The environmental setting provided on pages 4.5-9 through 4.5-14 of the 2003 SEIR is relevant to understanding the potential air quality impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

The project site is located in the SJVAB. The SJVAB includes all of Fresno, Kings, Madera, Merced, Stanislaus, San Joaquin, and Tulare counties and the valley portion of Kern County. Ambient concentrations of air pollutants are determined by the levels of emissions released by pollutant sources and the ability of the atmosphere to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and the presence of sunlight.

### **CLIMATE, METEOROLOGY, AND TOPOGRAPHY**

The environmental setting provided on pages 4.5-9 through 4.5-11 of the 2003 SEIR comprehensively addressed issues related to the topography, meteorology, climate, atmospheric stability, and inversions characteristic of the SJVAB. The existing conditions related to these topics have not changed appreciably since the 2003 SEIR and no new information is available regarding these topics that would affect the conclusions provided in that SEIR.

The local meteorology of the project site and surrounding area is represented by measurements recorded at the Western Regional Climate Center (WRCC) Tracy Pumping Plant Station. The average annual precipitation from a 1995 to 2016 period is approximately 12 inches. Average January temperatures range from a normal minimum of 38°F to a normal maximum of 55°F. July temperatures range from a normal minimum of 61°F to a normal maximum of 93°F (WRCC 2016). The prevailing wind direction is from the west (WRCC 2002).

## CRITERIA AIR POLLUTANTS

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. A brief description of key criteria air pollutants in the SJVAB was included in the 2003 SEIR which is herein incorporated by reference. However, in the wake of the 2018 California Supreme Court Decision *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, the health effects associated with exposure to each criteria air pollutant in exceedance of the NAAQS and CAAQS are summarized in Table 4.5-2. Table 4.5-3 shows San Joaquin County's attainment status for the CAAQS and the NAAQS.

### Ozone

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2018). Emissions of the ozone precursors ROG and NO<sub>x</sub> have decreased over the past two decades because of more stringent motor vehicle standards and cleaner burning fuels and are projected to continue decreasing from 2010 to 2035 (CARB 2013).

### Nitrogen Dioxide

Acute health effects of exposure to NO<sub>x</sub> includes coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, or pulmonary edema, breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2018).

### Particulate Matter

Acute health effects of exposure to PM<sub>10</sub> include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases including asthma and chronic obstructive pulmonary disease, and premature death. Chronic health effects include alternations to the immune system and carcinogenesis (EPA 2018). For PM<sub>2.5</sub>, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term (months to years) exposure to PM<sub>2.5</sub> has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children (EPA 2018).

Direct emissions of PM<sub>10</sub> are projected to remain relatively constant through 2035. Direct emissions of PM<sub>2.5</sub> have steadily declined in the SJVAB between 2000 and 2010 and then are projected to increase very slightly through 2035. Emissions of PM<sub>2.5</sub> in the SJVAB are dominated by the same sources as emissions of PM<sub>10</sub> (CARB 2013).

**Table 4.5-2 Sources and Health Effects of Criteria Air Pollutants**

Pollutant	Sources	Acute <sup>a</sup> Health Effects	Chronic <sup>b</sup> Health Effects
Ozone	Secondary pollutant resulting from reaction of reactive organic gases (ROG) and oxides of nitrogen (NO <sub>x</sub> ) in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO <sub>x</sub> results from the combustion of fuels	Increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	Permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	Incomplete combustion of fuels; motor vehicle exhaust	Headache, dizziness, fatigue, nausea, vomiting, death	Permanent heart and brain damage
Nitrogen dioxide (NO <sub>2</sub> )	Combustion devices (e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines)	Coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	Chronic bronchitis, decreased lung function

Pollutant	Sources	Acute <sup>a</sup> Health Effects	Chronic <sup>b</sup> Health Effects
Sulfur dioxide (SO <sub>2</sub> )	Coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO <sub>2</sub> exposure to chronic health impacts
Respirable particulate matter (PM <sub>10</sub> ), Fine particulate matter (PM <sub>2.5</sub> )	Fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO <sub>2</sub> and ROG	Breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	Alterations to the immune system, carcinogenesis
Lead	Metal processing	Reproductive/developmental effects (fetuses and children)	Numerous effects including neurological, endocrine, and cardiovascular effects

<sup>a</sup> Acute health effects refer to immediate illnesses caused by short-term exposures to criteria air pollutants at fairly high concentrations. An example of an acute health effect includes fatality resulting from short-term exposure to carbon monoxide levels in excess of 1,200 parts per million.

<sup>b</sup> Chronic health effects refer to cumulative effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations. An example of a chronic health effect includes the development of cancer from prolonged exposure to particulate matter at concentrations above the national ambient air quality standards.

Source: EPA 2018

**Table 4.5-3 Attainment Status Designations for San Joaquin County**

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	—	Nonattainment (1-hour) Classification-Serious <sup>a</sup>
	Nonattainment (8-hour) <sup>b</sup> Classification=Extreme	Nonattainment (8-hour)
Respirable particulate matter (PM <sub>10</sub> )	Attainment (24-hour)	Nonattainment (24-hour)
	—	Nonattainment (Annual)
Fine particulate matter (PM <sub>2.5</sub> )	Nonattainment (24-hour)	—
	Nonattainment (Annual)	Nonattainment (Annual)
Carbon monoxide (CO)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO <sub>2</sub> )	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO <sub>2</sub> ) <sup>c</sup>	Unclassified/Attainment (1-Hour)	Attainment (1-hour)
		Attainment (24-hour)
Lead (Particulate)	Unclassified/Attainment (3-month rolling avg.)	Attainment (30-day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

<sup>a</sup> Per Health and Safety Code (HSC) Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change.

<sup>b</sup> 2015 Standard.

<sup>c</sup> 2010 Standard.

Sources: CARB 2019b; EPA 2020

## TOXIC AIR CONTAMINANTS

According to the 2013 Edition of the California Almanac of Emissions and Air Quality, health risks from TACs can largely be attributed to relatively few compounds, the most important being diesel PM (CARB 2013). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

Although diesel-fueled internal combustion engines emit diesel PM by, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a PM exposure method. This method uses the CARB emissions inventory's PM<sub>10</sub> database, ambient PM<sub>10</sub> monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among these 10 TACs mentioned. Based on receptor modeling techniques, CARB estimated the average cancer risk associated with diesel PM concentrations in the SVAB to be 360 excess cancer cases per million people in the year 2000. Overall, levels of most TACs, except para-dichlorobenzene and formaldehyde, have decreased since 1990 (CARB 2013).

## ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity. Typical odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, food packaging plants, and cannabis (OPR 2017). SJVAPCD provides screening criteria for siting new land uses near these sources of odor (SJVAPCD 2015a). Based on guidance provided by SJVAPCD, none of these odorous land uses are within proximity to the project site.

## SENSITIVE RECEPTORS

Sensitive receptors generally include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants. The residents in the Phase 1 area are adjacent to the eastern boundary of the Phase 2 area and comprise nearby sensitive receptors.

## 4.5.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

The following resources were used for this analysis:

- ▶ 2003 SEIR for the River Islands Project;
- ▶ The California Emissions Estimator Model (CalEEMod) 2016.3.2 Computer Program (CAPCOA 2017), and
- ▶ SJVAPCD's *Guidance for Assessing and Mitigation Air Quality Impacts* (SJVAPCD 2015a).

Regional and local criteria air pollutant emissions and associated impacts, as well as impacts from TACs, CO concentrations, and odors were assessed in accordance with SJVAPCD-recommended methodologies and then evaluated against SJVAPCD-adopted thresholds.

To determine whether the modified Phase 2 Project would result in a new significant impact or a substantially more severe impact with respect to construction- and operation-generated criteria air pollutants and ozone precursors, emissions for the approved Phase 2 Project were estimated and then compared to emissions from the modified Phase 2 Project. This analysis presents the estimated emissions associated with construction and operations, then evaluates the difference between the approved and proposed projects to determine whether the modified Phase 2 Project would result in a new significant impact or a substantially more severe impact than what was identified in the 2003 SEIR.

Construction emissions of criteria air pollutants and precursors associated with the approved Phase 2 Project and modified Phase 2 Project were calculated using CalEEMod, as recommended by SJVAPCD (CAPCOA 2017). Modeling was based on project-specific information (e.g., construction activity, estimated hauling trips, worker trips) where available; assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. Construction for the modified Phase 2 Project was assumed to occur over an approximately 20-year period commencing in 2021 and ending in 2040 with construction emissions presented in annual mass emissions by year.

Emissions are also presented in daily estimates to evaluate whether the project would generate daily emissions in exceedance of 100 lb/day (see discussion under the heading, "Thresholds of Significance," for additional information). A scenario using construction equipment type, numbers, and level of activity derived from actual construction activity occurring in the Phase 1 area was developed to represent a worst-case construction day. This worst-case construction scenario could occur at any point during the project's 20-year construction period. Therefore, to provide the most conservative estimate of emissions, a worst-case construction day was modeled in 2021. 2021 was selected as the example year for maximum daily emissions as emissions factors reflect the state's vehicle fleet's compliance with regulatory requirements. This generates the most conservative estimate of emissions as heavy-duty equipment is expected to become more fuel-efficient over time. For example, a suite of construction equipment operating in 2021 would generate fewer emissions than the same suite of construction equipment operating in 2040 as regulatory mechanisms improve the fuel efficiency of engines and decrease the carbon content of fuels over time; therefore, the construction fleet used in the earliest year would be expected to have the greatest emissions.

Operational emissions of criteria air pollutants for the approved Phase 2 Project and modified Phase 2 Project were estimated in CalEEMod for the year 2040; the CalEEMod computer program does not generate emissions estimates for the incremental years between 2040 and 2045. Therefore, the first full year of operation was assumed to occur in 2040 to provide a more conservative estimate of emissions (i.e., earliest year when full operation of all project elements could be underway). CalEEMod default energy values were amended to reflect compliance with the 2019 California Energy Code. Notably, the California Energy Code is updated triennially; therefore, residential and nonresidential buildings constructed throughout the lifespan of the Phase 2 Project would likely be more energy efficient and emit less air pollution than is assumed in this analysis as the Title 24 California Building Code continues to decarbonize (i.e., transition to carbon-free sources of power) and become more energy efficient. In addition, default vehicle emissions factors in CalEEMod were adjusted based on updated EMFAC Safe Rule emissions factors



(see Section 4.5.1, "Regulatory Setting") assuming that implementation of the SAFE Rule, as currently proposed, would continue to be implemented. Criteria air pollutant emissions for landscaping activity was derived using CalEEMod default values. Emissions estimates are presented in annual and daily values and compared to the applicable thresholds of significance and screening criteria (discussed in greater detail below under the heading, "Thresholds of Significance").

Specific model assumptions and inputs for these calculations can be found in Appendix C.

Since the certification of the 2003 SEIR, the California Supreme Court issued a ruling in *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 regarding an air quality analysis prepared for the Friant Ranch Development Project EIR in December 2018. The Court asserted that the air quality analysis performed for the project did not adequately explain the nature and magnitude of long-term air quality impacts from emissions of criteria pollutants and ozone precursors. The Court held that the EIR lacked "sufficient detail to enable those who did not participate in its preparation to understand and consider meaningfully the issues the proposed project raises."

The Court expressed the need to determine whether there was a connection between the significant project emissions and the human health impacts associated with such emissions. According to the Court, one pathway would be to estimate the level of ozone that would be produced from the project, measure to what extent human health would be affected, and describe where daily exceedances of the NAAQS and CAAQS would occur in an air basin. This detailed approach to modeling is founded on the assumption that such an exercise would produce estimates of meaningful accuracy.

In response to this recent court case, a discussion of the development of air quality thresholds of significance for criteria pollutants and ozone precursors and their connection to attainment of the NAAQS and CAAQS, as well as a discussion of the applicability of regional air pollution modeling is provided below.

Typically, air districts develop thresholds of significance for CEQA evaluation (summarized below) in consideration of maintaining or achieving attainment under the NAAQS and CAAQS for the geographical area they oversee (long-term regional air quality planning). These thresholds are tied to an air district in nonattainment's SIP for criteria air pollutants within a cumulative context. These SIPs are submitted to CARB and contain an inventory of existing ambient air pollutant concentrations and, if applicable, a suite of measures to reduce air pollution and a projected date of achieving attainment under the NAAQS and CAAQS. Air quality plans identify a budget that accounts for new, future sources of pollution from land use development and stationary sources. These budgets inform the development of CEQA thresholds of significance and represent an allowable level of pollution that, when emitted in volumes below such thresholds, would not conflict with an air district's long-term regional air quality planning or attainment date.

As discussed previously, the NAAQS and CAAQS represent concentrations of criteria air pollutants protective of human health and are substantiated by extensive scientific evidence. EPA and CARB recognize that ambient air quality below these concentrations would not cause adverse health impacts to exposed receptors. In connecting an air district's (e.g., SJVAPCD) thresholds of significance to its anticipated date of attainment, projects that demonstrate levels of construction and/or operational emissions below the applicable thresholds would be consistent with long-term regional planning efforts. These projects would not result in emissions that would conflict with an area achieving future attainment status under the NAAQS and CAAQS as outlined by an applicable air quality plan.

Similarly, projects that demonstrate emissions levels in exceedance of an applicable threshold could contribute to the continued nonattainment designation of a region or potentially degrade a region from attainment to nonattainment resulting in acute or chronic respiratory and cardiovascular illness associated with exposure to concentrations of criteria air pollutants above what EPA and CARB consider safe. Symptoms can include coughing, difficulty breathing, chest pain, eye and throat irritation and, in extreme cases, death caused by exacerbation of existing respiratory and cardiovascular disease, cancer, and impaired immune and lung function.

However, the exact location and magnitude of specific health impacts that could occur as a result of project-level construction- or operation-related emissions is infeasible to model with a high degree of accuracy. While dispersion modeling of project-generated PM may be conducted to evaluate resulting ground-level concentrations, the

secondary formation of PM is similar to the complexity of ozone formation, and localized impacts of directly emitted PM do not always equate to local PM concentrations due to the transport of emissions. Ozone is a secondary pollutant formed from the oxidation of ROG and NO<sub>x</sub> in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including topography, building influences on air flow (e.g., downwash), ROG and NO<sub>x</sub> concentration ratios, multiple meteorological conditions, and sunlight exposure (Seinfeld and Pandis 1996:298). For example, rates of ozone formation are highest in elevated temperatures and when the ratio of ROG to NO<sub>x</sub> is 5.5:1. When temperatures are lower and this ratio shifts, rates of ozone formation are stunted (Seinfeld and Pandis 1996:299–300). In addition, ROG emissions are composed of many compounds that have different levels of reactivity leading to ozone formation. Methane, for instance, is the most common ROG compound, yet it has one of the lowest reactivity potentials (Seinfeld and Pandis 1996:309, 312). Moreover, some groups may develop more severe health impacts than others. For instance, infants, children, the elderly, and individuals with preexisting medical conditions are more susceptible to developing illnesses from exposure to air pollutants.

Notably, during the litigation process in the Friant Ranch case, SJVAPCD submitted an amicus curiae brief that provided scientific context and expert opinion regarding the feasibility of performing regional dispersion modeling for ozone. In the brief, SJVAPCD states that “CEQA does not require an EIR to correlate a project’s air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.” SJVAPCD reiterates that (SJVAPCD 2015b):

the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the [SJVAB] can accommodate without affecting the attainment date for the NAAQS. The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources must ‘offset’ their emissions...Thus the CEQA air quality analysis for criteria air pollutants is not really localized, project-level impact analysis but one of regional ‘cumulative impacts.’

The brief asserts that these CEQA thresholds of significance are not intended to be applied such that any localized human health impact associated with a project’s emissions could be identified. Rather, CEQA thresholds of significance are used to determine whether a project’s emissions would obstruct a region’s capability of attaining the NAAQS and CAAQS according to the emissions inventory prepared in a SIP, which is then submitted and reviewed by CARB and EPA. This sentiment is corroborated in an additional brief submitted by the South Coast Air Quality Management District (SCAQMD 2015).

SJVAPCD has not developed a dispersion model to evaluate resulting human health impacts for project-level emissions with resulting concentrations of ozone precursors within the SJVAB. It is foreseeable that such a model could be developed to quantify potential human health impacts in connection with locations of nonattainment of an air basin; however, at the time of writing this Draft SEIR, SJVAPCD has not developed a model nor endorsed an existing model.

As discussed below under the heading, “Thresholds of Significance,” SJVAPCD has established annual thresholds of significance and daily mass emissions screening criteria for project-level emissions. As discussed in greater detail in the aforementioned section, annual thresholds of significance are tied to long-term regional air quality planning while the daily mass emissions screening criteria are used as a trigger point for additional air dispersion modeling. Projects that exceed these criteria are encouraged by the district to prepare an ambient air quality analysis (AAQA) to determine whether a project’s emissions would result in a violation of an ambient air quality standard (AAQS) within the SJVAB. However, an AAQA is not intended to be used to quantify or predict specific human health impacts. For instance, the degree or severity of an adverse health outcome is not determined solely based on exposure to a certain concentration of a criteria air pollutant as other factors such as age, genetics, preexisting conditions, proximity to existing sources of pollution, and exposure period would also contribute to an individual’s susceptibility to be adversely affected by air pollution. This information is private and not available to a lead agency and, thus, cannot be included in a model to qualitatively predict future health impacts in the context of exposure to concentrations of air pollution in exceedance of an AAQS.

However, as discussed above, the NAAQS and CAAQS were developed in consideration of ample scientific research indicating that human health impacts may occur from exposure to certain concentrations of criteria air pollutants;

therefore, a correlation between a violation of an AAQS and adverse health impacts can be made if a specific exceedance can be identified. Thus, for the reasons stated above, human health impacts are evaluated qualitatively rather than quantitatively due to inherent uncertainty pertaining to a particular individual's vulnerability to air pollution.

CO impacts were assessed qualitatively, using the screening criteria set forth by SJVAPCD and results from the project-specific traffic analysis. The level of health risk from exposure to construction- and operation-related TAC emissions was assessed qualitatively. This assessment was based on the proximity of TAC-generating construction activity to off-site sensitive receptors, the number and types of diesel-powered construction equipment being used, and the duration of potential TAC exposure.

Impacts related to odors were also assessed qualitatively, based on proposed construction activities, equipment types and duration of use, overall construction schedule, and distance to nearby sensitive receptors. To evaluate an odor impact, SJVAPCD recommends the lead agency provide the buffer distance and a description of the land features and topography in the buffer zone that separates nearby sensitive receptors and the odor source. The focus of the analysis is construction-related odors as the modified Phase 2 Project does not include any uses that would generate odors different from typical existing urban, suburban, and mixed-use development in the area.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, SJVAPCD has published new guidance for the evaluation of air pollutants during CEQA review. For instance, at the time of preparing the 2003 SEIR, SJVAPCD did not recommend that the City quantify construction-generated emissions of criteria pollutants. Additionally, SJVAPCD's most recent guidance provides mass emissions thresholds for SO<sub>x</sub> and PM<sub>2.5</sub>, which were not pollutants evaluated in the 2003 SEIR.

In its March 2015 *Guide for Assessing and Mitigating Air Quality Impacts* (CEQA Guide), SJVAPCD provides evidence to support the development and applicability of its thresholds of significance for project-generated emissions of criteria air pollutants and precursors, which may be used at the discretion of a lead agency overseeing the environmental review of projects located within the SJVAB. As stated in the CEQA Guide, "a Lead Agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the Lead Agency to adopt such thresholds is supported by substantial evidence" (SJVAPCD 2015a:63-64). CEQA-related air quality thresholds of significance are tied to long-term air quality planning, which focuses on achieving or maintaining attainment designations with respect to the NAAQS and CAAQS for criteria air pollutants, which are scientifically substantiated, numerical concentrations considered to be protective of human health.

These numerical thresholds for construction- and operation-related emissions of criteria air pollutants and precursors would determine whether a project's discrete emissions would result in a regional contribution (i.e., significant) to the baseline nonattainment status of SJVAPCD. In developing thresholds of significance for individual project emissions, SJVAPCD analyzed emissions values against the SJVAPCD's offset thresholds to ozone precursors, which, when applied, prevent further deterioration of ambient air quality in the SJVAB. Thresholds for PM<sub>10</sub> and PM<sub>2.5</sub> were adopted from the SJVAPCD's PM<sub>10</sub> New Source Review (NSR) offset thresholds for stationary sources, which represent the greatest component of SJVAPCD's long-term regional air quality planning (SJVAPCD 2015a:82). Using these parameters, SJVAPCD developed quantitative thresholds of significance for project-level CEQA evaluation that may be used to determine the extent to which a project's emissions of criteria air pollutants and precursors would contribute to the regional degradation of ambient air quality within the SJVAB. According to SJVAPCD, projects with emissions below these thresholds of significance would demonstrate consistency with SJVAPCD's air quality plans. Notably, annual mass emissions thresholds of significance are not designed to determine whether a project's contribution of emissions would directly result in a violation of the NAAQS or CAAQS, which are hourly, concentration-based standards.

SJVAPCD has also developed daily mass emissions screening criteria for ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> to determine whether project emissions would result in a violation of an AAQS. Unlike SJVAPCD's annual mass emissions thresholds, which are used to evaluate a project's consistency with long-term regional air quality planning, these daily mass emissions screening criteria serve to determine the location of where an exceedance of an AAQS, and resulting

adverse health impacts, could occur. Because the NAAQS and CAAQS are concentration-based standards presented hourly, daily mass emissions are a more suitable estimate to determine whether a project would contribute to a violation of an AAQS. Projects that emit emissions below these mass daily screening criteria would likely not generate emissions in levels that would result in a violation of an AAQS, and air dispersion modeling would not be required. Consequently, projects that emit emissions above these criteria are recommended to perform an AAQS to evaluate whether an exceedance, and resulting health impact, would occur.

Using federal and state guidance pertaining to TACs, in addition to the findings of several scientific studies, SJVAPCD developed cancer risk and non-cancer health hazard thresholds for TAC exposure. Unlike criteria air pollutants, there is no known safe concentration of TACs for cancer risk. Moreover, TAC emissions contribute to the deterioration of localized air quality and due to the dispersion characteristics of TACs, emissions generally do not cause regional-scale air quality impacts. SJVAPCD's thresholds are designed to ensure that a source of TACs does not contribute to a localized, significant impact to existing or new receptors.

The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds. Text deletion are shown in ~~strike through~~ and text additions are shown in underline.

Per Appendix G of the CEQA Guidelines and SJVAPCD recommendations, the following thresholds are used to determine whether implementing the Phase 2 Project would result in a significant air quality impact.

- ▶ **Short-term increases in regional criteria pollutants.** Construction impacts associated with the proposed project would be considered significant if construction emissions would exceed SJVAPCD's mass emissions threshold of 10 tons per year (TPY) for ROG and NO<sub>x</sub>, 15 TPY for PM<sub>10</sub> and PM<sub>2.5</sub>, and 27 TPY for SO<sub>x</sub>. Additional air dispersion modeling would be required if construction emissions would exceed SJVAPCD's mass emissions screening criteria of 100 pounds per day (lb/day) for ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented.
- ▶ **Increases in Toxic Air Contaminants.** TAC impacts associated with the proposed project would be considered significant if the project would expose the public to substantial levels of TACs so that the probability of contracting cancer for the Maximally Exposed Individual exceeds ~~40~~ 20 in 1 million or an acute or chronic Hazard Index that equals or exceeds 1 for the Maximally Exposed Individual for non-carcinogens.
- ▶ **Increase in odorous emissions.** Odor impacts associated with the proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.
- ▶ **Increases in local mobile source CO concentrations.** Local mobile source impacts associated with the proposed project would be considered significant if the project contributes to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour.
- ▶ **Long-term increases in regional criteria pollutants.** Regional (operational) impacts associated with the proposed project would be considered significant if the project generates emissions of ROG and NO<sub>x</sub> that exceed 10 TPY, PM<sub>10</sub> and PM<sub>2.5</sub> that exceed 15 TPY, and SO<sub>x</sub> that exceed 27 TPY. Additional air dispersion modeling would be required if operational emissions would exceed SJVAPCD's mass emissions screening criteria of 100 pounds per day (lb/day) for ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>.

## ISSUES NOT DISCUSSED FURTHER

All topics related to air quality are evaluated in this section.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.5-a: Increases in Regional Criteria Pollutants during Construction

The 2003 SEIR qualitatively evaluated construction emissions of criteria pollutants during construction of the River Islands Project. Although emissions were not quantified, the 2003 SEIR concluded that construction activities would generate substantial increases in ROG, NO<sub>x</sub>, and PM<sub>10</sub> emissions from site grading and excavation, road paving, application of architectural coatings, motor vehicle exhaust, and operation and movement of heavy-duty construction equipment. The modified Phase 2 Project would entail similar types of construction activities over a similarly sized project site. Nonetheless, since certification of the 2003 EIR, SJVAPCD has updated its guidance for determining construction-related air quality analysis and recommends that emissions be quantified and evaluated against annual mass emissions thresholds and daily mass emissions screening criteria. In light of this new guidance, annual construction-generated emissions were quantified for both the approved Phase 2 Project and modified Phase 2 Project to determine whether construction of the modified Phase 2 Project would result in a substantially more severe impact than what was identified in the 2003 SEIR. Due to the differences in land uses between the approved Phase 2 Project, the modified Phase 2 Project would result in lesser annual emissions of criteria air pollutants as compared to the approved Phase 2 Project. Daily construction of the approved Phase 2 Project and modified Phase 2 Project under a worst-case scenario would generate the same level of emissions. Nonetheless, these emissions would exceed SJVAPCD's daily mass emissions screening criteria, resulting in an exceedance of an AAQS. There is no new significance impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain **potentially significant** as identified in the 2003 SEIR.

Impact 4.5-a of the 2003 SEIR provided a qualitative discussion of construction emissions and assumed that due to the project's size and construction phasing, construction emissions would produce a potentially significant regional air quality impact without the application of best management practices (BMPs). At the time of writing the 2003 SEIR, SJVAPCD did not require environmental documents to quantify construction emissions; however, since certification of the 2003 SEIR, SJVAPCD has updated its CEQA guidance to require that construction emissions be quantified and compared to a mass emissions threshold (SJVAPCD 2015a).

The approved Phase 2 Project evaluated in the 2003 SEIR included the construction of approximately 6,700 residences, an employment center, open space, parks, schools, and neighborhood commercial on approximately 3,445 acres of undeveloped/agricultural land.

Construction-related activities associated with the approved Phase 2 Project and the modified Phase 2 Project would result in emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub> from site preparation (e.g., grading and clearing), off-road equipment, material delivery, worker commute exhaust emissions, vehicle travel, and other miscellaneous activities (e.g., building construction, asphalt paving, application of architectural coatings). Fugitive dust emissions would be associated primarily with site preparation and would vary as a function of soil silt content, soil moisture, wind speed, and area of disturbance. Other PM emissions would result from a combination of fuels and from tire and brake wear. Emissions of ozone precursors (i.e., ROG and NO<sub>x</sub>) would be associated primarily with exhaust from construction equipment, haul truck trips, and worker trips. Off-gas emissions of ROG would also be emitted during asphalt paving in the parking lots and the application of architectural coatings on the new buildings. Maximum annual construction emissions for the approved Phase 2 Project are summarized in Table 4.5-4. The table presents maximum annual emissions of ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> for each construction year (i.e., 2021–2040). Refer to Appendix C for a detailed summary of the modeling assumptions, inputs, and outputs.

**Table 4.5-4 Maximum Annual Emissions of Criteria Pollutants and Precursors Associated with Construction of the Approved Phase 2 Project (2021–2040)**

Year	ROG (TPY) <sup>a</sup>	NO <sub>x</sub> (TPY)	CO (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
2021	<1	3.3	2.9	<1	<1	<1
2022	<1	4.4	3.2	<1	22.4	3.3
2023	<1	4.5	3.9	<1	21.6	2.8

Year	ROG (TPY) <sup>a</sup>	NO <sub>x</sub> (TPY)	CO (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
2024	<1	3.1	3.2	<1	21.1	2.4
2025	<1	2.7	3.0	<1	<1	<1
2026	<1	2.7	2.9	<1	<1	<1
2027	<1	2.7	2.9	<1	<1	<1
2028	<1	2.6	2.8	<1	<1	<1
2029	<1	2.6	2.8	<1	<1	<1
2030	<1	2.0	2.7	<1	<1	<1
2031	<1	2.0	2.7	<1	<1	<1
2032	<1	2.0	2.7	<1	<1	<1
2033	<1	2.0	2.7	<1	<1	<1
2034	<1	2.0	2.6	<1	<1	<1
2035	<1	1.9	2.6	<1	<1	<1
2036	<1	1.9	2.6	<1	<1	<1
2037	<1	1.9	2.6	<1	<1	<1
2038	<1	1.5	2.5	<1	<1	<1
2039	4.8	<1	1.9	<1	<1	<1
2040	12.5	<1	<1	<1	<1	<1
SJVAPCD Significance <sup>a</sup>	10	10	10	27	15	27
Exceeds Threshold?	Yes	No	No	No	Yes	No

Notes: TPY = tons per year, ROG = reactive organic gases, NO<sub>x</sub> = oxides of nitrogen, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = respirable particulate matter, PM<sub>2.5</sub> = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District

<sup>a</sup> CalEEMod estimates for construction ROG emissions were adjusted to reflect a more accurate emissions estimate of architectural coatings based on construction phasing.

Source: Modeling conducted by Ascent Environmental in 2020 using CalEEMod v. 2016.3.2

As shown in Table 4.5-4, annual emissions of ROG and PM<sub>10</sub> would exceed SJVAPCD's annual mass emission threshold of significance in 2040 and 2022, 2023, and 2024, respectively.

The proposed Phase 2 modifications would densify the Phase 2 area by including additional multi-family dwellings (condominiums, apartments, etc.) as well as more attached single-family residences similar to units already constructed as part of Phase 1. The modified Phase 2 Project would also create a Town Center and a mixed-use Transit Oriented Development (TOD) area as part of the Employment Center District that would complement the future planned Valley Link transit station. Construction would occur over the course of a 20-year period commencing in 2021 through December 2040.

Maximum annual construction emissions for the modified Phase 2 Project are summarized in Table 4.5-5. The table presents maximum annual emissions of ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> for each construction year (i.e., 2021–2040). Refer to Appendix C for a detailed summary of the modeling assumptions, inputs, and outputs.

**Table 4.5-5 Maximum Annual Emissions of Criteria Pollutants and Precursors Associated with Construction of the Modified Phase 2 Project (2021–2040)**

Year	ROG (TPY) <sup>a</sup>	NO <sub>x</sub> (TPY)	CO (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
2021	<1	3.2	2.2	<1	<1	<1
2022	<1	4.4	3.0	<1	22.4	3.3
2023	<1	4.5	3.9	<1	21.6	2.8

Year	ROG (TPY) <sup>a</sup>	NO <sub>x</sub> (TPY)	CO (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
2024	<1	3.1	3.2	<1	21.1	2.4
2025	<1	2.7	3.0	<1	<1	<1
2026	<1	2.7	2.9	<1	<1	<1
2027	<1	2.7	2.9	<1	<1	<1
2028	<1	2.6	2.8	<1	<1	<1
2029	<1	2.6	2.8	<1	<1	<1
2030	<1	2.0	2.7	<1	<1	<1
2031	<1	2.0	2.7	<1	<1	<1
2032	<1	2.0	2.7	<1	<1	<1
2033	<1	2.0	2.7	<1	<1	<1
2034	<1	2.0	2.6	<1	<1	<1
2035	<1	1.9	2.6	<1	<1	<1
2036	<1	1.9	2.6	<1	<1	<1
2037	<1	1.9	2.6	<1	<1	<1
2038	<1	1.5	2.5	<1	<1	<1
2039	2.5	<1	1.9	<1	<1	<1
2040	6.5	<1	<1	<1	<1	<1
SJVAPCD Significance <sup>a</sup>	10	10	10	27	15	27
Exceeds Threshold?	No	No	No	No	Yes	No

Notes: TPY = tons per year, ROG = reactive organic gases, NO<sub>x</sub> = oxides of nitrogen, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = respirable particulate matter, PM<sub>2.5</sub> = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District

<sup>a</sup> CalEEMod estimates for construction ROG emissions were adjusted to reflect a more accurate emissions estimate of architectural coatings based on construction phasing.

Source: Modeling conducted by Ascent Environmental in 2020 using CalEEMod v. 2016.3.2

As shown in Table 4.5-5, annual emissions of criteria air pollutants would exceed SJVAPCD's annual mass emission threshold of significance in 2022, 2023, and 2024. These years would experience the greatest emissions of PM as grading would occur at this time, which is the construction phase that generates high volumes of fugitive dust emissions. ROG emissions would also be highest in the later years of project construction, though not in exceedance of SJVAPCD's annual threshold of significance, when the CalEEMod computer programs assumes architectural coating will occur. As discussed under the heading, "Analysis Methodology," CEQA thresholds of significance are developed by air districts in consideration of long-term regional air quality planning efforts. According to SJVAPCD guidance, projects that generate construction emissions above these annual thresholds of significance would conflict with an air quality plan. Based on the levels of emissions summarized in Tables 4.5-4 and 4.5-5, this impact would be potentially significant.

However, this analysis reviews the difference between the construction emissions associated with the approved Phase 2 Project and the modified Phase 2 Project. Table 4.5-6 identifies the delta construction emissions. Notably, CalEEMod defaults were used for several components of project construction resulting in similar emissions estimates for several years. As such, construction emissions for the years 2023–2037 are assumed to be identical.

**Table 4.5-6 Annual Emissions Difference of Criteria Pollutants and Precursors Associated with Construction of Modified Phase 2 Project Compared to the Approved Phase 2 Project (2021–2022, 2038–2040)**

Year	ROG (TPY) <sup>a</sup>	NO <sub>x</sub> (TPY)	CO (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
2021	-0.1	-0.07	-0.8	0	-0.2	0
2022	0	0	-0.1	0	0	0
2038	-0.1	0	0	0	0	0
2039	-2.3	0	0	0	0	0
2040	-6.0	0	0	0	0	0

Notes: TPY = tons per year, ROG = reactive organic gases, NO<sub>x</sub> = oxides of nitrogen, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = respirable particulate matter, PM<sub>2.5</sub> = fine particulate matter

<sup>a</sup> It is expected that annual ROG emissions under the approved Phase 2 Project would be greater due to increased paintable surface area associated with less dense development.

Source: Modeling conducted by Ascent Environmental in 2020 using CalEEMod v. 2016.3.2

As shown above, the modified Phase 2 Project would result in fewer emissions of ROG, NO<sub>x</sub>, CO, and PM<sub>10</sub> than the approved Phase 2 Project in 2021–2022. Additionally, the modified Phase 2 Project would result in fewer emissions of ROG from 2038–2040 due to the increased density and the decrease in paintable surface area of the proposed land uses associated with the Phase 2 modifications as compared to the approved Phase 2 Project. Nonetheless, as shown in Table 4.5-5, annual construction emissions under the modified Phase 2 Project would exceed SJVAPCD's annual mass emissions thresholds for PM<sub>10</sub>, similar to the approved Phase 2 Project.

As discussed above under the heading, "Thresholds of Significance," annual mass emissions thresholds should not be used to determine whether a violation of an AAQS would occur, as AAQS are presented as hourly, concentration-based standard. Thus, to determine whether the project would generate substantial construction emissions that could result in a violation of an AAQS, maximum daily emissions for a worst-case construction scenario were modeled.

SJVAPCD has established daily mass emissions screening criteria for criteria air pollutants. These criteria were developed to assess the likelihood that a project would cause or contribute to a violation of the NAAQS or CAAQS under a worst-case daily construction emissions scenario. The modified Phase 2 Project would be constructed over the course of a 20-year period (2021–2040), and the year 2021 was selected to provide a more conservative representation of maximum daily emissions under a worst-case single day construction scenario. Heavy-duty construction equipment would continually become more fuel efficient and produce fewer emissions as regulatory mechanisms unfold over the construction period. As discussed under the heading, "Methodology," the number and type of equipment assumed under this worst-case scenario could occur at any point during the project's 20-year construction period. Due to inherent uncertainty surrounding the timing of when this worst-case single day scenario would occur in the Phase 2 area, modeling was performed for 2021. This estimate should be interpreted independently of the annual emissions estimates summarized in Tables 4.5-4 and 4.5-5, which are representative of total annual emissions rather than a one-day emissions estimate. For instance, Tables 4.5-4 and 4.5-5 indicate that fugitive dust (PM<sub>10</sub>) would be highest in 2022 where the most grading and site preparation would be expected to occur; however, this is a total annual estimate and does not represent a worst-case daily emissions scenario.

The worst-case daily scenario assumed a level of overlapping operation of heavy-duty construction equipment, which was derived from existing construction activity in the Phase 1 area. The assumptions used to generate this worst-case emissions scenario would be the same for both the approved Phase 2 Project and the modified Phase 2 Project. Additionally, in 2003, SJVAPCD did not recommend that daily construction emissions be evaluated in the SEIR. Therefore, the emissions presented below in Table 4.5-7 summarizes the maximum daily emissions under a worst-case construction scenario for 2021 and is representative of the approved Phase 2 Project and modified Phase 2 Project. Refer to Appendix C for a detailed summary of the modeling assumptions, inputs, and outputs.



**Table 4.5-7 Maximum Daily Emissions of Criteria Air Pollutants Under a Worst-Case Scenario (2021)**

Year	ROG (lb/day)	NO <sub>x</sub> (lb/day)	CO (lb/day)	SO <sub>x</sub> (lb/day)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (lb/day)
2021	35	327	240	1	16	13
SJVACPD Screening Criteria	100	100	100	100	100	100
Exceeds Screening Criteria?	No	Yes	Yes	No	No	No

Notes: lb/day = pounds per day, ROG = reactive organic gases, NO<sub>x</sub> = oxides of nitrogen, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = respirable particulate matter, PM<sub>2.5</sub> = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District

Source: Modeling conducted by Ascent Environmental in 2020 using CalEEMod v. 2016.3.2

SJVAPCD recommends that an AAQA be performed for a project if emissions of any criteria air pollutant or ozone precursor exceeds 100 lb/day. As shown in Table 4.5-7, maximum daily emissions of NO<sub>x</sub> and CO would exceed the 100 lb/day screening criteria set forth by SJVAPCD in 2021.

However, an AAQA is more appropriate for assessing single site, discrete project construction emissions. The modified Phase 2 Project, which would be constructed on approximately 3,445 acres over the course of a 20-year construction period. The proposed land uses under the modified Phase 2 Project would be constructed incrementally with inherent uncertainty surrounding the schedule and location of where land uses would be constructed. Based on the modeling, as summarized in Table 4.5-5, the modified Phase 2 Project could generate emissions of NO<sub>x</sub> and CO in exceedance of SJVAPCD's 100 lb/day screening criteria. Given this uncertainty regarding the actual timing, intensity, and location of construction, however, the preparation of an AAQA at the time of this Draft SEIR would not generate a meaningful conclusion. because modeled worst-day emissions would exceed the daily screening levels, project-generated emissions would be considered significant and could contribute to a violation of an AAQS within the SJVAB.

The modified Phase 2 Project would also be subject to SJVAPCD's Rule 9510, "Indirect Source Review," which applies to emissions of new land use development to mitigate emissions of NO<sub>x</sub> and PM<sub>10</sub>. As summarized in Section 4.5.1, "Regulatory Setting," Rule 9510 requires the on-site construction emissions of NO<sub>x</sub> and PM<sub>10</sub> exhaust be reduced by 20 and 45 percent, respectively. Compliance with Rule 9510 is a regulatory requirement for projects constructed under the purview of SJVACPD. Future land uses constructed under the modified Phase 2 Project would be required to demonstrate compliance with Rule 9510 as a condition of project approval. While compliance with Rule 9510 would reduce total NO<sub>x</sub> and PM<sub>10</sub> exhaust emissions by the 20 and 45 percent requirement, it is possible that during a day with exceptionally high construction activity this reduction would not be sufficient to reduce construction emissions to a less-than-significant level (i.e., below 100 lb/day for criteria air pollutants and ozone precursors).

The 2003 SEIR determined that construction-generated emissions of criteria air pollutants would be significant (Impact 4.5-a), and mitigation was adopted. With the application of Mitigation Measure 4.5-a, this impact was concluded to be less than significant. As shown above in Table 4.5-6, construction emissions associated with the modified Phase 2 Project would be less than the approved Phase 2 Project and no new significant impact or substantially more severe impact would occur. Nevertheless, as summarized in Table 4.5-5, construction emissions under the modified Phase 2 Project would exceed SJVAPCD's annual mass emissions threshold for PM<sub>10</sub> in 2022, 2023, and 2024. Additionally, daily construction emissions would exceed SJVAPCD's mass emissions screening criteria for NO<sub>x</sub> and CO. Adopted Mitigation Measure 4.5-a would continue to apply to the modified Phase 2 Project.

Adopted Mitigation Measure 4.5-a requires implementation of feasible control measures that would reduce construction emissions. While this measure includes actions that may continue to be implemented to reduce construction emissions, new protocols have been developed since the certification of the 2003 SEIR. Modified Mitigation Measure 4.5-a shown below includes the original language from the measure as it was adopted, with revisions to reflect new control measures.

Both the 2003 SEIR and this analysis identify a significant impact related to construction emissions using the standards and analysis procedures in effect at the time of analysis. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.5-a: Increases in Regional Criteria Pollutants during Construction

Mitigation Measure 4.5-a shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.

~~The~~ SJVAPCD emphasizes implementation of effective and comprehensive control measures rather than requiring a detailed quantification of construction emissions. ~~The~~ 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 (~~SJVAPCD 1998~~), the following mitigation, which includes SJVAPCD Basic, Enhanced, and Additional Control Measures, shall be incorporated and implemented (SJVAPCD 2015a). Fugitive dust emissions shall be reduced through application of 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, including the requirement 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.
- ▶ 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.
- ▶ 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 and~~ 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**

SJVAPCD recommends that construction and operational emissions that exceed 100 lb/day prepare 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. If, following the preparation of an AAQA, emissions are found to contribute to an exceedance of an AAQS, 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 100 lb/day 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 100 lb/day through a process that funds and 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.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.5-a and New Mitigation Measure 4.5-a(2) would reduce emissions of criteria air pollutants through the application of recognized construction emission control measures and certification of an AAQA, and potentially a VERA (if necessary). Emissions would be mitigated to below applicable SJVAPCD thresholds. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact to air quality from construction activities, thus avoiding the potential for individuals to be exposed to unhealthy concentrations of criteria air pollutants that could result in adverse health outcomes.

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## Impact 4.5-b: Increases in Odorous Emission

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The 2003 SEIR evaluated the potential for adverse increases in odorous emissions due to the project site's proximity to nearby existing agricultural uses. The City's Right-to-Farm Ordinance, which requires buffers between agriculture and development, protects agricultural landowners from nuisance complaints related to normal agricultural operations. The 2003 SEIR also noted that the City's industrial and wastewater facilities had not received odor complaints from nearby residents, and thus would not adversely affect the River Islands Project residents. The modified Phase 2 Project would not introduce any new sources of odor compared to what was evaluated in the 2003 SEIR and would be sited in the same location. Therefore, there is no change in odor impact conditions. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.5-b on the 2003 SEIR evaluated whether the residents of Phase 2 would be exposed to adverse odors due to the project site's vicinity to nearby existing agricultural uses. The 2003 SEIR concludes that the City's Right-to-Farm Ordinances protects agricultural landowners from nuisance complaints related to cultivation, irrigations, spraying, fertilizing, and other activities related to normal agricultural operations. Impact 4.5-b also indicated that SJVAPCD recommends that sensitive land uses be sited with sufficient distance between an odor source. The Phase 2 Project would be separated from offsite agricultural uses by natural buffers such as Old River, the San Joaquin River, and Paradise Cut, as well as levees surrounding the Phase 2 area.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The modified Phase 2 Project would not introduce any new sources of odor than what were identified in the 2003 SEIR. In addition, since certification of the 2003 SEIR, there has not been any changes in surrounding development, nor changes in planned development, that would place a new source of odorous emissions in the vicinity of the River Islands project site. With no change in conditions regarding odorous emissions on or off the project site, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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## Impact 4.5-c: Increases in Stationary Source Toxic Air Contaminants

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The 2003 SEIR evaluated the potential for sensitive receptors (e.g., residences, schools) to be exposed to TAC emissions from stationary sources, primarily from manufacturing activity in the Employment Center land use. The 2003 SEIR concluded that onsite and offsite facilities that may emit TACs would be required to comply with established emission standards through the SJVAPCD permitting process. The modified Phase 2 Project would include the construction and operation of the Employment Center; however, the size of the Employment Center would be approximately 60 acres less than what was evaluated in the 2003 SEIR. SJVAPCD permitting processes would continue to be applied to potential stationary sources of TACs, resulting in similar restrictions and controls on TAC emissions. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.5-c of the 2003 SEIR evaluated the potential for sensitive receptors to be exposed to onsite and offsite concentrations of TACs emanating from stationary sources. The analysis indicated that the Employment Center would permit the operations of research/development and manufacturing facilities, which could potentially generate TACs as part of facility operations. This impact was concluded to be less than significant because both onsite and offsite facilities that may emit TACs would be required to comply with established emission standards through the SJVAPCD permitting process.

The Employment Center proposed under the modified Phase 2 Project is located in the southeastern portion of the project site and would share boundaries with the proposed TOD, which was previously not included in the 2003 SEIR.

The modified Phase 2 Project converts approximately 60 acres of land proposed as Employment Center under the Approved Project to TOD and Regional Commercial.

The modified Phase 2 Project, and the TAC-generating stationary sources in the Employment Center, would continue to comply with SJVAPCD Rule 2010, which regulates sources with the potential to emit TACs through a permitting process. Permits may only be granted to these operations provided that they are constructed and operated in accordance with applicable regulations, and they include best available control technology, if applicable, including Rule 2201 (New and Modified Stationary Source Review Rule), Rule 4001 (New Source Performance Standards), and Rule 4002 (National Emissions Standards for Hazardous Air Pollutants). Compliance with these rules would ensure that these stationary sources would meet established health standards for TACs. Given that compliance with applicable standards are required for the construction and operation of facilities that may emit TACs, the TAC emissions from the routine use of TACs in manufacturing processes, both on and off the project site, are expected to be within established standards.

Notably, the modified Phase 2 Project proposes an Employment Center approximately 60 acres smaller than the site evaluated in the 2003 EIR. As such, potential TAC emissions would be reasonably less due to a decrease in potential TAC-generating activity. Thus, because the modified Phase 2 Project would introduce a smaller potential for TAC-generating land uses, and the stationary sources of TACs associated with these land uses would comply with the SJVAPCD permitting process (which reduces the potential for sensitive receptors to be exposed to substantial pollutant concentration), there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.5-d: Increases in Mobile Source Toxic Air Contaminants

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The 2003 SEIR evaluated the potential for sensitive receptors to be exposed to substantial diesel PM emissions from diesel-fueled delivery trucks associated with development of commercial- and industrial-related land uses. The 2003 SEIR concluded that movement of diesel-fueled delivery trucks could expose sensitive receptors to substantial pollutant concentrations. The modified Phase 2 Project proposes a new Town Center and an Employment Center that would be serviced by diesel-fueled delivery trucks that could expose sensitive receptors to harmful concentrations of diesel PM. At the time of writing this SEIR, the level of diesel PM emissions associated with these land uses is unknown; however, it would be expected that diesel PM emissions would be comparable to what was evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.5-d of the 2003 SEIR evaluated the potential for sensitive receptors to be exposed to diesel PM emissions (a TAC) from diesel-fueled vehicles and engines from the operation of the proposed retail commercial and industrial land uses. These land uses would be frequented by diesel-fueled trucks for deliveries and shipping activities. Impact 4.5-d noted that passenger vehicles and watercrafts would also be a source of diesel PM to the project site and its surroundings; however, these emissions would be minor and dispersed over a large area and were not identified as causing a potential health hazard. Due to the uncertainty surrounding the types of retail and occupants of the Employment Center, the 2003 SEIR concluded that the potential existed for commercial and manufacturing facilities to general mobile-source emissions of diesel PM which could expose sensitive receptors to substantial pollutant concentrations, resulting in a potentially significant impact. In 2003, mobile source TACs were a relatively new concern for CARB and no feasible mitigation was available at the time to reduce the impact to a less-than-significant level; thus, this impact was concluded to be significant and unavoidable.

The modified Phase 2 Project proposes a new Town Center and a smaller Employment Center than what was evaluated in the 2003 SEIR. Nonetheless, the Employment Center, as well as the Town Center portion of the modified Phase 2 Project would support activities that would generate diesel-fueled vehicles trips to support deliveries and shipping activities. These truck trips would generate diesel PM emissions that could expose sensitive receptors to

harmful concentrations of diesel PM. At the time of writing this SEIR, the level of diesel PM emissions associated with these land uses is unknown; however, it would be expected that diesel PM emissions would be comparable to what was evaluated in the 2003 SEIR. There is no new significant impact and the impact is not substantially more severe than identified in the 2003 SEIR. This would remain a **potentially significant** impact as identified in the 2003 SEIR.

As noted above, the 2003 SEIR determined that mobile-source emissions of diesel PM (Impact 4.5-d) would be significant; however, mitigation was not developed to reduce this impact because, in 2003, mobile source TACs were a relatively new concern for CARB and no feasible mitigation was available at the time to reduce the impact to a less-than-significant level. Knowledge and policies regarding diesel PM have advanced substantially since 2003 and information on the effects various mitigation options are now available. Therefore, to address this potentially significant impact, New Mitigation Measure 4.5-d is included below.

## Mitigation Measures

### 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 SJVACPD and shall be approved by the city. 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 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.

### Significance after Mitigation

Implementation of New Mitigation Measure 4.5-d would ensure that a sensitive receptor (e.g., residence, school, daycare facility) and a truck loading/unloading facility would not be located with 1,000 feet of each other. The 1,000-foot setback is the CARB-recommended setback distance and would be sufficient to reduce the associated level of cancer risk at the locations of sensitive receptors to less than 20 in 1 million, unless a future site-specific, city-approved HRA indicates that locating a truck loading/unloading facility within this setback distance would generate cancer risk in exceedance of 20 in 1 million (CARB 2005). With implementation of this mitigation measure, this impact would be **less than significant**.

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### Impact 4.5-e: Increases in Local Mobile Source CO Concentrations

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The 2003 SEIR evaluated the generation of CO from project-generated vehicle trips. The 2003 SEIR concluded that the River Islands Project would not contribute to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour. The proposed land uses under the modified Phase 2 Project would result in the redistribution of trips as compared to what was evaluated in the 2003 SEIR. However, this redistribution would not result in a new impact. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.5-e of the 2003 SEIR evaluated the River Islands Project's contribution to the deterioration of intersections to levels of service E or F as a measure of potentially significant CO concentrations. Modeling performed for the 2003 SEIR evaluated CO concentrations for anticipated traffic conditions in 2025 with and without the River Islands Project (2025 base case and 2025 base case+ project conditions) using worst-case meteorological conditions. Results indicated that the estimated 1-hour and 8-hour CO concentrations did not exceed the recommended significance thresholds of 20 ppm and 9 ppm. Therefore, this impact was determined to be less than significant.

As discussed in Section 4.4, "Traffic and Transportation," the proposed Phase 2 modifications would result in a redistribution and reduction in of vehicle miles traveled (VMT) per household, per capita, and per employee compared to the approved project. Also, the proposed Phase 2 modifications would not introduce substantially more average daily vehicle trips to the Phase 2 area compared to what was evaluated in the 2003 SEIR. As discussed in Section 4.6, "Noise and Vibration," average daily trips on the roadway segments within the vicinity of the Louise Avenue/1-5 northbound and southbound ramp intersections (one of the intersections modelled for CO emissions in 2003) would decrease with proposed Phase 2 land use modifications (see Appendix D). Additionally, mobile-source CO emissions have historically decreased since the advent of catalytic converters, which decrease mobile-source exhaust emissions, and there have been improvements in fuel economy since 2003 through regulatory compliance implemented by EPA and CARB (e.g., the CAFE standards and Advanced Clean Cars program). As such, CO emissions from the modified Phase 2 Project would not introduce a substantially new or more severe impact as compared to what was evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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### Impact 4.5-f: Increases in Long-Term Regional Emissions

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The 2003 SEIR evaluated the generation of long-term regional emissions of criteria air pollutants and ozone precursors and determined that emissions of ROG and NO<sub>x</sub> would exceed SJVACPD's thresholds of significance that were in effect in 2003. Since certification of the 2003 SEIR, SJVACPD has issued new guidance and thresholds of significance for determining long-term operational emissions of criteria air pollutants and ozone precursors. The approved Phase 2 Project and modified Phase 2 Project would generate emissions of ROG, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> in exceedance of SJVAPCD's operational thresholds of significance, consistent with the findings of the 2003 SEIR. However, the modified Phase 2 Project would result in greater total emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> as compared to the approved project. Therefore, this impact would be more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.5-f of the 2003 SEIR estimated operational emissions of ROG, NO<sub>x</sub>, and PM<sub>10</sub> and evaluated these levels of emissions against the SJVAPCD thresholds of significance that were in effect in 2003. Vehicles accessing the project site would generate operational emissions of criteria air pollutants., The combustion of natural gas, electricity demand, use of landscaping equipment and consumer products, and periodic application of architectural coatings would also contribute to operational emissions. Based on the modeling conducted, the 2003 SEIR estimated that the entire River Islands Project would generate approximately 784 TPY of ROG, 433 TPY of NO<sub>x</sub>, and 94 TPY of PM<sub>10</sub>.

Different phases of the project were not modelled separately. At the time of the 2003 SEIR, SJVAPCD only recommended that ROG and NO<sub>x</sub> be evaluated against a 10 TPY threshold of significance. Thus, the 2003 SEIR determined that emissions of ROG and NO<sub>x</sub> would exceed SJVAPCD's thresholds of significance, resulting in a potentially significant impact. Mitigation Measure 4.5-f was adopted; however, it was not sufficient to minimize this impact to a less-than-significant level, and this impact was therefore concluded to be significant and unavoidable.

Table 4.5-8 summarizes the modeled operational emissions associated with the approved Phase 2 Project and the proposed Phase 2 modifications for the assumed first full year of operation (i.e., 2040). As discussed under the heading, "Analysis Methodology," the CalEEMod computer program does not provide yearly estimates for the years between 2040 and 2045; therefore, 2040 was assumed to be the first full year of operation to provide a most conservative estimate of emissions. See Appendix C for detailed modeling assumptions.

**Table 4.5-8 Maximum Daily and Annual Emissions of Criteria Pollutants and Precursors Associated with Operation of the Approved Phase 2 Project and the Modified Phase 2 Project (2040)**

Year	ROG (TPY)	ROG (lb/day)	NO <sub>x</sub> (TPY)	NO <sub>x</sub> (lb/day)	CO (TPY)	CO (lb/day)	SO <sub>x</sub> (TPY)	SO <sub>x</sub> (lb/day)	PM <sub>10</sub> (TPY)	PM <sub>10</sub> (lb/day)	PM <sub>2.5</sub> (TPY)	PM <sub>2.5</sub> (lb/day)
Approved Phase 2 Emissions Total	521	3,431	485	3,375	776	9,448	4	41	367	3,161	125	1,469
Modified Phase 2 Emissions Total	188	1,745	541	3,835	921	11,485	5	48	415	3,653	145	1,774
SJVAPCD Significance/ Screening Criteria <sup>a</sup>	10	100	10	100	10	100	27	100	15	100	27	100
Exceeds Threshold/ Screening Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
<b>Net Difference<sup>1</sup></b>	<b>(333)</b>	<b>(1,686)</b>	<b>56</b>	<b>360</b>	<b>145</b>	<b>2,037</b>	<b>1</b>	<b>7</b>	<b>48</b>	<b>492</b>	<b>20</b>	<b>305</b>

Notes: TPY = tons per year, lb/day = pounds per day, ROG = reactive organic gases, NO<sub>x</sub> = oxides of nitrogen, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = respirable particulate matter, PM<sub>2.5</sub> = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District

<sup>a</sup> This line represents the difference between the modified Phase 2 Project and the approved Phase 2 Project's emissions of criteria air pollutants and ozone precursors. Numbers presented in parenthesis indicate a decrease. For example, the modified Phase 2 Project would result in fewer emissions of ROG, shown in parenthesis.

Source: Modeling conducted by Ascent Environmental in 2020 using CalEEMod v. 2016.3.2

As shown in Table 4.5-8, operational emissions associated with the approved Phase 2 Project and modified Phase 2 Project of ROG, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> would exceed SJVAPCD's CEQA annual mass emissions thresholds of significance and SJVAPCD's 100 lb/day screening criteria. Table 4.5-9 summarizes the difference in emissions between the modified Phase 2 Project and approved Phase 2 Project.

As noted above, the 2003 SEIR determined that operational emissions of criteria air pollutants would be significant (Impact 4.5-a), and mitigation was adopted. With the application of Mitigation Measure 4.5-f, operational emissions under this impact were reduced, but not to a less-than-significant level.

As shown above in Table 4.5-8, operational emissions generated by both the approved Phase 2 Project and the modified Phase 2 Project would exceed SJVAPCD's annual mass emissions threshold and SJVAPCD's daily mass—as emissions screening criteria. However, as shown in Table 4.5-8, operational emissions under the modified Phase 2 Project would generate greater operational emissions of NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> than the approved Phase 2 Project. This is attributable to the higher total VMT associated with the modified Phase 2 Project resulting from a higher total project population; although per capita and per employee VMT is less (see Section. Emissions of ROG would be less under the modified Phase 2 Project as the denser land uses included in the modified Phase 2 Project would introduce less paintable surface area requiring fewer future applications of architectural coatings. Additionally, under the approved Phase 2 Project, more single-family housing units would be constructed, likely with lawns and/or outdoor areas that would be treated with synthetic fertilizers, another source of ROG.



Notably, while SJVAPCD's thresholds of significance are not presented in consideration of per capita emissions—rather, they are presented in mass emissions tied to long-term air quality planning in the SJVAB and potential exceedances of an AAQS—VMT would be less per capita under the modified Phase 2 Project as compared to the approved Phase 2 Project. As discussed in Chapter 4.19, "Greenhouse Gas Emissions and Climate Change," this improved per capita VMT would occur from improved densification of the land uses under the modified Phase 2 Project. VMT is a metric associated with number of vehicle trips and trip length; therefore, it is understandable that VMT as a whole would be greater under the modified Phase 2 Project because it would introduce an additional 4,010 dwelling units and 12,910 residents beyond what was included in the currently approved Phase 2 Project.

This increased population would generate more trips and therefore greater mobile-source emissions as compared to the approved Phase 2 Project; however, emissions under both scenarios would exceed SJVAPCD's annual and daily mass emissions. Therefore, operational emissions would warrant the preparation of an AAQA. However, as discussed under Impact 4.5-a, given the uncertainty and programmatic level of analysis, the preparation of an AAQA at the time of this Draft SEIR would not generate a meaningful conclusion. Therefore, operational emissions of the modified Phase 2 Project are assumed to conflict with long-term regional air quality planning and could result in a violation of an AAQS within the SJVAB, which would also occur from operation of the approved Phase 2 Project. Therefore, like the 2003 SEIR, there is a significant impact related to long-term regional emissions. As described below, Mitigation Measure 4.5-b from the 2003 SEIR has been modified to further reduce emissions beyond what was anticipated in the 2003 SEIR in consideration of greater mobile-source emissions under the modified Phase 2 Project from higher VMT associated with a larger population.

As identified in Section 4.4, "Traffic and Transportation," the VMT analysis provided in that section analyzes a modified Phase 2 Project Without Valley Link scenario as the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. As shown in Tables 4.4-7 through 4.4-10, if the Valley Link Station is not constructed, the modified Phase 2 Project will generate more total VMT and higher VMT per household, per capita, and per employee. This increased VMT would translate into greater emissions of mobile-source criteria air pollutants and ozone precursors. Although the scenario with No Valley Link Station has higher VMT per capita and per employee than the modified Phase 2 Project, as also shown in Section 4.4, "Traffic and Transportation," it has lower VMT per capita and per employee than the current approved Phase 2 Project. The decrease in VMT under the modified Phase 2 Project with the Valley Link Station compared to the Scenario with No Valley Link Station occurs because single-occupancy vehicle trips would be diverted to the Valley Link Station, whereas, under the Scenario with No Valley Link Station, occupants of the Phase 2 area would not have this transit option. Nonetheless, total VMT would be higher under the modified Phase 2 Project with or without the Valley Link Station as compared to the approved Phase 2 Project because of the greater density of overall development.

Table 4.5-9 summarizes the total mobile source emissions of ROG, NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> for both the modified Phase 2 Project with the Valley Link Station and No Valley Link Station. See Appendix C for detailed modeling.

**Table 4.5-9 Maximum Annual Emissions of Criteria Air Pollutants by the No Valley Link Scenario at Full Build Out (2040)**

Scenario	ROG (TPY)	NO <sub>x</sub> (TPY)	CO (TPY)	SO <sub>x</sub> (TPY)	PM <sub>10</sub> (TPY)	PM <sub>2.5</sub> (TPY)
With Valley Link Station	52	523	567	4	370	100
Without Valley Link Station	53	524	579	5	379	102
SJVAPCD Significance	10	10	10	27	15	27
Exceeds Threshold?	Yes	Yes	Yes	No	Yes	Yes

Notes: TPY = tons per year, ROG = reactive organic gases, NO<sub>x</sub> = oxides of nitrogen, CO = carbon monoxide, SO<sub>x</sub> = sulfur oxides, PM<sub>10</sub> = respirable particulate matter, PM<sub>2.5</sub> = fine particulate matter, SJVAPCD = San Joaquin Valley Air Pollution Control District

Source: Modeling conducted by Ascent Environmental in 2020 using CalEEMod v. 2016.3.2

As shown in Table 4.5-9, overall project emissions of criteria pollutants and ozone precursors would be slightly greater under the Scenario with No Valley Link Station. Thus, the air quality impact described above for the modified Phase 2 Project would be slightly greater if the Valley Link Station were not constructed.

The modified Phase 2 Project (with or without the Valley Link Station) would also be subject to SJVAPCD's Rule 9510, "Indirect Source Review," which applies to emissions of new land use development to mitigate emissions of NO<sub>x</sub> and PM<sub>10</sub>. Rule 9510 was not in place when the 2003 SEIR was prepared. As summarized in Section 4.5.1, "Regulatory Setting," Rule 9510 requires that operational emissions of NO<sub>x</sub> and PM<sub>10</sub> be reduced by 33.3 and 50 percent, respectively. Compliance with Rule 9510 is a regulatory requirement for projects constructed within the purview of SJVAPCD. Future land uses constructed under the modified Phase 2 Project would be required to demonstrate compliance with Rule 9510 as a condition of project approval. While compliance with Rule 9510 would reduce NO<sub>x</sub> and PM<sub>10</sub> emissions by the 33.3 and 50 percent requirement, it is possible that this reduction would not be sufficient to reduce operational emissions to a less-than-significant level in terms of a CEQA significant determination when compared to annual mass emissions thresholds and daily mass emissions screening criteria.

Mitigation Measure 4.5-f as included in the 2003 SEIR requires implementation of on-site project design features that would reduce operation emissions of criteria air pollutants and ozone precursors. While this measure includes actions that may continue to be implemented to reduce construction emissions, new design features have been developed since certification of the 2003 SEIR. Modified Mitigation Measure 4.5-f shown below includes the original language from the measure as it was adopted, with revisions to reflect new control measures.

In summary, the modified Phase 2 Project (with or without the Valley Link Station) would generate operational emissions in exceedance of applicable thresholds consistent with the findings of the 2003 SEIR; however, these operational emissions of NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> would be greater under the modified Phase 2 Project as compared to the approved Phase 2 Project. Therefore, the impact is more severe than the impact identified in the 2003 SEIR. Nevertheless, given that operational emissions under both the modified Phase 2 Project (with or without the Valley Link Station) and approved Phase 2 Project would be in exceedance of SJVAPCD's annual and daily mass emissions thresholds, operational impacts would remain **potentially significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.5-f: Increases in Long-Term Regional Emissions

*Mitigation Measure 4.5-f shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

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 ~~1998~~ 2015). ~~It should be noted that m~~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.

- ▶ 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.
- ▶ 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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.5-f would reduce emissions of criteria air pollutants through incorporation of project design features that would reduce on-site and off-site emissions of criteria air pollutants. However, like the 2003 SEIR, implementation of Adopted Mitigation Measure 4.5-f would reduce operational emissions, but not necessarily to a less-than-significant level. Because reducing operational emissions below applicable thresholds cannot be assured, this impact remains **significant and unavoidable** consistent with the conclusion in the 2003 SEIR.

#### **Impact 4.5-g: Consistency with Air Quality Plans**

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The 2003 SEIR evaluated the River Islands Project's consistency with applicable air quality plans and concluded that it would be consistent with the emissions inventories used for air quality planning purposes. The 2003 SEIR reviewed population growth associated with the River Islands Project against the growth assumed by the San Joaquin Council of Governments (SJCOG), which were an input into criteria pollutant emissions inventories. The River Islands growth was found to be consistent with SJCOG countywide growth projections and, therefore, the growth would also be consistent with applicable criteria pollutant emissions inventories based on projected County growth and demonstrates consistency with the region's pollution budget. Since certification of the 2003 SEIR, SJCOG has produced and adopted more recent population growth estimates and regional transportation plans/sustainable communities strategies (RTP/SCSs). The most recent RTP/SCS prepared by SJCOG was adopted in 2018. The modified Phase 2 Project would support a population of greater size than what was evaluated in the 2003 SEIR. However, this level of growth would not be inconsistent with the growth projections or VMT reductions of SJCOG's most recent population forecasts, consistent with the findings of the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.5-g of the 2003 SEIR evaluated the River Islands Project's consistency with applicable air quality plans. The emissions inventories developed by SJVACPD and contained in these plans are based on projected population growth and VMT for the region based, in part, on the predicted growth identified by local and regional planning agencies and reflected in regional and community plans. The 2003 SEIR states, "If growth in population is greater than assumed in the emissions inventories, then population-based emissions are also likely to increase in excess of the projections contained in the regional air quality plans. Accordingly, the consistency of the proposed project with the regional attainment plans would be assessed by comparing the projected population growth associated with the project to population forecasts adopted by the [SJCOG]." The River Islands growth was found to be consistent with SJCOG countywide growth projections and, therefore, the growth would also be consistent with applicable criteria pollutant emissions inventories based on projected County growth and demonstrates consistency with the region's pollution budget. This impact was concluded to be less than significant.

Since certification of the 2003 SEIR, SJCOG has produced and adopted more recent population growth estimates and RTP/SCSs). The most recent RTP/SCS prepared by SJCOG was adopted in 2018 (see Section 4.4, "Traffic and Transportation" for more information on the RTP/SCS). Although the modified Phase 2 Project would support a

population of greater size than what was evaluated in the 2003 SEIR, this level of growth would not be inconsistent with the County wise growth projections or VMT reductions included in SJCOG's most recent population forecasts. As a result, predicted increases in regional emissions would continue to be consistent with the emissions inventories used for air quality planning purposes. Therefore, there is no new significant effect and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The widening and improvement of Paradise Road would result in the construction and operation of a roadway similar to many of the roadways on the modified Phase 2 Project site. Like the modified Phase 2 Project, widening of Paradise Road would not add any new sources of odors or new odor receptors that would result in members of the public being frequently exposed to objectionable odors (Impact 4.4-b). A roadway, as proposed, is not a land use that generates stationary or mobile source TACs at concentrations that would cause acute or chronic health hazards. Therefore, the expansion of Paradise Road to four lanes would not result in a significant impact related to TACs (Impacts 4.4-c and 4.4-d).

As identified above in the discussion of Impact 4.4-e, analysis of average daily trips and trip distribution under the modified Phase 2 Project shows that the less than significant impact conclusion for CO identified in the 2003 SEIR would continue to apply to the modified Phase 2 Project. The continued less than significant conclusion for CO is also supported by the fact that mobile-source CO emissions have historically decreased since the advent of catalytic converters, which decrease mobile-source exhaust emissions. There have also been improvements in fuel economy since 2003 through regulatory compliance implemented by EPA and CARB (e.g., the CAFE standards and Advanced Clean Cars program) that also result in reduced vehicular CO emissions. Furthermore, the widened Paradise Road would function as a four-lane arterial with few intersections limiting the potential for CO-hotspot generating congestion would occur. Therefore, the CO concentrations along a widened Paradise Road would also remain less than significant.

The expansion of Paradise Road does not alter proposed land uses on the modified Phase 2 project site or elsewhere. Therefore, development and growth that would occur under the No Valley Link Scenario would be the same as what was evaluated under Impact 4.4-g and would continue to be captured under the SJCOG 2018 RTP/SCS and would be consistent with long-term regional planning.

Construction of a Paradise Road expansion would require the use of heavy construction equipment similar to the modified Phase 2 Project (Impact 4.5-a). Although the exact type and number of equipment may differ between the two activities, considering maximum annual or daily construction emissions, expansion of Paradise Road would have

a similar potential as the modified Phase 2 Project to exceed SJVAPCD mass emission thresholds (Impact 4.4-a) and therefore, would require emission reduction measures.

With the Paradise Road expansion consisting solely of a roadway, operational emissions of criteria air pollutants and ozone precursors attributable to buildings and related facilities and activities would not occur (Impact 4.4-f). With respect to mobile source operational emissions, the traffic model used to generate VMT values incorporates roadway network conditions under cumulative scenarios that include the widening and improvement of Paradise Road. Therefore, VMT generation includes the effects of a widened and improved Paradise Road being in place. Consequently, the widening and improvement of Paradise Road does not alter the mobile source criteria pollutant emissions identified in Impact 4.4-f. The widening and improvement of Paradise Road also does not change the conclusion that criteria pollutant emissions from the modified Phase 2 Project are less than for the approved Phase 2 Project.

Any future CEQA lead agency that uses this programmatic analysis of the Paradise Road widening to support implementation of the road widening would be required to implement all applicable mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Modified Mitigation Measure 4.5-a, Increases in Regional Criteria Pollutants During Construction; New Mitigation Measure 4.5-a(2), Preparation of an Ambient Air Quality Analysis; and Modified Mitigation Measure 4.5-f, Increases in Long-Term Regional Emissions. However, only the portions of Modified Mitigation Measure 4.5-f applicable to a roadway project, such as providing transit enhancing infrastructure, would need to be applied to the Paradise Road expansion. In addition, the entirety of New Mitigation Measure 4.5-d, Incorporation of Design Features at Truck Loading Area to Reduce Health-Risk Exposure at Sensitive Receptors, would not be applicable as the widening of Paradise Road does not include the construction and operation of truck loading areas.

These mitigation measures would be equally effective at reducing significant air quality impacts related to construction emissions (Impacts 4.19-a) to a less-than-significant level for both the Paradise Road widening and the modified Phase 2 Project. Modified Mitigation Measure 4.16-f would be equally effective at reducing significant air quality impacts related to the contribution of operational emissions to increases in long-term regional emissions; however, the impact would remain significant and unavoidable as identified for the modified Phase 2 Project.

## 4.6 NOISE AND VIBRATION

This section describes the potential impacts of the modified Phase 2 Project related to noise and vibration. Detailed noise measurement data prepared by Illingworth & Rodkin is included as Appendix D.

The 2003 SEIR included Section 4.6, "Noise," which evaluated the potential effects of the River Islands project related to noise, addressing both how the existing noise environment might affect the project, and how noise generated by the project might affect sensitive receptors both inside and outside the project boundary. The 2003 SEIR conducted a project-level analysis of both Phase 1 and Phase 2 of the project as sufficient information was available regarding noise sources, level of noise generation, and locations of sensitive receptors for both phases. The 2003 SEIR concluded that there would be a significant impact related to compatibility of the proposed land uses with projected onsite noise levels (Impact 4.6-d). Mitigation Measure 4.6-d would reduce this impact to a less-than-significant level for interior noise levels; however, it could not be assured that exterior noise levels would remain below City standards; therefore, this impact was identified as significant and unavoidable. The 2003 SEIR concluded that there would be a less-than-significant impact related to increases in existing traffic noise levels, and that impacts related to stationary source noise generated by onsite land use (Impact 4.6-b) and short-term construction-generated noise (Impact 4.6-a) would be reduced to a less-than-significant level with the implementation of Mitigation Measures 4.6-a and 4.6-b.

### 4.6.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

##### U.S. Environmental Protection Agency Office of Noise Abatement and Control

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate Federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

##### Federal Transit Administration

To address the human response to ground vibration, the Federal Transit Administration (FTA) has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in Table 4.6-1.

**Table 4.6-1 Ground-Borne Vibration (GBV) Impact Criteria for General Assessment**

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/second)		
	Frequent Events <sup>a</sup>	Occasional Events <sup>b</sup>	Infrequent Events <sup>c</sup>
<i>Category 1:</i> Buildings where vibration would interfere with interior operations.	65 <sup>d</sup>	65 <sup>d</sup>	65 <sup>d</sup>
<i>Category 2:</i> Residences and buildings where people normally sleep.	72	75	80
<i>Category 3:</i> Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB = vibration decibels referenced to 1  $\mu$  inch/second and based on the root mean square (RMS) velocity amplitude.

<sup>a</sup> "Frequent Events" is defined as more than 70 vibration events of the same source per day.

<sup>b</sup> "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

<sup>c</sup> "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

<sup>d</sup> This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018

## STATE

### California General Plan Guidelines

The State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (2017), provides guidance for the compatibility of projects within areas of specific noise exposure. Acceptable and unacceptable community noise exposure limits for various land use categories have been determined to help guide new land use decisions in California communities. In many local jurisdictions, these guidelines are used to derive local noise standards and guidance. Citing EPA materials and the State Sound Transmissions Control Standards, the State's general plan guidelines recommend interior and exterior noise levels of 45 and 60 decibels (dB) Community Noise Equivalent Level (CNEL, defined below in the discussion of Acoustic Fundamentals) for residential units, respectively (OPR 2017:378).

### 2019 California Building Code, Title 24, Part 2

The current California Building Code (CBC) requires interior noise levels in residential units attributable to exterior environmental noise sources to be limited to a level not exceeding 45 dBA Day-Night Level ( $L_{dn}$ , defined below in the discussion of Acoustic Fundamentals)/CNEL in any habitable room.

### California Green Building Standards Code (Cal Green Code)

The State of California established exterior sound transmission control standards for new non-residential buildings as set forth in the 2019 California Green Building Standards Code (Section 5.507.4.1 and 5.507.4.2). Section 5.507 states that either the prescriptive (Section 5.507.4.1) or the performance method (Section 5.507.4.2) shall be used to determine environmental control at indoor areas. The prescriptive method is very conservative and not practical in most cases; however, the performance method can be quantitatively verified using exterior-to-interior calculations. For the purposes of this SEIR analysis, the performance method is utilized to determine consistency with the Cal Green Code. The sections that pertain to this project are as follows:

**5.507.4.1 Exterior noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall meet a composite Sound Transmission Class (STC, defined below) rating of at least 50 or a composite Outdoor-Indoor Transmission Class (OITC, defined below) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the building falls within the 65 dBA  $L_{dn}$  noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source, as determined by the local general plan noise element.

**5.507.4.2 Performance method.** For buildings located, as defined by Section 5.507.4.1, wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ( $L_{eq(1-hr)}$ ) of 50 dBA in occupied areas during any hour of operation.

Sound Transmission Class (STC) and Outdoor-Indoor Transmission Class (OITC) are single-figure ratings designed to give an estimate of the sound insulation properties of a partition. Numerically, these figures represent the number of decibels of noise reduction from one partition to the other. The STC is intended for use when speech and office noise constitute the principal noise problem and is the more commonly used rating metric, whereas OITC ratings place an emphasis on a partition's ability to reduce transmission of low frequency sounds.

### California Department of Transportation

In 2013, Caltrans published the Transportation and Construction Vibration Manual (Caltrans 2013a). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 4.6-2 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

**Table 4.6-2 Caltrans Recommendations Regarding Levels of Vibration Exposure**

PPV (in/sec)	Effect on Buildings
0.5	Risk of damage to new residential and modern commercial/industrial structures
0.3	Risk of damage to older residential structures
0.25	Risk of damage to historic and some old buildings
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.04	Vibration unlikely to cause damage of any type
0.01	No effect

Notes: PPV= Peak Particle Velocity; in/sec = inches per second

Source: Caltrans 2013a, Table 19

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Noise section of the *City of Lathrop General Plan* (2004) contains the following goals and policies that may be applicable to the project:

#### Goal No. 9 - Noise Hazards

1. It is the goal of the General Plan to protect citizens from the harmful effects of exposure to excessive noise, and to protect the economic base of the City by preventing the encroachment of incompatible land uses near noise-producing roadways, industries, the railroad, and other sources. As a point of reference, Figure VI-1 [reproduced as Table 4.6-3 in this assessment] illustrates the different degrees of sensitivity of various land uses to their noise environment, and the range of noise levels considered to be appropriate for the full range of land use activities involved.

#### Policies

1. Areas within the City shall be designated as noise-impacted if exposed to existing or projected future noise levels exterior to buildings exceeding 60 dB CNEL or the performance standards prescribed in Table VI-1 [reproduced as Tables 4.6-4 and 4.6-5 in this assessment].
2. New development of residential or other noise sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into project designs to reduce noise to the following levels:
  - a. Noise sources preempted from local control, such as railroad and highway traffic:
    - ▶ 60 dB CNEL or less in outdoor activity areas;
    - ▶ 45 dB CNEL within interior living spaces or other noise-sensitive interior spaces.
    - ▶ Where it is not possible to achieve reductions of exterior noise to 60 dB CNEL or less by using the best available and practical noise reduction technology, an exterior noise level of up to 65 dB CNEL will be allowed.
    - ▶ Under no circumstances will interior noise levels be allowed to exceed 45 dB CNEL with windows and doors closed.
  - b. For noise from other sources, such as local industries:
    - ▶ 60 dB CNEL or less in outdoor activity areas;
    - ▶ 45 dB CNEL or less within interior living spaces, plus the performance standards contained in Table VI-1 [reproduced as Tables 4.6-4 and 4.6-5 in this assessment].







3. New development of industrial, commercial, or other noise generating land uses will not be permitted if resulting noise levels will exceed 60 dB CNEL in areas containing residential or other noise-sensitive land uses. Additionally, new noise-generating land uses which are not preempted from local noise regulation by the State of California will not be permitted if resulting noise levels will exceed the performance standards contained in Table VI-1 [reproduced as Tables 4.6-4 and 4.6-5 in this assessment] in areas containing residential or other noise-sensitive land uses.
4. Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with the recommendations of the California Office of Noise Control.

**Table 4.6-3 Land Use Compatibility for Community Noise Environments**

Land Use Category	Community Noise Exposure ( $L_{dn}$ or CNEL, dB)					
	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Homes	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Multi-family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging – Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable

Interpretation:

-  Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
-  Normally Unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
-  Clearly Unacceptable – New construction or development should generally not be undertaken.

Source: City of Lathrop 2004, Figure VI-1

**Table 4.6-4 Exterior Noise Level Performance Standards for Non-Preempted Noise Sources (dB)**

Receiving Land Use	Nighttime (10 p.m. – 7 a.m.)			Daytime (7 a.m. – 10 p.m.)		
	Rural Suburban	Suburban	Urban	Rural Suburban	Suburban	Urban
One and Two Family Residential	40	45	50	50	55	60
Multiple Family Residential	45	50	55	50	55	60
Public Space	50	55	60	50	55	60
Limited Commercial	55			60		
Commercial	60			65		
Light Industrial	70			70		
Heavy Industrial	75			75		

Source: City of Lathrop 2004, Table VI-1

**Table 4.6-5 Exterior Noise Level Performance Standards for Non-Preempted Noise Sources (dB)**

Noise Category	Cumulative Number of Minutes in any 1 Hour Period	Nighttime 10:00 p.m. – 7:00 a.m.	Daytime 7:00 a.m. – 10:00 p.m.
1 (L <sub>50</sub> )	30	45	55
2 (L <sub>25</sub> )	15	50	60
3 (L <sub>8</sub> )	5	55	65
4 (L <sub>2</sub> )	1	60	70
5 (L <sub>max</sub> )	0	65	75

Note: Each of the noise level standards specified in Tables 4.6-4 and 4.6-5 shall be reduced by five (5) dB for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive noises. The standards should be applied at a residential or other noise-sensitive land use and not on the property of a noise-generating land use.

Source: City of Lathrop 2004, Table VI-1

### City of Lathrop Municipal Code

The following policies in the City of Lathrop Municipal Code may be applicable to the project:

► 8.2.040 Ambient Base Noise Level

Where the ambient noise level is less than designated in this section the respective noise level in this section shall govern.

**Table 4.6-6 Community Environment Classification**

Zone	Time	Very Quiet (Rural, Suburban)	Slightly Quiet (Suburban, Urban)	Noisy (Urban)
R1 and R2	10:00 p.m. to 7:00 a.m.	40	45	50
	7:00 p.m. to 10:00 p.m.	45	50	55
	7:00 a.m. to 7:00 p.m.	50	55	60
R3 and R4	10:00 p.m. to 7:00 a.m.	45	50	55
	7:00 a.m. to 10:00 p.m.	50	55	60
Commercial	10:00 p.m. to 7:00 a.m.	50	55	60
	7:00 a.m. to 10:00 p.m.	55	60	65
M1	Anytime	70		
M2	Anytime	75		

Source: City of Lathrop 2020

▶ 8.20.100 Machinery, Equipment, Fans, and Air Conditioning

It shall be unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient base noise level by more than five decibels.

▶ 8.20.110 Construction of Buildings and Projects

It shall be unlawful for any person within a residential zone or within a radius of five hundred (500) feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefore has been duly obtained from the office or body of the city having the function to issue permits of this kind. No permit shall be required to perform emergency work as defined in Sections 8.20.010 through 8.20.040.

## 4.6.2 Environmental Setting

The environmental setting provided on pages 4.6-5 through 4.6-13 of the 2003 SEIR is relevant to understanding the potential noise impacts of the River Islands project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

### ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting for the project, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this section.

#### Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

#### Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

#### Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.0000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). Logarithmic scales are able to reflect large ranges of numbers as they increase not by equal increments, but by factors of a base value. For decibels, the logarithmic scale increases by a factor of 10, that is, each increase of

10 decibels increases the sound pressure level by 10. For example, a 10-dB sound is 10 times the pressure difference of a 0-dB sound; a 20-dB sound is 100 times the pressure difference of a 0-dB sound (10 X 10).

### Addition of Decibels

Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase, and a 10 times increase in sound energy corresponds to a 10-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

### A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels. Table 4.6-7 describes typical A-weighted noise levels for various noise sources.

**Table 4.6-7 Typical A-Weighted Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	
Quiet urban daytime	— 50 —	Large business office, Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library, Bedroom at night
Quiet rural nighttime	— 20 —	
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013b: Table 2-5

## Human Response to Changes in Noise Levels

The doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013b:2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013b:2-10). Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

## Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2018; Caltrans 2013b:6).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2018; Caltrans 2013a:7). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018; Caltrans 2013a:27).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018).

Vibrations generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Table 4.6-8 summarizes the general human response to different ground vibration-velocity levels.

**Table 4.6-8 Human Response to Different Levels of Ground Noise and Vibration**

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1  $\mu$  inch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2018

## Common Noise Descriptors

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this section.

**Equivalent Continuous Sound Level ( $L_{eq}$ ):**  $L_{eq}$  represents an average of the sound energy occurring over a specified period. In effect,  $L_{eq}$  is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013b:2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly  $L_{eq}$ , is the energy average of sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used in the 2019 California Green Building Standards Code (California Building Standards Commission 2019:5.507.4).

**Percentile-Exceeded Sound Level ( $L_x$ ):**  $L_x$  represents the sound level exceeded for a given percentage of a specified period (e.g.,  $L_{10}$  is the sound level exceeded 10 percent of the time, and  $L_{90}$  is the sound level exceeded 90 percent of the time) (Caltrans 2013b:2-16).

**Maximum Sound Level ( $L_{max}$ ):**  $L_{max}$  is the highest instantaneous sound level measured during a specified period (Caltrans 2013b:2-48; FTA 2018).

**Day-Night Level ( $L_{dn}$ ):**  $L_{dn}$  is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB "penalty" applied to sound levels occurring during nighttime hours between 10 p.m. and 7 a.m. (Caltrans 2013b:2-48; FTA 2018).

**Community Noise Equivalent Level (CNEL):** CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10 p.m. and 7 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7 p.m. and 10 p.m. (Caltrans 2013b:2-48). Many agencies and local jurisdictions in California often have established noise standards using the CNEL metric.

## Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which a noise level decreases with distance depends on the following factors:

### Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

### Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a

reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuation rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

### **Atmospheric Effects**

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

### **Shielding by Natural or Human-Made Features**

A large object or barrier in the path between a noise source and a receiver attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013b:2-41; FTA 2018). Barriers higher than the line of sight provide increased noise reduction (FTA 2018). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation (FTA 2018).

## **EXISTING NOISE ENVIRONMENT**

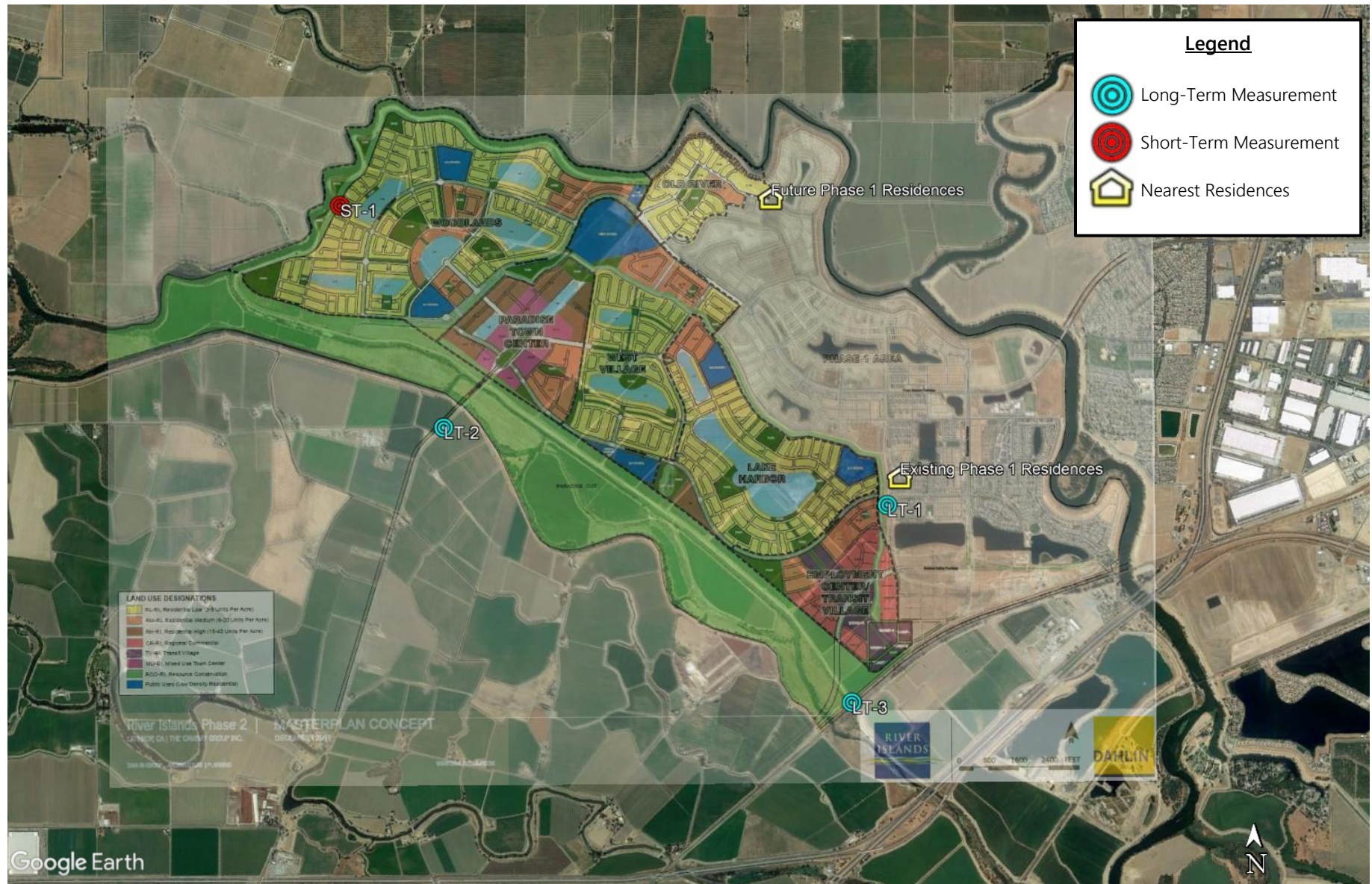
### **Existing Noise- and Vibration-Sensitive Land Uses**

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because of the potential for nighttime noise to result in sleep disruption. Additional land uses such as schools, transient lodging, historic sites, cemeteries, places of worship, and parks and recreational areas are also generally considered sensitive to increases in noise levels. These land use types are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

The existing noise-sensitive receptors nearest the Phase 2 area are single family homes located along the eastern boundary of the Phase 1 area of the River Islands project, approximately 200 feet to the west of the Phase 2 site boundary and on the opposite side of West Stewart Road. Existing rural residences are located to the north, south, and west at distances as close as 600 feet from the site. Additional residences planned as part of Phase 1 of the River Islands project would be located as close as approximately 50 feet to the north and west of the project site. Figure 4.6-1 shows the layout of the nearest receptors relative to the project site.

### **Existing Noise Sources and Ambient Levels**

To characterize the existing ambient noise environment in the project vicinity, long-term (24-hour continuous) and short-term ambient noise level measurements were conducted at four locations in the project area starting on Wednesday, March 4, 2020 and concluding on Friday, March 6, 2020. The locations of the noise monitoring sites are shown in Figure 4.6-1. Larson Davis Laboratories Model 820 precision integrating sound level meters were used for the ambient noise level measurement surveys. The meters were calibrated before use with Larson Davis Laboratories Model CAL200 acoustical calibrators to ensure measurement accuracy. The measurement equipment meets all pertinent specifications of the American National Standards Institute. The results of the ambient noise measurement survey are summarized in Table 4.6-9.



Source: Image from Google Earth in 2020; adapted by Illingworth & Rodkin in 2020

Figure 4.6-1 Noise Measurement Locations and Nearest Noise-Sensitive Receptors



The predominant noise sources in the project area are vehicle traffic on the surrounding roadway network (e.g. River Islands Parkway, Louise Avenue, Golden Valley Parkway), train operations along the Union Pacific Railroad line, and distant traffic along Interstate 5 and Interstate 205.

Long-term measurements LT-1, LT-2, and LT-3 quantified the daily noise level trends in the area. Measurement LT-1 was made to quantify the ambient noise level along the western boundary of the site adjacent to Phase 1 of the River Islands project. The primary noise source at this location was distant highway traffic. Hourly average noise levels at this location typically varied between 45 and 57 dBA  $L_{eq}$  during the day and between 42 and 54 dBA  $L_{eq}$  at night. The Community Noise Equivalent Level at this location on Thursday, March 5, 2020 was 56 dBA CNEL. Measurement LT-2 was made to quantify the ambient noise level at a distance of 20 feet from the center of Paradise Road near the closest off-site sensitive receptors to the south. The primary noise source at LT-2 was vehicular traffic along Paradise Road. Hourly average noise levels at this location typically varied between 38 and 57 dB  $L_{eq}$  during the day and between 39 and 52 dBA  $L_{eq}$  at night. The Community Noise Equivalent Level at LT-2 on Thursday, March 5, 2020 was 54 dBA CNEL. Measurement LT-3 was made to quantify the ambient noise level at the southwestern corner of the site at a distance of 115 feet from the Union Pacific Railroad line. The primary noise sources at this location were trains traveling along the adjacent tracks and distant highway traffic. Hourly average noise levels at this location typically varied between 43 and 61 dBA  $L_{eq}$  during the day and between 47 and 57 dBA  $L_{eq}$  at night. The Community Noise Equivalent Level at this location on Thursday, March 5, 2020 was 59 dBA CNEL. Maximum noise levels generated during train passby events ranged from 66 to 75 dBA  $L_{max}$ . The daily trends in noise levels are shown in Appendix D, Figures 4.6-A1 through 4.6-A9.

One attended, short-term (10 minute) measurement (i.e., measurement was attended and monitored in-person for the full duration of their measurement period), labeled as ST-1, was made to quantify typical daytime noise levels at the western side of the site furthest from the most dominant noise sources in the vicinity. The primary noise sources at this location were distant highway traffic, distant construction activity, distant aircraft flyovers, and birdsong. The average equivalent noise level at this location was 41 dB  $L_{eq}$ .

**Table 4.6-9 Noise Measurement Summary**

Measurement <sup>1</sup>	Start (Date/Time)	Stop (Date/Time)	A-Weighted Sound Level (dBA)					
			$L_{eq}$	$L_{max}$	$L_1$	$L_{10}$	$L_{50}$	$L_{90}$
<b>Short-Term</b>			$L_{eq}$	$L_{max}$	$L_1$	$L_{10}$	$L_{50}$	$L_{90}$
ST-1	March 6, 2020, 9:20 a.m.	March 6, 2020, 9:30 a.m.	41	52	46	43	40	38
<b>Long-Term</b>			CNEL	Daytime $L_{eq}$ (7:00 a.m.-10:00 p.m.)		Nighttime $L_{eq}$ (10:00 p.m.-7:00 a.m.)		
LT-1	March 4, 2020, 1:30 p.m.	March 6, 2020, 10:30 a.m.	56	45 – 57		42 – 54		
LT-2	March 4, 2020, 2:00 p.m.	March 6, 2020, 10:10 a.m.	54	38 – 57		39 – 52		
LT-3	March 4, 2020, 2:20 p.m.	March 6, 2020, 10:20 a.m.	59	43 – 61		47 – 57		

Refer to Figure 4.6-1 for ambient noise level measurement locations.

See Appendix D, Figures 4.6-A1 through 4.6-A9 for detailed noise measurement data.

Source: Data collected by Illingworth & Rodkin in 2020

To supplement the noise monitoring results, existing traffic noise levels on roadway segments in the project area were modeled in SoundPLAN 8.2 using calculation methods consistent with FHWA Traffic Noise Model, Version 2.5 (FHWA 2004) and using average daily traffic (ADT) volumes provided in the traffic analysis conducted by Fehr & Peers (the firm that prepared the traffic analysis in Section 4.4, "Traffic and Transportation"). Table 4.6-10 summarizes the modeled traffic noise levels at 50 feet from the centerline of each roadway segment, and lists distances from each roadway centerline to the 70, 65, and 60 dB CNEL traffic noise contours. For further details on traffic-noise modeling inputs and parameters, refer to Appendix D, Table 4.6-A1.

**Table 4.6-10 Summary of Modeled Existing Traffic Noise Levels**

Roadway	Segment Description	CNEL at 50 feet from Roadway Centerline, dBA	Distance (feet) from Roadway Centerline to CNEL Contour		
			70	65	60
Arbor Avenue	Paradise Road to MacArthur Drive	51	< 50	< 50	< 50
Golden Valley Parkway	Land Park to River Islands Parkway	65	< 50	50	115
	River Islands Parkway to Town Centre Drive	67	< 50	65	140
	Town Centre Drive to Brookhurst Boulevard	64	< 50	< 50	90
Lakeside Drive	Stewart Drive to Commercial Street	52	< 50	< 50	< 50
	Commercial Street to Somerston Parkway	52	< 50	< 50	< 50
	5 <sup>th</sup> Street to Harlan Road	73	75	165	355
	Harlan Road to I-5	74	90	190	410
Louise Avenue	I-5 to Golden Valley Parkway	71	60	125	270
MacArthur Drive	I-205 to Arbor Avenue	57	< 50	< 50	< 50
Manthey Road	San Joaquin River to Stewart Road	57	< 50	< 50	< 50
	Stewart Road to I-5 Undercrossing	62	< 50	< 50	70
Paradise Road	Delta Avenue to Arbor Avenue	52	< 50	< 50	< 50
	Arbor Avenue to I-205 Overcrossing	50	< 50	< 50	< 50
River Islands Parkway	Golden Valley Parkway to McKee Boulevard	71	55	120	260
	McKee Boulevard to Somerston Parkway	63	< 50	< 50	85
	Somerston Parkway to Stewart Road	62	< 50	< 50	65
	Stewart Road to Sidwell Drive	58	< 50	< 50	< 50
	Sidwell Drive to End of the Road	54	< 50	< 50	< 50
Somerston Parkway	River Islands Parkway to Marina Drive	56	< 50	< 50	< 50
	Marina Drive to Lakeside Drive	53	< 50	< 50	< 50
Stewart Road	Manthey Road to Lakeside Drive	55	< 50	< 50	< 50

Notes: CNEL = Community Noise Equivalent Level

Traffic noise levels based only on traffic noise generated by the roadway segment identified. All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix D, Tables 4.6-A1 and 4.6-A2 for detailed traffic data, and traffic-noise modeling input data and output results.

Source: Data modeled by Illingworth & Rodkin, Inc. in 2020

## 4.6.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

#### Construction Noise and Vibration

To assess potential short-term (construction-related) noise and vibration impacts, sensitive receptors and their relative exposures to noise and vibration were identified. Project-generated construction noise and vibration levels were determined based on methodologies and usage factors from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018), and reference noise emission level data collected by the National Cooperative Highway Research Program (NCHRP 2018).

## Operational Noise

With respect to stationary noise sources associated with project implementation, the assessment of long-term (operational-related) impacts was based on existing data, reference noise emission levels, measured noise levels for activities and equipment associated with project operation (e.g., heating, ventilation and air conditioning [HVAC] units, delivery docks), and standard attenuation rates and modeling techniques.

To assess potential long-term (operation-related) noise impacts due to project-generated increases in traffic, noise levels were calculated using the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004) implemented in SoundPLAN 8.2. Inputs to the model included project-specific traffic data (Appendix D, Table 4.6-A1) and roadway geometry. The analysis utilizes reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. Truck usage and vehicle speeds on area roadways were estimated from field observations and the project-specific traffic report. Note that as a conservative measure, the modeling conducted does not account for any natural or human-made shielding (e.g., the presence of walls or buildings) or reflections.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. However, since that time, various changes, both minor and substantive, have been made to thresholds typically used to assess noise impacts in a CEQA document. The changes to the thresholds reflect changes to the CEQA guidelines, responses to court decisions, and evolving professional standards. The thresholds shown below entirely replace the thresholds from the 2003 SEIR and are reflective of current legal and professional standards for noise impact analyses. Although in some ways elements of these thresholds are very similar to those used in 2003, there are sufficient differences to warrant provision of completely new scenarios rather than attempting to show text deletions in ~~strike through~~ and additional text shown in underline as is done in other sections of this document.

The modified Phase 2 Project would cause a significant impact related to noise and vibration if it would:

- ▶ result in construction noise levels that would exceed the City of Lathrop Noise Ordinance standards (Table 4.6-4) or construction were to occur in, or within 500 feet of a residential zone during the nighttime or weekend hours prohibited by the noise ordinance (i.e., between 10 p.m. and 7 a.m. on Sunday through Thursday and between 11 p.m. and 9 a.m. on Fridays, Saturdays, and legal holidays);
- ▶ result in long-term operational stationary sources which generate noise levels that exceed the City of Lathrop Noise Ordinance standards at nearby noise-sensitive land uses;
- ▶ result in noticeable, long-term traffic noise increases (i.e., 3 dBA CNEL or greater for areas where traffic noise levels already exceed standards, and 5dBA CNEL for areas where traffic noise levels are at or below standards);
- ▶ result in interior noise levels attributable to exterior environmental noise sources exceeding the California Building Code limit of 45 dBA CNEL in habitable rooms;
- ▶ result in an interior noise environment attributable to exterior sources exceeding the Cal Green Code limit of an hourly equivalent noise level ( $L_{eq(1-hr)}$ ) of 50 dBA in occupied areas of non-residential uses during any hour of operation; or
- ▶ result in construction-generated vibration levels exceeding the standards recommended by Caltrans (Table 4.6-2) with respect to the prevention of structural building damage. A vibration threshold of 0.5 in/sec PPV shall be used for new residential and modern commercial and industrial structures, 0.3 in/sec PPV for older residential structures, and 0.25 in/sec PPV for historic and some old buildings.

## ISSUES NOT DISCUSSED FURTHER

The nearest airport or airstrip to the project site is the Stockton Metropolitan Airport, located approximately 7.5 miles to the northeast. At this distance, there would not be potential for excessive aircraft noise exposure to people residing or working in the project area.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.6-a: Increase in Short-Term Construction Generated Noise

The 2003 SEIR evaluated the potential for construction generated noise to result in noise levels that exceeded City of Lathrop Noise Ordinance standards. The proposed Phase 2 modifications would increase the amount and density of residential development but would not change the development footprint and would not change the general type and character of development. No new or more intense construction methods would be required that would generate substantially more noise compared to the approved River Islands Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain **significant** as identified in the 2003 SEIR.

Impact 4.6-a of the 2003 SEIR evaluated whether noise generated by project construction would violate City of Lathrop Noise Ordinance standards. This impact was determined to be significant because depending on the construction activities being performed, as well as the duration and hours during which activities occur, construction-generated noise levels at nearby existing or project-related residences could violate the Noise Ordinance. However, Mitigation Measure 4.6-a would reduce the impact to a less than significant level. Mitigation Measure 4.6-a limits construction within 500 feet of a residential zone to hours that would minimize sleep disruption and provides requirement for construction equipment that would reduce noise generation.

The 2003 SEIR referenced typical construction noise levels based on U.S. Environmental Protection Agency (EPA) data. To provide an updated analysis, additional EPA data for typical construction noise levels (Table 4.6-11) and more recent National Cooperative Highway Research Program data for noise levels generated by individual pieces of equipment (Table 4.6-12) were used.

**Table 4.6-11 Typical Ranges of Construction Noise Levels at 50 Feet,  $L_{eq}$  (dBA)**

Construction Phase	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

I – All pertinent equipment present at site.

II – Minimum equipment present at site.

Source: EPA 1973

**Table 4.6-12 Construction Equipment 50-foot Noise Emission Levels (dBA)**

Equipment Category	$L_{eq}^{a,b,c}$	$L_{max}^{a,b}$	Equipment Category	$L_{eq}^{a,b,c}$	$L_{max}^{a,b}$
Air Hose	93	100	Horizontal Bore Drill	87	88
Air-Operated Post Driver	83	85	Impact Pile Driver	99	105
Asphalt Distributor Truck (Asphalt Sprayer)	-	70	Impact Wrench	68	72
Auger Drill	88	101	Jackhammer	91	95
Backhoe	76	84	Jig Saw	92	95
Bar Bender	66	75	Joint Sealer	-	74
Blasting (Abrasive)	100	103	Man Lift	72	73
Blasting (Explosive)	83	93	Movement Alarm	79	80
Chainsaw	79	83	Mud Recycler	73	74
Chip Spreader	-	77	Nail Gun	70	74
Chipping Gun	95	100	Pavement Scarifier (Milling Machine)	-	84
Circular Saw	73	76	Paving – Asphalt (Paver, Dump Truck)	-	82
Compactor (Plate)	-	75	Paving – Asphalt (Paver, MTV, Dump Truck)	-	83
Compactor (Roller)	82	83	Paving – Concrete (Placer, Slipform Paver)	87	91
Compressor	66	67	Paving – Concrete (Texturing/Curing Machine)	73	74
Concrete Batch Plant	87	90	Paving – Concrete (Triple Roller Tube Paver)	85	88
Concrete Grinder	-	97	Power Unit (Power Pack)	81	82
Concrete Mixer Truck	81	82	Pump	73	74
Concrete Pump Truck	84	88	Reciprocating Saw	64	66
Concrete Saw	85	88	Rivet Buster	100	107
Crane	74	76	Rock Drill	92	95
Directional Drill Rig	68	80	Rumble Strip Grinding	-	87
Drum Mixer	66	71	Sander	65	68
Dump Truck (Cyclical)	82	92	Scraper	-	92
Dump Truck (Passby)	-	73	Shot Crete Pump/Spray	78	87
Excavator	76	87	Street Sweeper	-	81
Flatbed Truck	-	74	Telescopic Handler (Forklift)	-	88
Front End Loader (Cyclical)	72	81	Vacuum Excavator (Vac-Truck)	86	87
Front End Loader (Passby)	-	71	Ventilation Fan	62	63
Generator	67	68	Vibratory Concrete Consolidator	78	80
Grader (Passby)	-	79	Vibratory Pile Driver	99	105
Grinder	68	71	Warning Horn (Air Horn)	94	99
Hammer Drill	72	75	Water Spray Truck	-	72
Hoe Ram	92	99	Welding Machine	71	72

<sup>a</sup> Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time averaging constant.

<sup>b</sup> Noise levels apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

<sup>c</sup> Equipment without average ( $L_{eq}$ ) noise levels are non-stationary and best represented only by maximum instantaneous noise level ( $L_{max}$ ).

Source: NCHRP 2018

Project construction is anticipated to begin in 2021 and take place over a period of approximately 20 years, with full buildout expected to be completed by 2040. Construction would involve demolition of existing structures including two single-family residences, a single-family foundation, and 19 barn stalls, site preparation, grading and excavation, trenching, building erection, interior/architectural coating, and paving. A list of construction equipment to be used during peak construction activity was provided, however a list of average quantities and types of equipment planned for use during each construction phase was not available at the time of this writing. Based on Table 4.6-11, typical hourly average noise levels during periods of heavy construction would range from 65 to 89 dBA  $L_{eq}$  at 50 feet. Typical heavy construction activity would have the potential to result in noise levels exceeding 60 dBA  $L_{eq}$  at sensitive receptors within 1,300 feet of construction.

Equipment present during peak construction activity would include 12 scrapers, 4 dozers, 3 compactors, 3 excavators, 5 loaders, 4 haul trucks, 5 water trucks, and 12 pickup trucks spread throughout the site. Given the large area of the project site, it is assumed that a single receptor would be exposed to about four pieces of equipment during peak construction activity, as the remaining equipment would be located too far from an individual receptor to substantially contribute to the noise level. Based on the loudest four individual pieces of construction equipment to be used during peak hours operating simultaneously, noise levels may reach up to 85 dBA  $L_{eq}$  at a distance of 50 feet from the approximate center of construction at the site. Maximum instantaneous noise levels generated by individual equipment may reach up to 92 dBA  $L_{max}$  at a distance of 50 feet. During peak construction when the loudest equipment is operating, sensitive receptors within approximately 875 feet of peak construction activities would potentially experience hourly average noise levels exceeding 60 dBA  $L_{eq}$ . The 60 dBA  $L_{eq}$  construction noise contour distances do not assume shielding provided by terrain or existing or future structures. As construction activity moves towards the center and western portions of the site, noise levels at existing surrounding sensitive receptors would decrease. Due to the large area of the site, it is anticipated that there will be periods when construction is staged in locations at a great distance from existing sensitive receptors such that they are not exposed to substantial construction noise. It is not anticipated that individual sensitive receptors will be exposed to substantial construction noise throughout the full 20-year period.

Project construction would result in noise levels at existing residences and at future residences and public spaces planned as part of Phase 1 of the River Islands Project exceeding 60 dBA  $L_{eq}$  and therefore exceeding City of Lathrop Municipal Code standards for a period of over one year.

This conclusion is consistent with the analysis provided in the 2003 SEIR, which also concluded that sensitive receptors could experience noise levels exceeding 60 dBA  $L_{eq}$ . This is not unexpected as the proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR. The types of buildings, development, and land uses included in the Phase 2 modifications are the same or similar to those evaluated in the 2003 SEIR (e.g., multi-story buildings, single-story buildings, residences, retail, parks) with no need for the addition of new or different construction practices that would generate additional noise. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This would remain a **significant** impact as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

This mitigation measure has been implemented successfully during Phase 1 construction and would continue to be implemented during the modified Phase 2 Project.

### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.6-a would limit construction within 500 feet of a residential zone to hours that would minimize sleep disruption and provides requirement for construction equipment that would reduce noise generation. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to construction noise, consistent with the impact conclusion in the 2003 SEIR.

## Impact 4.6-b: Stationary Source Noise Generated by Onsite Land Uses

The 2003 SEIR evaluated the potential for operational noise generated by project land uses to exceed City of Lathrop General Plan and Municipal Code standards. The proposed Phase 2 modifications do not propose additional types of noise-generating uses beyond those already addressed in the 2003 SEIR. Phase 2 modifications would relocate the high school, potentially resulting in greater noise levels at existing noise-sensitive uses to the north. Noise levels resulting from all other project land uses would be similar to those identified in the 2003 SEIR and would not be substantially affected by Phase 2 modifications. The impact would remain **significant** as identified in the 2003 SEIR.

Impact 4.6-b of the 2003 SEIR evaluated whether noise generated by project land uses post-construction would generate noise levels in excess of the City of Lathrop's maximum allowable noise standards. This impact was determined to be significant as noise resulting from residential land uses, commercial and public land uses, and schools and neighborhood parks would have the opportunity to generate noise levels which would exceed Municipal Code standards. Mitigation Measure 4.6-b would reduce the impact to a less-than-significant level. Mitigation Measure 4.6-b requires, where needed, that operational noise sources such as mechanical equipment, parking lots, and recreational use areas be located at the furthest distance from existing and future noise-sensitive land uses, that noise reducing building materials be used in structures near noise sources, and that the timing and type of equipment used for some activities be adjusted to minimize the potential for noise conflicts.

The proposed Phase 2 modifications would alter locations for some proposed noise-generating land uses and would eliminate the planned golf course, which was identified in the 2003 SEIR as a potentially significant noise source (greatest noise levels generated by maintenance activities). No additional sources of noise outside of those identified in the 2003 SEIR are included in the Phase 2 modifications, and the development would maintain the same footprint. The modified Phase 2 Project would locate the high school, identified along with all schools and neighborhood parks in the 2003 SEIR as a potentially significant source of noise, closer to two existing noise-sensitive uses located across Old River to the north, including a residence at 4040 Undine Road approximately 1,400 feet north of the high school.

The highest noise levels generated by school uses typically occur during sports games and special events such as graduation ceremonies. Noise generated by sports games and special events varies depending on several factors including the level of attendance, amount of excitement, and use of amplification. As specific locations of common areas or sports fields which would be used for large school events were not available as of this writing, a conservative estimate of 250 feet from sensitive receptors was used for the purpose of this analysis. Given typical modern campus designs and the common placement of streets or other uses between school boundaries and nearby homes, it is most common to find the locations of the loudest school activities to be greater than 250 feet from off campus sensitive noise receptors. Based on noise measurements made at various Bay Area high school (Illingworth & Rodkin 2010, 2013a, 2013b) special events and sports games, football games generate the highest noise levels, with a game attended by 1,000 spectators resulting in a noise level of about 66 dBA  $L_{eq}$  at a distance of 250 feet. At a distance of 1,400 feet, the same football game would result in a noise level of about 51 dBA  $L_{eq}$ . Depending on the location of the football field and level of attendance, football games could potentially result in noise levels exceeding General Plan limits at the nearest existing and planned Phase 1 residences and at the nearest rural suburban residence to the north. While the proposed Phase 2 modifications would remove golf course maintenance as a noise source, the location of the high school would potentially increase operational noise levels at the nearest noise-sensitive receptor to the north. The overall impact resulting from stationary noise sources generated by onsite land uses would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.6-b: Stationary Source Noise Generated by Onsite Land Uses

*Mitigation Measure 4.6-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation (including elimination of the golf course and relocation of the high school), with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

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 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, the following measures will apply to noise-generating activities associated with the golf course.~~

- ~~▶ Onsite landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications.~~
- ~~▶ For maintenance areas located within 500 feet of noise-sensitive land uses, the operation of onsite landscape maintenance equipment shall be limited to the least noise-sensitive periods of the day, between the hours of 7 a.m. and 7 p.m.~~
- ~~▶ Areas of the golf course that would require frequent turf maintenance (e.g., fairways, tees) shall be located at a minimum distance of 100 feet from the property line of nearby existing residences.~~

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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.6-b would require identification of locations where noise standards would not be met, reduce noise generated by stationary noise sources in these areas, and where necessary, require buildings housing noise sensitive receptors to be constructed with noise reducing building materials. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to operational noise from stationary sources, consistent with the impact conclusion in the 2003 SEIR.

### **Impact 4.6-c: Increases in Existing Traffic Noise Levels**

The 2003 SEIR evaluated the potential for the River Islands Project to cause a substantial permanent traffic noise level increase at existing sensitive land uses in the vicinity. The proposed Phase 2 modifications would increase the amount and density of residential development and, therefore, would likely increase traffic noise levels. As further buildout of the area within the project vicinity has occurred since the 2003 SEIR, there are new and more noise-sensitive receptors located along roadways affected by project-generated traffic. An updated traffic noise study was prepared to determine current existing traffic noise levels and noise level increases resulting from the modified Phase 2 Project. New traffic data shows greater increases in noise resulting from the modified Phase 2 Project, and due to the introduction of new noise-sensitive receptors along project-affected roadways, there would be a substantial increase in the traffic noise impact identified in the 2003 SEIR. Therefore, the impact would now be **significant**.



Impact 4.6-3 of the 2003 SEIR evaluated whether implementation of the project would result in a noticeable increase in ambient noise levels at nearby existing noise-sensitive land uses. Based on modeled noise levels, the 2003 SEIR concluded the Phase 2 Project would result in a less-than-significant impact and no mitigation was proposed. The existing traffic noise environment of the area has changed substantially since the 2003 SEIR, and data provided by Fehr & Peers shows the project's contribution to traffic in the area will increase substantially. This will translate into increased traffic-generated noise.

Vehicular traffic on roadways in the project vicinity would increase as development of the project occurs. These projected increases in traffic would, over time, increase noise levels throughout the Phase 1 area and at sensitive receptors in the project site vicinity. Traffic noise levels were calculated based on average daily traffic (ADT) volumes calculated by Fehr & Peers as part of the traffic analysis for the project. Traffic noise levels and contour distances for existing, existing plus proposed project, cumulative plus current approved project, and cumulative plus proposed project with Valley Link scenarios are shown in Table 4.6-13. Traffic noise changes compared to existing levels are shown in Table 4.6-14. Traffic noise levels in rural areas will substantially increase as the area transitions to an urban setting.

**Table 4.6-13 Summary of Modeled Traffic Noise Levels**

Roadway	Segment Description	Existing				Existing Plus Proposed Project				Cumulative Plus Current Approved Project				Cumulative Plus Proposed Project with Valley Link			
		CNEL at 50 feet	Distance to Traffic Noise Contour (feet)			CNEL at 50 feet	Distance to Traffic Noise Contour (feet)			CNEL at 50 feet	Distance to Traffic Noise Contour (feet)			CNEL at 50 feet	Distance to Traffic Noise Contour (feet)		
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Arbor Avenue	Paradise Road to MacArthur Drive	51	< 50	< 50	< 50	68	< 50	80	170	45	< 50	< 50	< 50	47	< 50	< 50	< 50
Golden Valley Parkway	Land Park to River Islands Parkway	65	< 50	50	115	73	75	160	340	78	160	340	735	78	160	340	735
	River Islands Parkway to Town Centre Drive	67	< 50	65	140	72	70	155	335	76	125	270	585	76	125	270	585
	Town Centre Drive to Brookhurst Boulevard	64	< 50	< 50	90	72	70	150	320	75	115	245	530	75	115	245	530
Lakeside Drive	Stewart Drive to Commercial Street	52	< 50	< 50	< 50	63	< 50	< 50	80	56	< 50	< 50	< 50	56	< 50	< 50	< 50
	Commercial Street to Somerston Parkway	52	< 50	< 50	< 50	64	< 50	< 50	90	55	< 50	< 50	< 50	56	< 50	< 50	< 50
Louise Avenue	5 <sup>th</sup> Street to Harlan Road	73	75	165	355	76	105	220	475	77	155	330	710	77	155	335	725
	Harlan Road to I-5	74	90	190	410	76	120	260	555	78	180	390	845	78	180	390	845
	I-5 to Golden Valley Parkway	71	60	125	270	76	125	265	575	79	195	415	895	79	195	415	895
MacArthur Drive	I-205 to Arbor Avenue	57	< 50	< 50	< 50	71	55	12	255	60	< 50	< 50	50	60	< 50	< 50	50
Manthey Road	San Joaquin River to Stewart Road	57	< 50	< 50	< 50	68	< 50	75	160	-	-	-	-	-	-	-	-
	Stewart Road to I-5 Undercrossing	62	< 50	< 50	70	71	60	135	290	-	-	-	-	-	-	-	-
Paradise Road	Delta Avenue to Arbor Avenue	52	< 50	< 50	< 50	69	< 50	100	210	75	105	225	485	75	115	245	525

Roadway	Segment Description	Existing				Existing Plus Proposed Project				Cumulative Plus Current Approved Project				Cumulative Plus Proposed Project with Valley Link			
		CNEL at 50 feet	Distance to Traffic Noise Contour (feet)			CNEL at 50 feet	Distance to Traffic Noise Contour (feet)			CNEL at 50 feet	Distance to Traffic Noise Contour (feet)			CNEL at 50 feet	Distance to Traffic Noise Contour (feet)		
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
	Arbor Avenue to I-205 Overcrossing	50	< 50	< 50	< 50	51	< 50	< 50	< 50	75	100	220	470	75	110	235	510
River Islands Parkway	Golden Valley Parkway to McKee Boulevard	71	55	120	260	77	135	290	630	78	170	360	780	78	170	370	790
	McKee Boulevard to Somerston Parkway	63	< 50	< 50	85	73	75	165	350	74	90	195	415	74	90	200	430
	Somerston Parkway to Stewart Road	62	< 50	< 50	65	75	115	245	530	75	110	240	515	75	115	245	530
	Stewart Road to Sidwell Drive	58	< 50	< 50	< 50	76	120	260	565	75	105	225	485	75	110	240	515
	Sidwell Drive to End of the Road	54	< 50	< 50	< 50	74	85	185	405	75	100	220	470	75	105	230	490
Somerston Parkway	River Islands Parkway to Marina Drive	56	< 50	< 50	< 50	66	< 50	55	125	63	< 50	< 50	75	63	< 50	< 50	80
	Marina Drive to Lakeside Drive	53	< 50	< 50	< 50	63	< 50	< 50	85	58	< 50	< 50	< 50	59	< 50	< 50	< 50
Stewart Road	Manthey Road to Lakeside Drive	55	< 50	< 50	< 50	68	< 50	75	165	-	-	-	-	-	-	-	-

Notes: CNEL = Community Noise Equivalent Level. Segments marked '-' do not exist under future scenarios.

Traffic noise levels based only on traffic noise generated by the roadway segment identified. All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix D, Table 4.6-A1 for detailed traffic noise modeling input data.

Source: Data modeled by Illingworth & Rodkin in 2020

**Table 4.6-14 Traffic Noise Level Changes Relative to Existing Conditions (dBA CNEL)**

Roadway	Segment Description	Existing Noise Level at 50 ft	Traffic Noise Level Changes			Significant Noise Increase
			Existing Plus Proposed Project	Cumulative Plus Existing Approved Project	Cumulative Plus Proposed Project with Valley Link	
Arbor Avenue	Paradise Road to MacArthur Drive	51	18	-6 <sup>a</sup>	-4 <sup>a</sup>	Yes <sup>c</sup>
Golden Valley Parkway	Land Park to River Islands Parkway	65	7	12	12	Yes
	River Islands Parkway to Town Centre Drive	67	6	9	9	Yes
	Town Centre Drive to Brookhurst Boulevard	64	8	11	11	Yes
Lakeside Drive	Stewart Drive to Commercial Street	52	11	4	5	Yes
	Commercial Street to Somerston Parkway	52	12	3	4	Yes <sup>c</sup>
Louise Avenue	5 <sup>th</sup> Street to Harlan Road	73	2	5	5	Yes
	Harlan Road to I-5	74	2	5	5	Yes
	I-5 to Golden Valley Parkway	71	5	8	8	Yes
MacArthur Drive	I-205 to Arbor Avenue	57	13	3	3	Yes <sup>c</sup>
Manthey Road	San Joaquin River to Stewart Road	57	11	N/A <sup>b</sup>	N/A <sup>b</sup>	N/A <sup>b</sup>
	Stewart Road to I-5 Undercrossing	62	9	N/A <sup>b</sup>	N/A <sup>b</sup>	N/A <sup>b</sup>
Paradise Road	Delta Avenue to Arbor Avenue	52	18	23	24	Yes
	Arbor Avenue to I-205 Overcrossing	50	1	25	25	Yes
River Islands Parkway	Golden Valley Parkway to McKee Boulevard	71	6	7	7	Yes
	McKee Boulevard to Somerston Parkway	63	9	11	11	Yes
	Somerston Parkway to Stewart Road	62	14	13	14	Yes
	Stewart Road to Sidwell Drive	58	18	17	17	Yes
	Sidwell Drive to End of the Road	54	20	21	21	Yes
Somerston Parkway	River Islands Parkway to Marina Drive	56	10	6	7	Yes
	Marina Drive to Lakeside Drive	53	11	5	7	Yes
Stewart Road	Manthey Road to Lakeside Drive	55	13	N/A <sup>b</sup>	N/A <sup>b</sup>	N/A <sup>b</sup>

<sup>a</sup> Decreases in traffic noise levels along Arbor Avenue under future cumulative scenarios are attributable to the construction of the I-205/Chrisman Road Interchange.

<sup>b</sup> Sections marked N/A will not exist under future roadway alignments.

<sup>c</sup> Due to future projects such as the I-205/Chrisman Interchange, traffic levels along some roadway segments will vary substantially between Existing Plus Proposed Project and future Cumulative scenarios. Some significant noise increases would only be temporary.

Traffic noise levels based only on traffic noise generated by the roadway segment identified. All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. For additional details, refer to Appendix D, Table 4.6-A1 for traffic noise modeling input data.

Source: Data modeled by Illingworth & Rodkin in 2020

As indicated in Table 4.6-14, the Modified Phase 2 Project (i.e. with Valley Link) would result in traffic noise increases exceeding the significance thresholds (i.e., 3 dBA CNEL or greater for areas where traffic noise levels already exceed standards, and 5dBA CNEL for areas where traffic noise levels are at or below standards) along multiple roadways including Arbor Avenue, Golden Valley Parkway, Lakeside Drive, Louise Avenue, MacArthur Drive, Manthey Road, Paradise Road, River Islands Parkway, and Somerston Parkway. River Islands Phase 1 residences were designed taking into account cumulative traffic noise increases. Existing residences located along Golden Valley Parkway, Lakeside Drive, Louise Avenue, MacArthur Boulevard, Paradise Road, River Islands Parkway, and Somerston Parkway would experience traffic noise increases of 3 dBA CNEL or greater in areas where existing noise levels currently exceed 60 dBA CNEL, and 5 dBA CNEL or greater in areas where existing noise levels are below 60 dBA CNEL. There are no existing residences along Manthey Road. Decreases in traffic noise levels along Arbor Avenue under future cumulative scenarios are attributable to the construction of the I-205/Chrisman Road Interchange which would divert traffic from Arbor Avenue. This would be a **significant** impact.

As identified in Section 4.4, "Traffic and Transportation," the VMT analysis provided in that section analyzes a modified Phase 2 Project Without Valley Link scenario as the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. As shown in Tables 4.4-7 through 4.4-10, if the Valley Link Station is not constructed, the modified Phase 2 Project will generate more total VMT. This increase in VMT would correlate to increased traffic volumes along portions of the roadway network. Therefore, traffic noise levels identified in Table 4.6-14 would be expected to be marginally higher than currently shown if the Valley Link Station were not constructed and the identified significant impact would remain significant.

## Mitigation Measures

### 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. 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.

### Significance after Mitigation

New Mitigation Measure 4.6-c involves other non-acoustical considerations. Roadways and noise barriers would be located within the public right-of-way, necessitating agreements with the City. Noise barriers and sound insulation

treatments must be done on private property necessitating agreements with each property owner. It is not expected that implementation of the actions included in this mitigation measure will be feasible at all affected receptors or will be able to reduce substantial noise increases to acceptable levels at all noise sensitive areas. Therefore, project traffic noise increases would result in a **significant and unavoidable** impact.

#### **Impact 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels**

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The 2003 SEIR evaluated the compatibility of the River Islands Project with the City's "normally acceptable" land use compatibility noise standards. The proposed Phase 2 modifications would not introduce any new categories of land use which were not previously analyzed in the 2003 SEIR. Noise levels in the Phase 2 area have changed since the 2003 SEIR and were reanalyzed based on noise measurement survey and traffic noise modeling data. As the majority of the Phase 2 area is not located near any new and substantial sources of environmental noise, the impact would be similar to that identified in the 2003 SEIR. There would be no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain **significant**.

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Impact 4.6-d of the 2003 SEIR evaluated whether the proposed uses of the project would be compatible with the General Plan land use noise regulations. This impact was determined to be significant due to the Phase 1 area's close proximity to I-5 and the UPRR line, and due to noise generated by the site's future roadway network resulting in ambient noise levels exceeding the General Plan "normally acceptable" standard of 60 dBA CNEL for single-family residences. Mitigation Measure 4.6-d would provide for interior noise reduction through noise-reducing building materials and methods sufficient to reduce interior noise within site buildings to levels not exceeding the General Plan and California Building Code limit of 45 dBA CNEL. Mitigation Measure 4.6-d would reduce exterior noise through sound walls, vegetative screening, buildings for screening, and setbacks, but would not be able to reduce future exterior noise levels at all proposed uses below "normally acceptable" levels.

Since certification of the 2003 SEIR, the California Supreme Court decision in California Building Industry Association v. Bay Area Air Quality Management District has resulted in changes in the interpretation of CEQA with regard to the effects of existing environmental conditions on a project's future users or residents. The effects of the environment on a project are outside the scope of CEQA unless the project would exacerbate these conditions, as concluded by the California Supreme Court (see California Building Industry Association v. Bay Area Air Quality Management District [2015] 62 Cal.4th 369, 377 ["we conclude that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users."]). Changes to the State CEQA Guidelines to reflect this decision were adopted on December 28, 2018. Development under the Modified Phase 2 Project would risk exacerbating environmental noise at the project site via increases to traffic noise levels on the surrounding roadway network. Therefore, it is appropriate to consider the effects of noise sources outside the project site on the project.

As identified in the 2003 SEIR, the future noise environment at the project site would result from existing sources such as vehicular traffic along Interstates 5 and 205 and train operations along the UPRR line, and from planned sources such as the future site roadway network and land uses including parks, schools, and commercial uses.

Noise resulting from the UPRR railroad line is not anticipated to increase substantially over levels identified in the 2003 SEIR. Therefore, the 1,300-foot 60 dBA CNEL distance would still apply. There are no outdoor areas of residential uses proposed within 1,300 feet of the UPRR line, and therefore railroad noise would not result in exceedances of exterior noise level limits.

Future traffic noise levels were calculated using the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004) implemented in SoundPLAN 8.2 and are shown in Table 4.6-13. Similar to the 2025 roadway traffic noise levels modeled in the 2003 SEIR, existing and future traffic noise levels along many roadways which would serve the Phase 2 site, such as Golden Valley Parkway, Paradise Road, and River Islands Parkway, approach or exceed 60 dBA CNEL at a distance of 50 feet. Future noise levels along segments of Golden Valley Parkway and River Islands Parkway approaching the site were calculated to reach up to 75 dBA CNEL at a distance of 50 feet. Noise levels at locations along Golden Valley Parkway, Paradise Road, and River Islands Parkway would have the potential to exceed the land use

compatibility standards for low density residences, multi-family residences, schools, parks, and commercial uses. Assuming a 25 dBA interior to exterior noise reduction resulting from standard construction with windows and doors closed, interior noise levels at uses located within 100 feet of Golden Valley Parkway, Paradise Road, and River Islands Parkway could exceed the City of Lathrop and California Building Code limit of 45 dBA CNEL. If future segments of the site's roadway network result in noise levels exceeding 75 dBA  $L_{eq}(1-hr)$  at a distance of 50 feet, peak-hour noise levels within non-residential uses located along these roadways could potentially exceed the Cal Green Code limit of 50 dBA  $L_{eq}(1-hr)$ . This would be a **significant** impact. The 2003 SEIR also identified this impact as significant. However, given the potential for increased traffic noise generation relative to the 2003 SEIR (see discussion of Impact 4.6-c), this impact would be greater than the impact identified in the 2003 SEIR, although not substantially more severe.

## Mitigation Measures

### Modified Mitigation Measure 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels

*Mitigation Measure 4.6-d shown below includes the original language from the measure as it was adopted, with revisions to apply to the modified Phase 2 Project which is designed based on updated California Building Code regulations, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

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 ~~multifamily~~ residences that demonstrates how interior noise levels will achieve a 45 dBA CNEL/ $L_{dn}$  ~~where the exterior noise levels exceed 60 dBA CNEL/ $L_{dn}$~~ . As a result, a Title 24 analysis shall be prepared as part of the final design of any proposed ~~multifamily~~ 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/ $L_{dn}$ .

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  $L_{eq}(1-hr)$  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  $L_{eq}(1-hr)$  or below.

#### Significance after Mitigation

As described in the 2003 SEIR, implementation of Modified Mitigation Measure 4.6-d would be effective in reducing impacts associated with interior noise levels to a less-than significant level. However, as exterior noise levels in some locations would still be anticipated to exceed General Plan land use compatibility noise standards, even after implementing Modified Mitigation Measure 4.6-d and New Mitigation Measure 4.6-d(1), this impact would remain **significant and unavoidable**.

## Impact 4.6-e: Generation of Excessive Groundborne Vibration

Construction-related vibration levels would have the potential to exceed applicable vibration thresholds at nearby sensitive land uses. This impact is considered **potentially significant**.

Construction-related vibration was not addressed in the 2003 SEIR, likely because, at the time, the project site was located far enough from the nearest existing structures and separated by intervening terrain such that there would be no potential for project construction-generated vibration to result in perceptible vibration. This is no longer the case after partial buildout of the project has occurred and residences are now located along the eastern property line of the Phase 2 area.

To avoid potential damage to modern commercial and industrial structures, Caltrans recommends a vibration limit of 0.5 in/sec PPV (see Table 4.6-2). This limit is applicable to most structures within 300 feet of the project site. A vibration limit of 0.3 in/sec PPV is used for older residential structures, such as the rural residences to the north, west, and south of the site. There are no historic or ancient buildings in the site vicinity.

Demolition and construction activities often generate perceptible vibration levels that could affect nearby structures when heavy equipment or impact tools (e.g. jackhammers, pile drivers, hoe rams) are used in the vicinity of nearby sensitive land uses. Building damage generally falls into three categories. Cosmetic damage (also known as threshold damage) is defined as hairline cracking in plaster, the opening of old cracks, the loosening of paint or the dislodging of loose objects. Minor damage is defined as hairline cracking in masonry or the loosening of plaster. Major structural damage is defined as wide cracking or the shifting of foundation or bearing walls.

Table 4.6-15 presents typical vibration levels from construction equipment at a reference distance of 25 feet, and calculated levels at representative distances from the construction equipment located at the closest property line to the nearest structures. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Calculations were made to estimate vibration levels at distances from site property lines of 50 feet to represent the distance to the nearest future Phase 1 residences to the east and at a distance of 300 feet to represent the distance to the nearest existing rural residence to the north.

**Table 4.6-15 Vibration Levels for Construction Equipment at Various Distances**

Equipment		PPV at 25 ft. (in/sec)	PPV at 50 ft. (in/sec)	PPV at 300 ft. (in/sec)
Pile Driver (Impact)	Upper Range	1.158	0.540	0.075
	Typical	0.644	0.300	0.042
Pile Driver (Sonic)	Upper Range	0.734	0.342	0.048
	Typical	0.170	0.079	0.011
Clam Shovel Drop		0.202	0.094	0.013
Hydromill (Slurry wall)	In Soil	0.008	0.004	0.001
	In Rock	0.017	0.008	0.001
Vibratory Roller		0.210	0.098	0.014
Hoe Ram		0.089	0.042	0.006
Large Bulldozer		0.089	0.042	0.006
Caisson Drilling		0.089	0.042	0.006
Loaded Trucks		0.076	0.035	0.005
Jackhammer		0.035	0.016	0.002
Small Bulldozer		0.003	0.001	0.000

Source: FTA 2018 as modified by Illingworth & Rodkin in 2020



As indicated in Table 4.6-14, if pile driving is necessary for construction along property lines, upper range vibration levels from impact pile driving could result in vibration levels exceeding 0.5 in/sec PPV at the nearest Phase I residences along the eastern property line of the site. Vibration levels would not exceed 0.3 in/sec PPV at any existing rural residences in the site vicinity. This would be a **potentially significant** impact.

Valley Link and UPRR trains would have the potential to generate perceptible vibration at the site. Structures planned as part of the transit village located at the site's southeastern corner would be located as close as approximately 100 feet from the planned Valley Link line and approximately 250 feet from the existing UPRR line. Typical vibration levels from light rail vehicles traveling at 35 mph such as those operating on the Valley Link line would reach approximately 65 VdB at a distance of 100 feet. Typical vibration levels from freight trains traveling at 50 mph such as those operating on the UPRR line would reach approximately 69 VdB at a distance of 250 feet (FTA 2018). Based on FTA standards for groundborne vibration shown in Table 4.6-1, if there are 70 or greater train passbys from Valley Link and UPRR per day, the vibration limit for potential residences proposed as part of the transit village would be 72 VdB, and the vibration limit for institutional land uses would be 75 VdB. Train operations from Valley Link and UPRR trains would not result in vibration levels at site structures exceeding the strictest applicable FTA limit of 72 VdB for frequent events at residences and buildings where people normally sleep.

## Mitigation Measures

### 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.

#### Significance after Mitigation

Implementation of New Mitigation Measure 4.6-e would reduce construction-generated vibration at the nearest sensitive structures in the site vicinity by prohibiting the use of impact pile driving within 55 feet of existing structures. All other construction-generated vibration would fall below the limit of 0.5 in/sec PPV for modern residential or commercial structures. After implementation of New Mitigation Measure 4.6-e, construction-generated vibration at the nearest sensitive structures in the site vicinity would be reduced to a **less-than-significant** level.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The types of noise and vibration generating construction equipment used for construction of a widened Paradise Road would not be substantially different from those generated by the proposed project (see Impacts 4.6-a and 5.6-e). Along Paradise Road there would be fewer sensitive receptors, but sensitive noise and vibration receptors do exist along the roadway alignment. Implementation of Adopted Mitigation Measures 4.6-a, Increases in Short-Term Construction-Generated Noise; and New Mitigation Measure 4.6-e, Construction Vibration Reduction would be required if the entity implementing the Paradise Road widening and improvement uses this SEIR for CEQA

compliance. These mitigation measures would be equally effective at reducing any significant construction noise and construction vibration impacts to a less-than-significant level for both the Paradise Road widening and improvement and the modified Phase 2 Project. Compared to the Phase 2 Project, the Paradise Road widening and improvement would not have new significant impacts related to construction noise and construction vibration and the impacts are not substantially more severe.

Impacts 4.6-b and 4.6-d apply to noise conditions specifically in the Phase 2 area. The analysis under these two impacts does not apply to the Paradise Road widening and improvement.

With respect to traffic noise increases, the traffic modelling that was the source for data for the traffic noise modelling incorporates roadway network conditions under cumulative scenarios that include the widening and improvement of Paradise Road. Therefore, increased traffic noise along Paradise Road identified for cumulative conditions in the discussion of Impact 4.6-c includes the effects of a widened and improved Paradise Road being in place. Therefore, the widening and improvement of Paradise Road does not alter the traffic noise impacts along Paradise Road under the cumulative scenarios identified in Impact 4.6-c. The widening and improvement of Paradise Road does not change the conclusion provided in Table 4.16-14 that there would be a significant increase in traffic noise along Paradise Road under cumulative scenarios where the Paradise Road widening and improvement is in place. Implementing applicable elements of New Mitigation Measure 4.6-c, Traffic Noise Reduction Measures, would be required if the entity implementing the Paradise Road widening uses this SEIR for CEQA compliance. This mitigation measure would reduce the adverse effects of transportation generated noise on sensitive receptors, but like the modified Phase 2 Project, the impact would remain significant and unavoidable.

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## 4.7 GEOLOGY, SOILS, AND MINERAL RESOURCES

This section evaluates potential impacts relative to geology and soils due to development of the Phase 2 Project. It includes a description of existing soils and mineral resources, analysis of environmental impacts, and recommendations for mitigation measures for any significant or potentially significant impacts resulting from the modified Phase 2 Project. The primary sources of information used in this analysis are two geotechnical studies prepared by ENGEO Incorporated (ENGEO) for the River Islands at Lathrop Project: *Baseline Geotechnical Assessment: River Islands, Lathrop, California* (ENGEO 2002a, cited in City of Lathrop 2002); *Preliminary Levee Evaluation: River Islands, Lathrop, California* (ENGEO 2002b, cited in City of Lathrop 2002); *Site-Specific Evaluation of Seismic Liquefaction and Settlement: River Islands, Lathrop, California* (ENGEO 2018a); and *Geotechnical Exploration: River Islands, Phase 2, Lathrop, California* (ENGEO 2018b).

Section 4.7, "Geology, Soils, and Mineral Resources," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to geology, soils, and mineral resources. The 2003 SEIR conducted a project-level analysis of both the Phase 1 and Phase 2 areas because site conditions, the general character of proposed development, associated risks related to seismic events, mitigation approaches, and other factors are very similar (or the same) across the Phase 1 and Phase 2 areas (ENGEO 2002a, 2002b, cited in City of Lathrop 2002). The 2003 SEIR concluded that there would be a less-than-significant impact related to erosion and the loss of topsoil during construction (Impact 4.7-a); seismic hazards related to ground lurching and soil settlement (Impact 4.7-d); and loss of access to mineral resources (Impact 4.7-h). The 2003 SEIR concluded that impacts related to ground shaking (Impact 4.7-b) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.7-b, which requires project facilities be designed for maximum horizontal ground surface accelerations; impacts related to liquefaction (Impact 4.7-c) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.7-c, which requires a design-level geotechnical study be completed for each project development, focusing on the liquefaction potential in the area and identifying appropriate means to minimize/avoid damage from liquefaction; impacts related to lateral spreading and landslide (Impact 4.7-e) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.7-e, which requires a design-level geotechnical study be completed for each project development; impacts related to shrink-swell potential (Impact 4.7-f) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.7-f, which requires a design-level geotechnical study addressing whether expansive soils are present in the development area and include measures to address these soils where they occur; and impacts related to corrosive soils (Impact 4.7-g) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.7-g, which requires a design-level geotechnical study addressing corrosion potential and include measures to address corrosive soils where damage to underground facilities may occur.

### 4.7.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

##### National Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States. To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities.

## STATE

### **Alquist-Priolo Earthquake Fault Zoning Act**

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (PRC Section 2621-2630) intends to reduce the risk to life and property from surface fault rupture during earthquakes by regulating construction in active fault corridors, and by prohibiting the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as active and inactive, and establishes a process for reviewing building proposals in Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned and construction along or across these zones is strictly regulated if they are “sufficiently active” and “well-defined.” A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as within the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Bryant and Hart 2007). Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

### **Seismic Hazards Mapping Act**

The intention of the Seismic Hazards Mapping Act of 1990 (PRC Section 2690–2699.6) is to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The act’s provisions are similar in concept to those of the Alquist-Priolo Act: The State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development.

### **California Building Code**

The California Building Code (CBC) (California Code of Regulations, Title 24) is based on the International Building Code. The CBC has been modified from the International Building Code for California conditions, with more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, while Chapter 18A regulates construction on unstable soils, such as expansive soils and areas subject to liquefaction. Appendix J of the CBC regulates grading activities, including drainage and erosion control. The CBC contains a provision that provides for a preliminary soil report to be prepared to identify “...the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects.” (CBC Chapter 18 §1803.1.1.1).

### **California Surface Mining and Reclamation Act**

The Surface Mining and Reclamation Act (SMARA) was enacted in 1975 by the State Legislature to regulate activities related to mineral resource extraction. The act requires the prevention of adverse environmental effects caused by mining, the reclamation of mined lands for alternative land uses, and the elimination of public health and safety hazards from the effects of mining activities. At the same time, SMARA encourages both the conservation and production of extractive mineral resources, requiring the State Geologist to identify and attach levels of significance to the state's varied extractive resource deposits. As stated above, in 1998 the City of Lathrop adopted its own SMARA ordinance, modeled after the state's SMARA guidelines. The City's SMARA ordinance is designed to preserve mineral resources while protecting people, property, and the environment from hazards caused by excavations.

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Hazard Management Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

#### Seismic Hazards Policies

2. All new building construction shall conform to the latest seismic requirements of the Uniform Building Code as a minimum standard.
4. Facilities needed for emergency service should be capable of withstanding a maximum credible earthquake and remain operational to provide emergency response.
5. Preliminary soil compaction tests and geotechnical analysis of soil conditions shall be submitted as part of the justification for development proposals contained in any Specific Plan.
6. Soil compaction tests, and geotechnical analysis of soil conditions and behavior under seismic conditions, shall be required of all subdivisions and of all commercial, industrial and institutional structures over 6,000 square feet in area.
7. A preliminary soils report is to be prepared by a registered geo-technical engineer for any residential development project, based upon adequate test borings. If the report indicates the presence of critically expansive soils or other soil problems which, if not corrected, would lead to structural defects, the developer shall provide for and submit the findings of a soil investigation of each lot or housing site proposed. The soil investigation shall be prepared by a state-registered civil engineer and shall recommend corrective action likely to prevent structural damage to each dwelling to be constructed. Prior to the issuance of a building permit, any recommended action approved by the Building Official shall be incorporated into the construction of each dwelling.
8. A preliminary geologic report, prepared by a state-certified engineering geologist and based on adequate test borings, shall be submitted to the Building Official for every subdivision, planned development or other residential project at the time of submitting a tentative map or other type of development application to the City.
9. If the preliminary geologic report indicates the presence of critically expansive soils or other soil problems (e.g., potential for liquefaction which if not corrected could lead to structural defects), the developer shall provide such additional soils investigation for each development site as may be requested by the Building Official. The geologic investigation shall be prepared by a state-certified engineering geologist and shall recommend further corrective action likely to prevent structural damage to dwelling units. Prior to the issuance of a building permit, any recommended action approved by the Building Official shall be incorporated into site preparation and the construction of each dwelling.

The Resource Management Element of the 2004 General Plan outlines goals and policies associated with mineral resources. The following mineral resource policies may be applicable to the project:

#### Mineral Resource Policies

1. Land classified by the State Department of Conservation as MRZ-2 as shown on Figure V-1 [of the General Plan] and as designated by the State Mining and Geology Board as shown on Figure V -2 [ of the General Plan], are urged for protection to assure their availability for mining under applicable provisions of State law and local ordinance. If determined practical and feasible, these lands are to be mined and reclaimed in accordance with the provisions of the California Surface Mining and Reclamation Act of 1975, as amended, prior to their being utilized for the various urban purposes depicted on the General Plan Diagram and described in this document [City General Plan].
2. While the depth of the known sand deposits of regional significance is considerable, the potential for mining to this depth is recognized only for the lands between the I-5/SR 120 merge and the Union Pacific Railroad. Lands classified MRZ-2 between the merge and the Southern Pacific Railroad may be mined to a much lesser depth, or not at all, because of the potential of this site location for Regional Commercial development.

3. Lands classified MRZ-2 as described above shall be zoned by the City with a combining "mineral resource open space zone" to identify the presence of known mineral deposits and which may restrict the encroachment of incompatible land uses in those areas for which mineral conservation is urged. As an alternative, such restriction may be included in any Specific Plan applicable to the affected property.
4. In consideration of mineral policy #2, above, lands classified MRZ-2, and designated, may be developed for urban use without first being mined only if compelling reasons can be stated by the City in writing in support of such action and upon fulfilling the requirements of Section 2562 (d) and Section 2763 (a) of the Surface Mining and Reclamation Act of 1975, as amended. Action by the City shall consider the need to balance mineral values against alternative land uses, and the importance of these mineral deposits to the regional market demand for their use.

### City of Lathrop Surface Mining and Reclamation Act Ordinance

On June 16, 1998, the City of Lathrop adopted its own SMARA ordinance, which is modeled after the state's SMARA guidelines. The City's SMARA ordinance is designed to preserve mineral resources while protecting people, property, and the environment from hazards caused by excavations.

## 4.7.2 Environmental Setting

The environmental setting provided on pages 4.7-5 through 4.7-15 of the 2003 SEIR comprehensively addressed issues related to geology, soils, and mineral resources. The existing conditions related to the following topics have not changed appreciably since the 2003 SEIR (relative to geology and soils) and no new information is available regarding these topics that would affect the conclusions provided in that SEIR; topography and drainage, geology, soils, groundwater, shrink-swell potential, corrosion potential, seepage potential, subsidence, seismicity, ground shaking, ground lurching, soil liquefaction, dynamic densification, lateral spreading and landsliding, and mineral resources. Refer to pages 4.7-5 through 4.7-15 of the 2003 SEIR for environmental setting information on these topics. The following information on Mineral Resources, although largely a repeat of information included in the 2003 SEIR, is provided to promote understanding of the Mineral Resource Zone classifications. Paleontological resources were not addressed in the 2003 SEIR and information on paleontological resources is provided here.

## MINERAL RESOURCES

The California Department of Conservation, Division of Mines and Geology has developed guidelines for the classification and designation of mineral lands, known as Mineral Resource Zones (MRZs), and retains publications of SMARA Mineral Land Classification Project dealing with mineral resources in California. The City of Lathrop General Plan identifies deposits of sand used in the making of high-quality Portland Cement Concrete as a mineral resource in the City that requires preservation. Land containing these sand deposits have been classified as MRZ-2. The MRZ system consists of four categories into which lands may be classified based on the degree of available knowledge about the resource, and the level of economic significance of the resource. These zones are described as follows.

- ▶ MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- ▶ MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- ▶ MRZ-3: Areas containing mineral deposits for which the significance cannot be determined from available data.
- ▶ MRZ-4: Areas where available information is inadequate for assignment of any other MRZ category.

A small, approximately 10-acre area in the eastern corner of the River Islands Project is classified as MRZ-2 by the Division of Mines and Geology. This 10-acre area is part of Phase 1 of the River Islands Project and has already been developed. The remainder of the River Islands Project site (including the current Phase 2 area) is either not classified by the Division of Mines and Geology or is classified as MRZ-3 (potentially containing significant mineral resources).

## PALEONTOLOGICAL RESOURCES

Significant nonrenewable vertebrate and invertebrate fossils and unique geologic units have been documented throughout California. The fossil yielding potential of a particular area is highly dependent on the geologic age and origin of the underlying rocks (refer to geologic timescale in Table 4.7-1). Paleontological potential refers to the likelihood that a rock unit will yield a unique or significant paleontological resource. All sedimentary rocks, some volcanic rocks, and some low-grade metamorphic rocks have potential to yield significant paleontological resources. Depending on location, the paleontological potential of subsurface materials generally increases with depth beneath the surface, as well as with proximity to known fossiliferous deposits.

Pleistocene or older (older than 11,000 years) continental sedimentary deposits are considered as having a high paleontological potential while Holocene-age deposits (less than 10,000 years old) are generally considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms. Metamorphic and igneous rocks have a low paleontological potential, either because they formed beneath the surface of the earth (such as granite), or because they have been altered under high heat and pressures, chaotically mixed or severely fractured. Generally, the processes that form igneous and metamorphic rocks are too destructive to preserve identifiable fossil remains.

**Table 4.7-1 Divisions of Geologic Time**

Era	Period	Time in Millions of Years Ago (approximately)	Epoch
Cenozoic	Quaternary	< 0.01	Holocene
		2.6	Pleistocene
	Tertiary	5.3	Pliocene
		23	Miocene
		34	Oligocene
		56	Eocene
		65	Paleocene
Mesozoic	Cretaceous	145	—
	Jurassic	200	—
	Triassic	251	—
Paleozoic	Permian	299	—
	Carboniferous	359	—
	Devonian	416	—
	Silurian	444	—
	Ordovician	488	—
	Cambrian	542	—
	Precambrian	2,500	—

Source: U.S. Geological Survey 2010

San Joaquin County is located at the northern end of the San Joaquin Valley, a sedimentary basin filled with an up to 6-mile-thick sequence of interbedded clay, silt, sand, and gravel deposits ranging in age from more than 144 million years old to less than 10,000 years. Recent sediments consist of coarse-grained sand and gravel deposits along river courses and fine-grained alluvium consisting of silt and clay deposited in low-lying areas or flood basins. Older alluvial deposits underlie the edges of the valley and slope gradually towards the center. The foothills of the Diablo Range in the southwestern part of the County are composed of alluvial deposits and older marine sediments



deposited during the Tertiary Period when an inland sea occupied the Central Valley. The River Islands Project site is located immediately west of the margin between Alluvial-Fan deposits derived from glaciated drainage basins and Alluvial-Flood Plain deposits. The surface deposits at the site, Dos Palos Alluvium, are mapped as Holocene (10,000 years old to present) supratidal (above mean high tide level) alluvial-flood plain deposits (U.S. Geological Survey 1991). Below these surface deposits, at varying depths, may be older Modesto Formation soils from the Pleistocene.

### 4.7.3 Environmental Impacts and Mitigation Measures

#### METHODOLOGY

The examination of geology, soils, and mineral resources is based on information obtained from reviews of:

- ▶ 2003 SEIR for the River Islands Project;
- ▶ available literature, including documents published by federal, State, County, and City agencies;
- ▶ review of applicable elements from the City of Lathrop General Plan;
- ▶ *Baseline Geotechnical Assessment: River Islands, Lathrop, California* (ENGEO 2002a, cited in City of Lathrop 2002);
- ▶ *Preliminary Levee Evaluation: River Islands, Lathrop, California* (ENGEO 2002b, cited in City of Lathrop 2002);
- ▶ *Site-Specific Evaluation of Seismic Liquefaction and Settlement: River Islands, Lathrop, California* (ENGEO 2018a); and
- ▶ *Geotechnical Exploration: River Islands, Phase 2, Lathrop, California* (ENGEO 2018b).

#### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and text additions shown in underline.

The modified Phase 2 Project would cause a significant impact related to geology, soils, and mineral resources if it would:

- ▶ directly or indirectly expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death through the rupture of a known earthquake fault, strong seismic shaking, seismic-related ground failure, soil liquefaction, or landslides;
- ▶ result in substantial soil erosion or the loss of topsoil;
- ▶ locate project facilities on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- ▶ locate project facilities on expansive soil, creating substantial direct or indirect risks to property;
- ▶ result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state;
- ▶ result in the loss of availability of a locally important mineral resources recovery site delineated on a local general plan, specific plan, or other land use plan;
- ▶ have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or
- ▶ directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

## ISSUES NOT DISCUSSED FURTHER

### Septic Tanks

The project does not include the construction of any septic tanks or other alternative wastewater disposal systems where sewers will not be available. All project development will be served by sewers (see Section 4.11, "Public Utilities"). Therefore, the project would have no impact related to soils adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater, and this issue will not be analyzed further.

### Paleontological Resources and Unique Geologic Features

The entirety of the project site is underlain by quaternary alluvium from the Holocene period that is generally less than 10,000 years old. This alluvium consists of sand, silt, and gravel deposited in fan, valley fill, terrace, or basin environments. These alluvial deposits may contain vertebrate and invertebrate remains of extant, modern taxa, which are generally not considered paleontologically significant. The soils of the area are deep, unconsolidated, alluvial units with a low likelihood of producing fossils. At various depths below the Holocene alluvium soils there are older Modesto Formation soils from the Pleistocene. However, Modesto Formation soils would only be encountered during deep excavations, such as for some of the interior lakes, and these near surface portions of the Modesto Formation are unlikely to contain fossilized remains. In addition, as a reclamation island, the project site has been subject to significant recent and historical disturbance of the land, and therefore is unlikely to yield heretofore unknown or undiscovered paleontological resources during development. Therefore, no impacts related to paleontological resources would occur; and this topic is not further evaluated in this Draft SEIR. The project site is relatively flat agricultural land underlain by common soil types. There are no unique geologic features that would be affected by the proposed project. This topic is not evaluated further.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.7-a: Potential for Construction Activities to Disturb Soils and Result in Erosion

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The 2003 SEIR evaluated the potential for earthwork activities to expose soils to erosion during all project phases. Given the sediment-containment function provided by the levees surrounding the RID Area, the relatively small size of disturbance outside the RID Area, and the implementation of erosion controls/best management practices (BMPs) included in Storm Water Pollution Prevention Plans (SWPPP), a substantial amount of soil erosion is not expected to occur with implementation of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.7-a of the 2003 SEIR evaluated whether construction activities could result in a substantial amount of soil erosion. The analysis noted that the combination of levees, a required SWPPP, and implementation of BMPs would minimize potential erosion. This impact was concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR; of the approximately 3,434 acres in the Phase 2 area, approximately 704 acres would be set aside for Resource Conservation - Open Space, while the remainder would be developed (see Table 3-1 in Chapter 3, "Description of the Proposed Project"). Construction activities would involve excavating, moving, filling, and temporary stockpiling of soil in the Phase 2 area. The elevated risk of erosion associated with construction activity has long been acknowledged by regulators. Consequently, programs aimed at mitigating these effects are reflected in policies, laws, and regulations at various levels of government. Project proponents must comply with the CBC and the federal National Pollutant Discharge Elimination System (NPDES), which would require implementation of BMPs that reduce the potential for erosion and loss of topsoil. Because construction of the modified Phase 2 Project would disturb more than one acre of soil, construction would be subject to the Statewide Construction General NPDES Permit from Central Valley Regional Water Quality Control Board. Coverage under this permit requires preparation and implementation of a

SWPPP, as discussed in Section 4.8, "Hydrology and Water Quality." SWPPPs would be required to identify temporary BMPs to prevent the transport of earthen materials from construction sites during periods of precipitation or runoff, and temporary BMPs would be required to prevent wind erosion of earthen materials.

Development of an Erosion and Sediment Control Plan and compliance with the CBC and Statewide Construction General NPDES Permit, including implementation of BMPs and a SWPPP, would reduce the potential for construction to create substantial soil erosion. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.7-b: Loss, Injury, or Death Resulting from Seismic Hazards

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The 2003 SEIR evaluated the potential for the River Islands Project to expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death, through seismic ground shaking. Because of the relatively close presence of the Great Valley Fault, it is possible that the site may experience ground shaking that would result in severe structural and nonstructural damage. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for large earthquakes to generate strong to violent ground shaking at the site. The types of buildings, development, and land uses remain similar relative to seismic risk and sensitivity. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.7-b of the 2003 SEIR evaluated the potential for the River Islands Project to expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death, through seismic ground shaking. This impact was determined to be significant, but implementation of Mitigation Measure 4.7-b would reduce the impact to a less-than-significant level. Mitigation Measure 4.7-b requires project facilities be designed in response to estimated maximum horizontal ground surface accelerations.

Mitigation Measure 4.7-b is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-b are reflected below and will be applied during Phase 2 implementation. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for large earthquakes to generate strong to violent ground shaking at the site. The types of buildings, development, and land uses included in the Phase 2 modifications are the same or similar to those evaluated in the 2003 SEIR (e.g., multi-story buildings, single-story buildings, residences, retail, parks) and do not have any special sensitivity to seismic events and seismic risk does not change. Since certification of the 2003 SEIR, the California Supreme Court decision in *California Building Industry Association v. Bay Area Air Quality Management District* has resulted in changes in the interpretation of CEQA with regard to the effects of existing environmental conditions on a project's future users or residents. The effects of the environment on a project are outside the scope of CEQA unless the project would exacerbate these conditions, as concluded by the California Supreme Court (see *California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal.4th 369, 377 ["we conclude that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users."])). Changes to the State CEQA Guidelines to reflect this decision were adopted on December 28, 2018. Therefore, while development under the modified Phase 2 Project would not risk exacerbating seismic hazards on the project site, it would expose more people to risks associated with damage from earthquakes in the same manner as identified in the 2003 SEIR. Therefore, there is no new significant impact and the

impact is not substantially more severe than the impact identified in the 2003 SEIR. This would remain a **significant** impact as identified in the 2003 SEIR.

### Modified Mitigation Measure 4.7-b: Ground Shaking

*Mitigation Measure 4.7-b shown below includes the original language from the measure as it was adopted, with revisions to reflect the more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR mitigation, with text deletions shown in ~~strike through~~ and additional text shown in underline.*

Project facilities shall be designed for maximum horizontal ground surface accelerations of at least ~~0.23~~ 0.46 g (gravity [g] [equivalent to  $\pm 46$  percent of the earth's normal gravitational strength]). Geotechnical reports completed by ENGeo in ~~2002~~ 2018 for the ~~proposed project River Islands Project (Baseline Geotechnical Assessment: River Islands, Lathrop, California and Preliminary Levee Evaluation: River Islands, Lathrop, California ENGeo 2018a, 2018b)~~ predict that a horizontal ground surface acceleration of ~~0.23~~ 0.46 g at the River Islands site would have a ~~40~~ 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 ~~0.23~~ 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 ~~0.23~~ 0.46 g, risks of loss, injury, or death from ground shaking would be substantially reduced.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-b are reflected above and will be applied during Phase 2 implementation.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.7-b would require project facilities be designed for maximum horizontal ground surface accelerations. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to ground shaking, consistent with the impact conclusion in the 2003 SEIR.

### Impact 4.7-c: Loss, Injury, or Death Resulting from Liquefaction

The 2003 SEIR evaluated the potential for the River Islands Project to result in substantial risk of structural damage and exposure of residents, workers, and visitors on the project site to substantial risk of bodily injury due to liquefaction. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for large earthquakes to result in liquefaction, exposing residents, workers, and visitors on the project site to substantial risk of bodily injury. The types of buildings, development, and land uses remain similar relative to liquefaction risk and sensitivity. Although soil boring data indicates that the potential for liquefaction and settlement may be considered low, portions of the soil profile at the site may be potentially liquefiable under seismic loading. Compared to the 2003 SEIR, there is no new significant impact and the impact is not substantially more severe. This impact would remain **significant** as identified in the 2003 SEIR.

Impact 4.7-c of the 2003 SEIR evaluated the potential for liquefaction caused by an earthquake. The analysis noted that portions of the soil profile at the site may be potentially liquefiable under seismic loading, thus requiring further study. It also discussed that there may be a potentially active blind thrust fault (Great Valley fault) located along the western margin of the San Joaquin Valley that may have the potential to produce higher ground accelerations. This impact was determined to be significant, but implementation of Mitigation Measure 4.7-c would reduce the impact to a less-than-significant level. Mitigation Measure 4.7-c requires a design-level geotechnical study be completed for each project development (e.g., housing subdivision, Employment Center subdivision, school, levee segment), focusing on the liquefaction potential.

Mitigation Measure 4.7-c is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. However, as a result of more recent geotechnical reports prepared for the Phase 2 area

after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-c are reflected below and will be applied during Phase 2 implementation. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for large earthquakes to result in liquefaction, exposing residents, workers, and visitors on the project site to substantial risk of bodily injury. The types of buildings, development, and land uses included in the Phase 2 modifications are the same or similar to those evaluated in the 2003 SEIR (e.g., multi-story buildings, single-story buildings, residences, retail, parks) and do not have any special sensitivity to liquefaction and risks from liquefaction do not change. Structural design is required to adhere to Chapters 16, 18, 33, and the appendix to Chapter 33 of the CBC. These standards would reduce the exposure to potentially damaging seismic vibrations through seismic resistant design, reduce the potential of liquefaction hazards through soil and foundation parameters and grading requirements. City of Lathrop General Plan Seismic Hazards Policies 2, 5, 6, and 9 require preliminary soils test be prepared by a registered geotechnical engineer and that all new building construction conform to the latest seismic requirements of the CBC as a minimum standard. Roads and bridges, including bike and pedestrian overcrossings, would be required to comply with California Department of Transportation design criteria and/or other accepted non-building structure standards to reduce the risks associated with seismic groundshaking.

Nevertheless, the project geotechnical study (ENGEO 2018b) estimated that settlement of up to 12 inches may be expected for portions of the project site at a seismic event with 0.46 g ground acceleration. According to the project geotechnical study, liquefaction-induced settlements of the existing levee areas may be approximately 0 to 12 inches (ENGEO 2018b). Therefore, it may be expected that there are localized areas at the project site that may be susceptible to the effects of liquefaction should a seismic event with sufficient ground motion occur during the expected life of the project. Liquefaction of soils in these areas during a seismic event could result in structural failures of buildings, levees, or other facilities. There is no new significant impact not already identified in the 2003 SEIR and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This would remain a **significant** impact as identified in the 2003 SEIR.

### Modified Mitigation Measure 4.7-c: Liquefaction

*Mitigation Measure 4.7-c shown below includes the original language from the measure as it was adopted, with revisions to reflect the more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR mitigation, with text deletions shown in ~~strike through~~ and additional text shown in underline.*

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 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.

This mitigation measure from the 2003 SEIR has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-c are reflected above and will be applied during Phase 2 implementation.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.7-c would require a design-level geotechnical study be completed for each project development, focusing on the liquefaction potential in the area and identifying appropriate means to minimize/avoid damage from liquefaction. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to liquefaction, consistent with the impact conclusion in the 2003 SEIR.

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### Impact 4.7-d: Loss, Injury, or Death Resulting from Ground Lurching and Soil Settlement

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The 2003 SEIR evaluated the potential for ground lurching and settlement to result in risk of structural damage and exposure of residents, workers, and visitors on the River Islands Project site to risk of bodily injury. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR, with the same types of soils that are unlikely to be susceptible to ground lurching and settlement. The types of buildings, development, and land uses remain similar relative to ground lurching and soil settlement risk and sensitivity. Compared to the 2003 SEIR there is no new significant impact and the impact is not substantially more severe. Because of soil conditions at the project site, this impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.7-d of the 2003 SEIR evaluated whether ground lurching and settlement induced by the settlement of loose granular soils during a seismic event at the project site could result in risk of structural damage or could expose residents, workers, and visitors on the project site to risk of bodily injury. This impact was concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR, with the same types of soils that are unlikely to be susceptible to dynamic densification. Dynamic densification occurs in loose, nonsaturated soils above the groundwater table, when earthquake-induced vibrations reduce the air voids in the soil matrix. Because of the stiffness and cohesive nature of some of the overlying soil layers at the River Islands Project site, the relatively shallow groundwater table, and density of the granular materials sampled in the borings above the groundwater table, potential densification of any granular layers above the water table would be considered negligible on the project site. Additionally, the types of buildings, development, and land uses included in the Phase 2 modifications are the same or similar to those evaluated in the 2003 SEIR (e.g., multi-story buildings with the same maximum height, single-story buildings, residences, retail, parks) and do not have any special sensitivity to ground lurching and soil settlement and risks from ground lurching and soil settlement do not change. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

#### Mitigation Measures

No mitigation is required.

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### Impact 4.7-e: Loss, Injury, or Death Resulting from Lateral Spreading and Landslide

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The 2003 SEIR evaluated the potential for the River Islands Project to result in seismically induced lateral spreading and landslide. Preliminary lateral spreading analysis conducted as part of the project geotechnical studies indicate maximum lateral deformation of up to 12 inches could occur along the top of slope at the existing levee locations. However, levees surrounding both the Phase 1 and Phase 2 areas have been completed in compliance with Mitigation Measure 4.7-e. Therefore, this impact would be **less than significant**.

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Impact 4.7-e of the 2003 SEIR evaluated the potential for liquefaction on the River Islands Project site caused by an earthquake. The analysis noted that the potential for lateral spreading appears to be high in the portions of the site underlain by liquefiable sands, but because the site topography is relatively flat, the potential for lateral spreading is generally considered low. However, because of the relatively low strength of the soil materials combined with the slope angles, preliminary lateral spreading analysis indicated a maximum lateral deformation of up to 12 inches could occur along the top of slope at the existing levee locations. This impact was determined to be significant, but implementation of Mitigation Measure 4.7-e would reduce the impact to a less-than-significant level. Mitigation Measure 4.7-e requires a design-level geotechnical study be completed to address levee slope instability.

Mitigation Measure 4.7-e has been implemented for the Phase 1 Project and flood protection improvements consisting of levees surrounding the Phase 2 area have since been completed. Therefore, Mitigation Measure 4.7-e is no longer applicable to the modified Phase 2 Project. Lateral spreading and earthquake-induced landsliding was considered low aside from potential levee work, which has already been completed consistent with applicable mitigation measures, this would be a **less-than-significant** impact.

## Mitigation Measures

No mitigation is required.

### Impact 4.7-f: Expansive or Otherwise Unstable Soils

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The 2003 SEIR evaluated whether shrinking and swelling of soils could result in damage to structures, underground utilities, and other facilities on the River Islands Project site. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for expansive soils to result in damage to structures, underground utilities, and other facilities in the Phase 2 area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because some soils on the project site have high plasticity, this impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.7-f of the 2003 SEIR evaluated the potential for expansive soils to result in damage over time to building foundations, underground utilities, and other subsurface facilities. This impact was determined to be significant, but implementation of Mitigation Measure 4.7-f would reduce the impact to a less-than-significant level. Mitigation Measure 4.7-f requires a design-level geotechnical study addressing whether expansive soils are present in the development area and include measures to address these soils where they occur.

Mitigation Measure 4.7-f is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for expansive soils to result in damage to structures, underground utilities, and other facilities in the Phase 2 area. The types of buildings and utilities included in the Phase 2 modifications are the same or similar to those evaluated in the 2003 SEIR and do not have any special sensitivity to expansive soils. City of Lathrop General Plan Seismic Hazards Policies 7 and 9 require that a preliminary soils test be prepared by a registered geo-technical engineer and that any recommended action approved by the Building Official shall be incorporated into site preparation and the construction of each dwelling. Based on the geotechnical report (ENGEO 2018b), the plasticity rating of the soil at the project site ranges from low (non-plastic) to high (expansive soils), with an anticipated settlement of approximately ½ inch from every 2 to 3 feet of fill placed above existing levee grades. Compared to the 2003 SEIR, there is no new significant impact and the impact is not substantially more severe. Therefore, this impact would remain **significant** as identified in the 2003 SEIR.

### 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.7-f would require a design-level geotechnical study be completed for each project development to address expansive soils where they occur and require recommended measures be implemented. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to shrink-swell potential, consistent with the impact conclusion in the 2003 SEIR.

## Impact 4.7-g: Exposure of Subsurface Facilities to the Effects of Corrosive Soils

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The 2003 SEIR evaluated whether corrosive soils would cause damage to buried concrete slabs and foundations and buried metal pipes during project operation. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for corrosive soils to result in damage to subsurface facilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because soils on the project site may have a moderate to low potential for corrosion to buried metals, this impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.7-g of the 2003 SEIR evaluated the potential for corrosive soils to cause damage to subsurface facilities during the operation of the River Islands Project. This impact was determined to be significant, but implementation of Mitigation Measure 4.7-g would reduce the impact to a less-than-significant level. Mitigation Measure 4.7-g requires a design-level geotechnical study addressing whether corrosive soils are present in the development area and include measures to address these soils where they occur.

Mitigation Measure 4.7-g is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-g are reflected below and will be applied during Phase 2 implementation. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for corrosive soils to result in damage to buried concrete slabs and foundations and buried metal pipes during operation of the modified Phase 2 Project. The types of buildings and utilities included in the Phase 2 modifications are the same or similar to those evaluated in the 2003 SEIR and do not have any special sensitivity to corrosive soils. Based on the geotechnical report (ENGEO 2018b), it appears that the site soils may have a moderate to low potential for corrosion to buried metals. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain **significant** as identified in the 2003 SEIR.

### Modified Mitigation Measure 4.7-g: Corrosive Soils

*Mitigation Measure 4.7-g shown below includes the original language from the measure as it was adopted, with revisions to reflect the more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR mitigation, with text deletions shown in ~~strike through~~ and additional text shown in underline.*

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 ~~or Type II Modified~~ cement. Appropriate measures identified in each geotechnical study shall be implemented during project construction.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2. However, as a result of more recent geotechnical reports prepared for the Phase 2 area after certification of the 2003 SEIR, some clarifications and refinements to text of Mitigation Measure 4.7-g are reflected above and will be applied during Phase 2 implementation.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.7-g would require a design-level geotechnical study be completed for each project development to address corrosive soils where they occur and require recommended measures be implemented. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to corrosive soils, consistent with the impact conclusion in the 2003 SEIR.



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## Impact 4.7-h: Loss of Access to Mineral Resources

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The 2003 SEIR evaluated the potential for development of the River Islands Project to result in the loss of access to potentially significant sand deposits. The Phase 2 area is not located within an area where known mineral resources are located. Therefore, there would be **no impact**.

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Impact 4.7-h of the 2003 SEIR evaluated whether development of permanent structures on land classified MRZ-2 would result in the loss of access to potentially significant sand deposits. The analysis noted that approximately 10 acres in the eastern portion of the River Islands Project site contain sand deposits classified as MRZ-2. These 10 acres are entirely in the Phase 1 area. Development of these 10 acres of MRZ-2 land (which has already occurred) was identified in the 2003 SEIR as removing less than 2 percent of the available MRZ-2 lands in the project vicinity. In addition, the small size and isolated nature of the sand deposits may make it undesirable economically to mine this resource. This impact was concluded to be less than significant in the 2003 SIER and no mitigation was required.

The Phase 2 area is not located within an area where known mineral resources are located. Development of the modified Phase 2 project site would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. **No impact** would occur.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The Paradise Road widening and improvement would not require the construction of any septic tanks. Therefore, no impacts related to this issue would occur. As with the modified Phase 2 Project, the area is underlain by quaternary alluvium from the Holocene period that is generally less than 10,000 years old; these soils are generally not considered paleontologically significant. Therefore, no impacts related to paleontological resources would occur.

The implementation of erosion controls and BMPs are required to be included in SWPPPs for any construction project disturbing more than one acre of soil; therefore, the potential for soil erosion would be the same as evaluated for the modified Phase 2 Project (Impact 4.7-a) and the impact would remain less than significant. Seismic conditions are regional in nature and, therefore, the Paradise Road widening and improvement area would have the same level of risk associated with damage from earthquakes and associated liquefaction as identified for the modified Phase 2 Project (Impacts 4.7-b and 4.7-c). The soil types are similar to the types found in the Phase 2 area; primarily Merritt, with pockets of Grangeville clay loam and Egbert silty clay loam (Natural Resources Conservation Service 2019). These soil types are unlikely to be susceptible to ground lurching and settlement (Impact 4.7-d); lateral spreading and earthquake-induced landsliding are also considered low for these soils types and the topography of the area (Impact 4.7-e). The Paradise Road widening and improvement area would have the same potential for expansive soils and corrosive soils (Impacts 4.7-f and 4.7-g) and would require a design-level geotechnical study, similar to the modified

Phase 2 Project. Therefore, significance conclusions for each of these impacts would be the same for a potential Paradise Road widening and improvement as described above for the modified Phase 2 Project.

The Paradise Road widening and improvement area has the same mineral classifications as the Phase 2 area and therefore, as identified in analysis above of the modified Phase 2 Project, would have no impact (Impact 4.7-h).

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening and improvement to support implementation of the road widening would be required to implement the mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Modified Mitigation Measure 4.7-b, Ground Shaking; Modified Mitigation Measure 4.7-c, Liquefaction; Adopted Mitigation Measure 4.7-f, Shrink-Swell Potential; and Modified Mitigation Measure 4.7-g, Corrosive Soils. These mitigation measures would be equally effective at reducing any significant geology and soils impacts to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. In addition, like all public roadway infrastructure projects, widening and improvement of Paradise Road would be subject to applicable building codes and engineering standards. Therefore, it would be designed and constructed to withstand anticipated seismic forces and accommodate local soil conditions. Compared to the modified Phase 2 Project, the Paradise Road widening and improvement would have no new significant impacts and the impacts would not be substantially more severe.

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## 4.8 HYDROLOGY AND WATER QUALITY

This section identifies the regulatory context and policies related to hydrology and water quality, describes the existing hydrologic conditions at the project site, and evaluates potential hydrology and receiving water quality impacts of the modified Phase 2 Project. Potential effects on the capacity of City of Lathrop (City) water supply, sewer/wastewater, and drainage/stormwater facilities are addressed in Section 4.11, "Public Utilities."

Section 4.8, "Hydrology and Water Quality," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to hydrology, hydraulics, and water quality. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information available for the project to provide detailed analysis. The main sources of information included documents from the City of Lathrop, South San Joaquin Irrigation District (SSJID), the project-specific draft water supply assessment (WSA), and personal communications with representatives of the City.

The 2003 SEIR concluded that there would be a beneficial impact related to diversion effects on Old River hydrology (Impact 4.8-f); diversion effects on Old River water quality (Impact 4.8-g); water discharges to the Delta (water quality)(Impact 4.8-i); and flood protection for the RID Area (Impact 4.8-l). The 2003 EIR concluded that there would be a less-than-significant impact related to interior lake quality (Impact 4.8-b); water discharges to the Delta (hydrology)(Impact 4.8-h); water discharges to the Delta (water quality) (Impact 4.8-i); flood protection for the RID Area (Impact 4.8-l); surrounding flood stage elevations (Impact 4.8-m); non-flood hydrology in surrounding waterways (Impact 4.8-n); groundwater quality and supply during project operation (Impact 4.8-p); and water supplies to other users (Impact 4.8-q).

The 2003 SEIR concluded that impacts related to RID Area construction sediment and water quality contamination (Impact 4.8-a) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-a, which requires preparation and implementation of a stormwater pollution prevention plan (SWPPP) (including an erosion control and construction plan and an environmental monitoring and mitigation compliance and reporting program); impacts related to earth moving in or adjacent to water bodies (Impact 4.8-c) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-c, which requires actions to be taken to reduce the potential for construction-related contamination and adherence to applicable requirements in Mitigation Measure 4.8-a; impacts related to in-water project features (Impact 4.8-d) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-d, which requires implementation of Mitigation Measure 4.8-a and 4.8-c; impacts related to maintenance of utility crossing (Impact 4.8-e) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-e, which requires an environmental monitor during drilling operations, a reconnaissance survey before drilling operations; implementation of boring measures to reduce a frac-out; cease of drilling operations and notification of the regional water quality control board (RWQCB) if a frac-out is detected, and implementation of relevant measures from Mitigation Measure 4.8-a and 4.8-c; impacts related to maintenance dredging of back bays (Impact 4.8-j) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-j, which requires dredging to occur during low tide and during low flows, the use of suction to minimize sediment release, adherence to all local, state, and federal regulations regarding turbidity reduction measures and dredged material disposal applicable to this activity, including developing and implementing a SWPPP, and adherence to Mitigation Measure 4.8-a; impacts related to increased boat traffic (Impact 4.8-k) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-k, which requires the establishment of "no-wake zones," providing project residents boater education materials, posting pertinent laws and waste discharge requirements, and providing and maintaining waste collection receptacles; impacts related to groundwater quality during construction (Impact 4.8-o) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.8-o, which requires 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.

## 4.8.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

### FEDERAL

#### Clean Water Act

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs and authorizes water quality control activities by EPA as well as the states. Various elements of the CWA address water quality. These are discussed below.

#### CWA Water Quality Criteria/Standards

Pursuant to federal law, EPA has published water quality regulations under Title 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the act, water quality standards consist of designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. As described in the discussion of state regulations below, the State Water Resources Control Board (State Water Board) and its nine RWQCBs have designated authority in California to identify beneficial uses and adopt applicable water quality objectives.

#### National Toxics Rule and California Toxics Rule

In 1992, EPA promulgated the National Toxics Rule (NTR) under the CWA to establish numeric criteria for priority toxic pollutants. The NTR established water quality standards for 42 pollutants for which Section 304(a) water quality criteria exists but that were not covered under California's statewide water quality regulations. As a result of the court-ordered revocation of California's statewide water quality control plans in September 1994, EPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, EPA issued the California Toxics Rule (CTR), which addresses all the priority pollutants for which EPA has issued Section 304(a) numeric criteria that were not included in the NTR. Section 304(a) numeric criteria are those CWA criteria, established by the EPA on a pollutant-by-pollutant basis, required to safeguard the chemical, physical, and biological integrity of a water body.

#### CWA Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that do not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of the pollutant that the water body can receive and still comply with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. In California, implementation of TMDLs is achieved through water quality control plans, known as Basin Plans, of the State RWQCBs. See "State Plans, Policies, Regulations, and Laws," below. The Sacramento San Joaquin Delta and its tributaries as well as the Old River are listed as Impaired Water Bodies under Section 303(d) of the CWA.

#### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source waste discharges and nonpoint source stormwater runoff. Each NPDES permit identifies limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

“Nonpoint source” pollution originates over a wide area rather than from a definable point. Nonpoint source pollution often enters receiving water in the form of surface runoff and is not conveyed by way of pipelines or discrete conveyances. Two types of nonpoint source discharges are controlled by the NPDES program: discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the maximum extent practicable. The RWQCBs in California are responsible for implementing the NPDES permit system (see the discussion of “State Plans, Policies, Regulations, and Laws” below).

### **Section 401 Water Quality Certification/Waiver**

Under Section 401 of the CWA, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) must first obtain a certificate from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirements is delegated by the State Water Resources Control Board (SWRCB) to the nine regional boards.

### **Pretreatment Requirements**

Under the CWA, EPA was required to establish pretreatment standards to prevent the discharge into a Publicly Owned Treatment Works (POTW) of any pollutant that would interfere with, pass through untreated, or otherwise be incompatible with such treatment works. Each POTW capable of treating more than 5 million gallons per day (mgd) is required to develop and enforce specific local limits for discharges to the POTW. The development and implementation of local limits by POTWs is a federal requirement under the General Pretreatment Regulations of the Clean Water Act. EPA is responsible for enforcing the National Pretreatment Program at the federal level. At the state level in California, Pretreatment Program enforcement is the responsibility of the California RWQCBs.

### **Antidegradation Policy**

The federal antidegradation policy has been in existence since 1968. The policy is designed to protect existing uses and water quality and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions: (1) existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

### **National Flood Insurance Act**

The Federal Emergency Management Agency (FEMA) is tasked with responding to, planning for, recovering from and mitigating against disasters. The Federal Insurance and Mitigation Administration within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that aid with mitigating future damages from natural hazards.

FEMA prepares Flood Insurance Rate Maps (FIRMs) that delineate the regulatory floodplain to assist local governments with the land use planning and floodplain management decisions needed to meet the requirements of NFIP. Floodplains are divided into flood hazard areas, which are areas designated per their potential for flooding, as delineated on FIRMs. Special Flood Hazard Areas are the areas identified as having a one percent chance of flooding in each year (otherwise known as the 100-year flood). In general, the NFIP mandates that development is not to proceed within the regulatory 100-year floodplain if the development is expected to increase flood elevation by 1 foot or more.

## STATE

### California Porter-Cologne Act

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

Under the Porter-Cologne Act, each RWQCB must formulate and adopt a water quality control plan (known as a "Basin Plan") for its region. The Basin Plan for the Central Valley Region includes a comprehensive list of waterbodies within the region and detailed language about the components of applicable Water Quality Objectives (WQOs). The Basin Plan recognizes natural water quality, existing and potential beneficial uses, and water quality problems associated with human activities throughout the Sacramento and San Joaquin River Basins. Through the Basin Plan, the Central Valley RWQCB executes its regulatory authority to enforce the implementation of TMDLs, and to ensure compliance with surface WQOs. The Basin Plan includes both narrative, and numerical WQOs designed to provide protection for all designated and potential beneficial uses in all its principal streams and tributaries. Applicable beneficial uses include:

- ▶ municipal and domestic water supply;
- ▶ irrigation agricultural supply;
- ▶ ground water recharge;
- ▶ freshwater replenishment;
- ▶ navigation;
- ▶ non-contact and contact water recreation;
- ▶ commercial and sport fishing, aquaculture;
- ▶ warm freshwater habitat;
- ▶ cold freshwater habitat;
- ▶ estuarine habitat;
- ▶ wildlife habitat;
- ▶ preservation of biological habitats of special significance, rare, threatened, or endangered species;
- ▶ migration of aquatic organisms;
- ▶ and spawning, reproduction, and/or early development;

The Central Valley RWQCB also administers the adoption of waste discharge requirements (WDRs), manages groundwater quality, and adopts projects within its boundaries under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit).

### NPDES Construction General Permit for Stormwater Discharges Associated with Construction Activity

The State Water Board adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non stormwater discharges to storm sewer systems and other waters. A SWPPP must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

## **NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems**

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s). Stormwater is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways or parking lots and can carry with it pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria and metals. The runoff can then drain directly into a local stream, lake or bay. Often, the runoff drains into storm drains which eventually drain untreated into a local waterbody.

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

## **California Water Code**

The California Water Code is enforced by the California Department of Water Resources (DWR). The mission of DWR is "to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments." DWR is responsible for promoting California's general welfare by ensuring beneficial water use and development statewide.

Under the Reclamation District Act (Water Code Section 50000 et seq.), Reclamation District (RD) 2062 was formed in 1922. RD 2062 maintains and operates the urban and agricultural levees that protect the River Islands development portion of the Stewart Tract, including the urban levees that provide 100-year and eventually 200-year flood protection to the River Islands development area.

## **Sustainable Groundwater Management Act**

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030 and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015 and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

Pursuant to the SGMA, any local agency that has water supply, water management or land use responsibilities within a groundwater basin may elect to be a "groundwater sustainability agency" (GSA) for that basin (Water Code Section 10723). The City has formed an exclusive GSA for its jurisdiction within the area formerly overlying the Eastern San Joaquin Subbasin, east of the San Joaquin River. The following seven agencies are part of the Tracy Subbasin GSA and are working cooperatively to develop a single groundwater sustainability plan (GSP): Banta-Carbona Irrigation District; Byron-Bethany Irrigation District; City of Lathrop; City of Tracy; County of San Joaquin; Stewart Tract; and West Side Irrigation District (GEI Consultants, Inc. 2020). The portion of the city overlying the Tracy Subbasin is managed by the Stewart Tract GSA, formed by RD 2062. In February 2019, DWR approved a Basin Boundary Modification Request that incorporates all of the City of Lathrop in the Tracy Subbasin and removes the City from the Eastern San Joaquin Subbasin. The City will be coordinating with the Tracy Subbasin GSAs to develop a GSP that needs to be completed and approved by January 31, 2022 (City of Lathrop 2020).

## **State Plan of Flood Control**

Section 9110(f) of the California Water Code defines the SPFC as follows, "'State Plan of Flood Control' (SPFC) means the state and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section



12648) of Chapter 2 of Part 6 of Division 6 for which the board or the department has provided the assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361.”

The SPFC encompasses a wide network of facilities, which range from major structures such as levees, drainage pumping plants, drop structures, dams and reservoirs, and major channel improvements, to minor components such as stream gauges, pipes, and bridges.

### **Toxic Pollutants (Inland Surface Waters and Enclosed Bays and Estuaries Plan)**

To comply with the legislative directive in Water Code Section 13393 to adopt sediment quality objectives, the SWRCB adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California in 2000.

This state policy for water quality control (Policy), adopted by the State Water Resources Control Board on March 2, 2000 and effective by May 22, 2000, applies to discharges of toxic pollutants into the inland surface waters, enclosed bays, and estuaries of California subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the Water Code) and the federal CWA. The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency. The policy outlines steps to the develop TMDLs to ensure achievement of water quality standards (i.e., water quality criteria or objectives, and the beneficial uses they are intended to protect, as well as the State and federal antidegradation policies).

### **Antidegradation Policy**

The antidegradation policy for water quality was adopted by the SWRCB and has the goal of maintaining high-quality waters in California. The antidegradation policy requires that the disposal of wastes into state waters shall be regulated so as to achieve the highest water quality consistent with maximum benefit to the people of the state and so as to promote the peace, health, safety, and welfare of the people of the state. The policy prescribes the following:

- a. Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.
- b. Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements which would ensure (1) pollution or nuisance would not occur and (2) the highest water quality consistent with the maximum benefit to the people of the state would be maintained.

## **LOCAL**

### **Central Valley Flood Protection Act**

The Central Valley Flood Protection Act of 2008 establishes the 200-year flood event as the minimum level of protection for urban and urbanizing areas. As part of the state's FloodSAFE program, those urban and urbanizing areas protected by flood control project levees must receive protection from the 200-year flood event level by 2025. As of August 2020, the Lathrop City Council adopted a finding of adequate progress for Phase 1 River Islands levee system towards achieving the FloodSAFE program urban level of flood protection and is expected to adopt a finding of adequate progress for the Phase 2 levee system in late 2020.

The DWR and Central Valley Flood Protection Board (CVFPB) collaborated with local governments and planning agencies to prepare the 2012 Central Valley Flood Protection Plan (CVFPP) (DWR 2012), which the CVFPB adopted on June 29, 2012. The objective of the 2012 CVFPP is to create a system-wide approach to flood management and protection improvements for the Central Valley and San Joaquin Valley. The Central Valley Flood Protection Act calls for updates to the CVFPP every 5-years. The 2017 Update to the Central Valley Flood Protection Plan was adopted by the CVFPB in August 2017. The 2017 update will guide investments in multi-benefit flood protection projects over the next 30 years.

## SWRCB Bay-Delta Plan

Protection of the Bay-Delta watershed and its many beneficial uses is one of the predominate responsibilities and priorities of the SWRCB. The SWRCB is responsible for adopting and updating the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (Bay-Delta Plan), which establishes water quality control measures and flow requirements needed to provide reasonable protection of beneficial uses in the watershed. The Bay-Delta Plan was adopted by the SWRCB in 1995 which identified and protected municipal, industrial, agriculture, and fish and wildlife beneficial water uses. The Bay-Delta Plan supplements the other water quality control plans that cover the Bay-Delta Estuary; together they include all necessary elements of water quality control plans in accordance with Water Code sections 13241 and 13242 and federal requirements.

The Bay-Delta Plan provides the component of a comprehensive management package for the protection of the Estuary's beneficial uses that involves salinity (from saltwater intrusion and agricultural drainage) and water project operations (flows and diversions), as well as a dissolved oxygen objective. Like all water quality control plans, this plan consists of: (1) beneficial uses to be protected; (2) water quality objectives for the reasonable protection of beneficial uses; and (3) a program of implementation for achieving the water quality objectives.

The State Water Board is now engaged in urgent efforts to address prolonged and precipitous declines of native aquatic species in the Bay-Delta and the ecosystem they depend upon. The Bay-Delta Plan is being updated through two separate processes (Plan amendments):

1. On December 12, 2018, through State Water Board Resolution No. 2018-0059, the State Water Board adopted the Plan amendments and Final SED establishing the Lower San Joaquin River flow objectives and revised southern Delta salinity objectives. On February 25, 2019, the Office of Administrative Law approved the Plan amendments, which are now in effect.
2. The State Water Board is also considering Plan amendments focused on the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne rivers), Delta outflows, and interior Delta flows (SWRCB 1995, 2019).

## Multi-Agency Post Construction Stormwater Standards Manual

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers and builders in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ). The Agencies have collaborated to prepare this 2015 Multi-Agency Post-Construction Stormwater Standards Manual (Manual) to assist the development of community in complying with the requirements of Provision E.12 of the Phase II Permit and local ordinances. The Manual provides tools and guidance for planning, implementing, and maintaining effective water quality impacts, including hydromodification, from stormwater and non-stormwater discharges (Larry Walker Associates 2015).

## City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

### Resource Management Element

#### Plan Policies and Proposals

6. The visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments by the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams or similar features which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites. The multi-purposes use of water bodies for surface water drainage, flood control, wastewater reclamation, wildlife management, recreation and visual amenity is encouraged.

## **Community Development Element**

### **Plan Policies and Proposals**

2. Urban development outside the existing city limits shall not be allowed to occur until reasonable certainty is established that additional firm supplies of potable water will be available to meet the needs of urban expansion into perpetuity.
4. In developing additional groundwater sources to meet requirements for firm water supply, the City will be required to meet State and Federal standards of water quality, including concern for such factors as taste, odor control, color, removal of any unique compounds of minerals identified through water testing, and need for disinfection and/or residual chlorination.

### **Stewart Tract Flood Control and Drainage Policies**

1. Flood control and drainage construction is to meet standards set by the U.S. Corps of Engineers, the Federal Emergency Management Agency (FEMA), the California State Reclamation Board, the California Department of Water Resources, and Reclamation District No. 2062. In each case, the most conservative requirements will govern unless otherwise agreed to by the agencies involved.
2. Levees along the San Joaquin, Old River and Paradise Cut require reconstruction to elevations that meet Project levee Standards (approximately 20 feet above mean sea level at the juncture of the San Joaquin and Old River, 25 feet at Mossdale Bridge, 25 feet at Paradise Cut and Old River and 31 feet on the San Joaquin River at the Union Pacific Railroad right-of-way, one-half mile south of Interstate 5). The required increase in levee height cannot be determined precisely until field mapping and soil investigations of the levees have been completed. All levee construction (within their authority) is to be accomplished under Encroachment Permits issued by the California State Reclamation Board.
3. Analysis shall be provided during amendments to the Drainage System Master Plans to indicate that no new flood threats will be created external to the Lathrop planning area as a result of flood control and drainage works constructed with and perimeter to the planning area.
4. Amendments to the Drainage System Master Plans will require the determination of required conveyance systems and pumping stations, including the availability of standby power units for pump station operation. The financing of levee reconstruction for the Stewart Tract should provide for local reclamation district management of the funds in accordance with plans approved by appropriate federal, state and local agencies. Phased levee reconstruction should be integrated with City approved plans for phased urbanization. Work should proceed under a financial program and work schedule reviewed by the City of Lathrop, including capital costs, costs of operation and maintenance and methods for achieving periodic repairs, reconstruction and system up-grading.
5. Amendments to the Drainage System Master Plan shall include provision for sites and works that eventually may be required for the removal of surface water contaminants prior to discharge to water courses.
6. The costs of flood control facilities and for surface water drainage systems in all sub-plan areas, should be funded entirely by affected land developers or other non-City financing. These costs must also cover the costs of City review and monitoring of work proposals, permits and land acquisitions, including legal, engineering and right-of-way work to be conducted by or for the City.
7. The costs of operating and maintaining flood control and drainage facilities by the City are to be funded through the creation of maintenance districts or other appropriate mechanisms that avoid burdening the General Plan.
8. The design of surface water detention and conveyance facilities may provide for multi-purpose recreational and wildlife habitat use of surface waters within recreation and other open space corridors to the maximum feasible extent. Detention reservoirs should assist in controlling the rate of surface water runoff and for the control of debris, sediment and contaminants.

9. Positive control of surface water runoff and sediment during wet weather is required for all types of construction activity required as part of the urban development process. This should include requirements for avoiding excessive slopes, trapping of sediments and debris, prohibition of grading during periods of rainfall, requirements for stockpiling and reuse of native topsoil and revegetation or temporary covering of barren areas to avoid sedimentation of drainageways.

### **Resource Management Element**

#### **Vegetation, Fish and Wildlife Policies**

5. Land use within areas of riparian habitat shall be restricted to nature-oriented passive recreation, which may include an arboretum, zoological gardens, hiking and nature study essential linear infrastructure and other such uses compatible with existing or enhanced riparian habitats. Structures, which would reduce the amount of area available for water detention, should be prohibited within the Paradise Cut flood plain unless they are accompanied by concurrent expansion of such detention areas in or adjacent to Paradise Cut.
7. The visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments by the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams or similar features which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites. The multi-purposes use of water bodies for surface water drainage, flood control, wastewater reclamation, wildlife management, recreation and visual amenity is encouraged.

#### **City of Lathrop Integrated Water Resources Master Plan**

In December 2019, the City of Lathrop adopted its Integrated Water Resources Master Plan (IWRMP), a comprehensive update to the City's water, wastewater and recycled water master plans. The IWRMP is a component of the City's General Plan and is used to support CIP planning, utility operations, regulatory permit compliance, and establishing utility budgets, rates and development fees.

#### **City of Lathrop Water Conservation Ordinance**

The City of Lathrop Water Conservation Ordinance is found in Chapter 13.08 of the City Code. Article 120- mandatory requirements in promotion of water conservation establishes prohibited uses for potable water, drinking water, and irrigation water.

## **4.8.2 Environmental Setting**

The environmental setting provided on pages 4.8-16 through 4.8-31 of the 2003 SEIR is relevant to understanding the potential hydrology and water quality impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

## **HYDROLOGY**

### **General Surface Hydrology**

#### **Bay-Delta**

The Delta is located between the Sacramento and San Joaquin rivers and extends inland from the confluence of the two rivers west of Antioch to Sacramento and south of Stockton. The Delta covers approximately 1,500 square miles, is interlaced with hundreds of miles of waterways, and includes flows from 19 tributary rivers (including the San Joaquin River). The Delta is clearly delineated by a legal boundary that extends from San Francisco Bay eastward to Sacramento in the northeast and the Mossdale area in the southwest. The River Islands Project lies entirely within the legal boundary of the Delta.

The Sacramento River contributes roughly 75 to 80 percent of the Delta inflow in most years, while the San Joaquin River contributes about 10 to 15 percent (City of Lathrop 2002:4.8-16). The minor flows of the Mokelumne, Cosumnes, and Calaveras rivers, which enter into the eastern side of the Delta, contribute the remainder. The rivers flow through the Delta and into Suisun Bay, San Pablo Bay, San Francisco Bay, and the Pacific Ocean. Historical annual Delta inflow has averaged approximately 23 million acre-feet (MAF) from 1945 to 1995, with a minimum inflow of approximately 6 MAF in 1977 and a maximum of approximately 70 MAF in 1983 (CCWD 1998:4.3-5, cited in City of Lathrop 2002).

The Delta is home to roughly 1,000 miles of channels; 1,100 miles of levees; and approximately 70 "islands," or tracts of land. Delta channels are generally less than 20 feet deep, unless dredged, and vary in width from less than 100 feet to over 1 mile. Some channels are edged with aquatic and riparian vegetation, but most are bordered by steep banks of mud or riprapped levees. Vegetation is generally removed from channel margins to increase floodflow capacity and facilitate levee maintenance.

Hydraulics of this estuarine system are complex. Freshwater inflows to the Delta vary greatly depending on precipitation, snowmelt, and Central Valley Project (CVP) and State Water Project (SWP) operations. During the summer months, most of the inflow to the Delta comes from regulated releases from SWP and CVP reservoirs. Both of these projects withdraw significant volumes of water from the Delta for agricultural and urban use.

Tidal influences are combined with freshwater outflow, resulting in flow patterns that vary daily. Tidal changes strongly influence Delta channel conditions by changing water surface elevation, current velocity, and flow direction twice daily. The average tidal flow at Chipps Island in the western Delta, ebb or flood, is approximately 170,000 cubic feet per second (cfs) (City of Lathrop 2002:4.8-16). The average tidal flow farther inland at the entrance to Clifton Court Forebay averages about 7,700 cfs (City of Lathrop 2002:4.8-17). Delta hydraulics are further complicated by a multitude of agricultural, industrial, and municipal diversions for use within the Delta itself and by CVP and SWP for exports.

The River Islands Project is located in an area identified as the South Delta. Major channels and waterways in the South Delta include the San Joaquin River, Old River, Paradise Cut (all adjacent to the River Islands Project site), Middle River, Grant Line Canal, as well as numerous other canals and sloughs. The CVP and SWP export facilities are located within the Clifton Court Forebay in the South Delta.

Water conditions in the South Delta area are influenced in varying degrees by natural tidal fluctuation, San Joaquin River flow and quality, local agricultural drainage water, CVP and SWP export pumping, local diversions, and channel capacity. These factors affect water levels and availability at some local diversion points. When the CVP, SWP, and local farmers divert water, flows in local channels, many of which are shallow and dead-end, can converge, creating "null zones." A null zone is a reach of a channel where flow is essentially stagnant, due to poor water circulation patterns. Shallow and narrow channels restrict the flow and volume of water supply for agricultural diversions, which can be aggravated by SWP and CVP export pumping, especially at low tides.

### **San Joaquin River**

The San Joaquin River basin is bounded on the west by the Coast Ranges and on the east by the Sierra Nevada. The San Joaquin River itself is 330 miles in length and drains a watershed area of 13,540 square miles from the Sierra Nevada to the Delta. Major tributaries flowing into the San Joaquin River include the Stanislaus, Merced, and Tuolumne Rivers. The River Islands Project is located toward the northern end of the San Joaquin River in the South Delta.

Hydrologic conditions in the San Joaquin River Basin are dominated by snowmelt from the Sierra Nevada. Before completion of major water storage projects on the San Joaquin River and its major tributaries, lower San Joaquin River flows generally peaked in late spring/early summer and dropped to low levels in the fall. Since the completion of Friant Dam (1944), McClure Reservoir (1967 on the Merced River), Don Pedro Reservoir (1971 on the Tuolumne River), and New Melones Reservoir (1979 on the Stanislaus River), the lower San Joaquin River seasonal flow pattern has been significantly altered. Before 1944, (based on the 1923-1944 period of record), the lower San Joaquin River flow tended to peak in May and June with an average monthly flow of almost 11,000 cfs and declined rapidly to an average monthly flow of approximately 1,200-1,300 cfs in August and September. Since 1979, the average monthly flow has peaked in March at just over 10,000 cfs with a more gradual decline to approximately 2,400 cfs in August. (City of Lathrop 2002:4.8-17)

### Old River

Varying levels of San Joaquin River water consistently flow into Old River near Mossdale. During periods of low San Joaquin River flow (less than 2,000 cfs), a large proportion of this flow is diverted into the Old River channel. This can be problematic for fish passage through the San Joaquin River and South Delta because fish are diverted into Old River and may ultimately suffer entrainment in SWP and CVP water diversion pumps or increased predation. Low San Joaquin River flows have also caused problems for water levels and circulation. To alleviate some of these problems, DWR has initiated a program to prevent low-flow water from entering Old River during crucial fish migration periods. The South Delta Temporary Barriers Project, initiated as a test project in 1991, consists of four rock barriers across South Delta channels (DWR 2020). Barriers have been installed at these locations to improve water levels, water circulation, and migration conditions for San Joaquin River salmon.

The "Head of Old River" barrier is located adjacent to the River Islands Project at the confluence of the San Joaquin River and Old River. This barrier is installed twice each year, once in the spring and again in the fall. The barrier's purpose in fall is to improve dissolved oxygen levels in the San Joaquin River between the Head of Old River and Medford Island and to aid adult salmon migration in the San Joaquin River. The barrier's purpose in spring is to reduce the loss of outmigrating San Joaquin fall-run chinook salmon smolts by significantly decreasing their diversion down Old River, consequently reducing their entrainment at the SWP and CVP pumps.

When all four barriers associated with the temporary barriers project are installed, they substantially alter water circulation patterns, especially in Old River. During these times, incoming tide is impounded between the Head of Old River barrier and the upstream channels of the remaining three barriers. During times when all but the Head of Old River barrier is operating, net tidal flow tends to move upstream, out Old River at the Head of Old River and down the San Joaquin River.

### Paradise Cut

Paradise Cut is a flood control bypass that was created in the 1950s as part of the U.S. Army Corps of Engineers (USACE) Lower San Joaquin River Federal Project levee system. There are several canals in the cut, with the main canal consisting of a small historic slough channel. The channel flows along the south side of the Stewart Tract, extending from the San Joaquin River to Old River, but is separated from the San Joaquin River by a low rock weir (Paradise Weir). It is considered a dead-end slough and connects primarily to Old River except during high San Joaquin River flows. When the San Joaquin River flow exceeds 18,000 cfs, the river overflows the Paradise Weir into Paradise Cut. Typically, the only non-flood flow in Paradise Cut results from tidal inflow via Old River, agricultural discharges from adjacent properties, and treated wastewater from Deuel Vocational Institution.

### **Delta Water Use**

The Sacramento-San Joaquin River Delta is the hub of California's major state and federal water development facilities and numerous local water supply projects. Water projects divert water from Delta channels to meet the needs of about two-thirds of the state's population and to irrigate 4.5 million acres. During normal water years, approximately 10 percent of the water reaching the Delta would be withdrawn for local use, 30 percent would be withdrawn for CVP and SWP export, 20 percent would be needed for Delta salinity control, and the remaining 40 percent would become Delta outflow in excess of minimum requirements. The excess outflow would occur almost entirely during the winter and spring runoff season (SWRCB 1999).

The CVP is a federal water supply, flood control, and power generation project operated by the U.S. Bureau of Reclamation (USBR). It is the largest water storage and delivery system in California. The CVP supplies water to more than 250 long-term water contractors whose contracts total 9.3 MAF per year. Much of this water is diverted at the Tracy Pumping Plant in the South Delta and exported south, primarily for agricultural uses.

Like the CVP, the SWP stores runoff from within the Sacramento Valley basin, releases stored water to the Sacramento River and the Delta, and pumps water out of the Delta for delivery to water users in the Bay Area, the San Joaquin Valley, and southern California. The SWP delivers water to 29 long-term contractors, including over 2 MAF to Metropolitan Water District of Southern California. In the South Delta, water is diverted into Clifton Court Forebay, then pumped at the Harvey O. Banks Delta Pumping Plant into the California Aqueduct.

The combined pumping of the SWP and CVP in close proximity in the South Delta can have substantial hydraulic effects throughout the Delta because of the large volume of pumping that can occur relative to overall Delta inflows and outflows. Operation of the CVP and SWP Delta export facilities are coordinated to meet water quality and flow standards set by the SWRCB, USACE, and more recently by federal and state fisheries agencies (USFWS, NMFS, and CDFW).

Delta agricultural water users typically divert directly from the channels near their cropland, using more than 1,800 unscreened pumps and siphons, which vary from 4 to 30 inches in diameter, and with flow rates up to about 200 cfs. These local diversions vary between 2,500 and 5,000 cfs during April through August, with maximum rates in July (SWRCB 1999).

## Groundwater Hydrology

Lathrop overlies the Tracy Groundwater Subbasin (DWR 5-22.15), which is a subbasin of the San Joaquin Valley Groundwater Basin (DWR 5-22). The Tracy Subbasin is a 539-square mile subbasin that includes the northwestern most portion of the San Joaquin Valley Groundwater Basin around the Sacramento-San Joaquin Delta and extends south into the central portion of the San Joaquin Valley. The extent of the Tracy Subbasin is defined by the extent of unconsolidated and semi-consolidated sedimentary deposits that are bounded by the Diablo Range on the west; the Mokelumne and San Joaquin Rivers on the north; the San Joaquin River to the east; and the San Joaquin-Stanislaus County border on the south. The City of Lathrop was formerly within two groundwater basins: the Tracy Groundwater Subbasin and the Eastern San Joaquin Subbasin. DWR approved a basin boundary modification in February 2019, which consolidated the entire City of Lathrop into the Tracy Subbasin. The Tracy Subbasin is not adjudicated, and a basin management plan has not been created. The City of Lathrop is working with the other GSAs in the Tracy subbasin to develop a Memorandum of Understanding and a groundwater sustainability plan for compliance with SGMA.

Most of the fresh groundwater within the subbasin is estimated to be located at depths of less than 1,000 feet, and most of this shallow groundwater is unconfined (City of Lathrop 2019:3.5-4). Several hydrologic formations underlie the Lathrop area; however, only the top two, the Victor and the Laguna formations, are currently utilized as a source of fresh water. The Victor formation is the uppermost formation and extends from the ground surface to a maximum depth of about 150 feet. The formation consists primarily of stream-deposited unconsolidated gravel, sand, silt, and clay. Compared to the underlying formations, the Victor formation is generally more permeable, and the groundwater is typically unconfined. Groundwater wells located on the River Islands Project site indicate that groundwater levels range from approximately 2 feet to 14 feet below the ground surface (City of Lathrop 2002:4.8-19).

During periods of high flow in Delta waterways, the rising groundwater table, along with some seepage through the levees, can cause soils in the low-lying portions of Delta islands to become saturated. This is especially true in the central portion of the Delta, where the soils contain large amounts of peat. In those islands that are below sea level, water is regularly pumped from a depth of 2 to 3 feet below ground level to keep the land from flooding. Seepage rates and dewatering costs increase as the elevation difference between the channel surface and island interior increases. Based on existing pumping records, seepage processes are relatively slow in the compacted sandy soils surrounding the project area and do not respond measurably to short-term fluctuations in channel flow.

Stewart Tract soils are sandy as a result of the change in gradient of the San Joaquin River from a steeper river associated with drainages of the Sierra Nevada to a flatter river associated with tidally influenced flows typical of the South Delta. That change in gradient has subjected the area to a pattern of deposition whereby sediment entrained in the San Joaquin River flows settles out as the river flattens, resulting in sandy soils in the Stewart Tract area, rather than the clay and peat soils encountered on many Delta islands. Because of the permeability of sandy soils, Stewart Tract is subject to greater overall fluctuations in groundwater elevations (from sources other than levee seepage) than Delta islands with clay and peat soils.

## Site-Specific Delta Hydrology

### Existing Water Diversions to the RID Area

Twelve existing intake pumps can be used to pump water into the RID Area for agricultural use. Irrigation water has been historically pumped from four separate locations more than the other eight points of diversion: Intake Pumps 9, 10, 12, and 12a (City of Lathrop 2002:4.8-20). Prior to 2017, water was generally pumped at the same volume from each of these locations. From these pumps, irrigation water was delivered to areas of the property through an irrigation system composed of pipes and open ditches. None of these existing pump stations were metered, and furrow irrigation is the primary irrigation practice on Stewart Tract. Excess irrigation water and drain water were collected in an open ditch drain system. Some of the drain water is reused; the remainder continued through the drainage system to the southwestern corner of the property, where it is pumped into Paradise Cut. With the construction of interior levees in the Phase 1 development area, phased removal of the irrigation system took place and urban development replaced agricultural uses. Pumps 9 and 10, as a result, provide irrigation water to urban landscapes by pumping the water into the interior lake system to help equalize water levels in the lake and supplement other non-potable water sources for irrigating urban landscapes via the RD 2062 Lake 3 Pump Station.

Phased alterations to other diversion points will occur over time with the rest of the RID area, including Phase 2. However, diversions for agricultural irrigation will continue until all the River Islands Project builds out.

Due to the lack of pumping data, agricultural water use on the project site for purposes of the 2003 SEIR was estimated based on the consumptive use of the crops that were planted over the previous 18 years. Specific methods for calculating agricultural water use are presented in Appendix E of the 2003 SEIR.

Based on equations presented in Appendix E of the 2003 SEIR, the average annual pumping volume into the RID Area ranged between approximately 10,400 and 16,600 acre-feet per year (afy), with the mean annual pumped volume of 13,696 af (City of Lathrop 2002:4.8-20). Mean monthly diversions are lowest during October through February and highest during March through September. Irrigation pumping volumes are generally inversely proportional to precipitation; pumping volumes were higher in years with low precipitation and lower in years with high precipitation (City of Lathrop 2002:4.8-20).

### Existing Water Discharges from the RID Area

Agricultural drain water, excess irrigation water, and excess precipitation are collected in the RID Area agricultural drain system. Water from the drain system is pumped into Paradise Cut at a pumping station at the southwest end of the RID Area. This pump station consists of three pumps: a 24-inch 50-hp pump that is activated by an automatic float level in the drain canal and two 16-inch 25-hp pumps that are manually activated when required (City of Lathrop 2002:4.8-21). There are other drain pumps within Stewart Tract, but only the three located at the discharge pump station are used on a regular basis.

There are no records kept for the amount of water pumped from Stewart Tract. To estimate the monthly volume for the 2003 SEIR, electrical records were obtained from Pacific Gas and Electric Company. These electrical records provided information on the amount of energy that was used by all three pumps. The 2003 SEIR estimated annual drain pump discharge into Paradise Cut between 1990 and 2000. The peak year was 1996 with a volume of 11,341 af, and the lowest year was 1991 with 7,300 af pumped. The mean annual discharge pumped from the RID Area is 8,712 afy. The monthly pumping rate ranges from 1,588 af in July to 156 af in December, with the mean monthly pumped discharge of 721 af. More than half of the water volume diverted onto the RID Area is discharged from the RID Area. (City of Lathrop 2002:4.8-21).

### Flood Hydrology

Stewart Tract (and the RID Area) is surrounded by the San Joaquin River on the north and east, Old River on the north, and Paradise Cut on the south. Paradise Cut is a bypass channel designed to divert excess waters from the San Joaquin River during flood events, thereby reducing downstream flood levels on the San Joaquin. The flow in Paradise Cut joins the flow in Old River at the west end of Stewart Tract. The Paradise Weir, which separates Paradise Cut from the San Joaquin River, prevents water from entering Paradise Cut until the flow in the San Joaquin River exceeds approximately 18,000 cfs (City of Lathrop 2002:4.8-21).



The San Joaquin River Basin is subjected to two types of floods: those attributable to prolonged rainstorms during the late fall and winter and those attributable to snowpack melting in the Sierra Nevada during the spring and early summer, particularly during years of heavy snowfall. Major problem areas include the lower San Joaquin River in the project region, where flood flows regularly exceed channel capacities. The potential for flooding under conditions of a 1-in-100 Annual Exceedance Probability (AEP) event (i.e., a water level with a 1 percent chance of being exceeded in any particular year) is high for Stewart Tract. Historic levee breaks on Stewart Tract occurred in 1938, 1950, and 1997. The 1950 failure was located just north of Paradise Weir, at the juncture of Paradise Cut and the San Joaquin River. This failure caused the eastern part of Stewart Tract to become flooded to the western Union Pacific Railroad (UPRR) (formerly Southern Pacific Railroad) embankment. In time, the railroad embankment also failed, which led to flooding in the rest of Stewart Tract. In 1997, flooding again occurred when the Paradise Cut levee failed just upstream of the eastern UPRR bridge. The floodwaters entered the eastern portion of Stewart Tract and were retained by the western UPRR embankment until it failed, allowing the floodwaters to pass onto the rest of the island.

The design flow in the San Joaquin River between Vernalis and Paradise Cut used in the design of the federal project levees in this reach was 52,000 cfs, which at the time (1955) was thought to represent an approximately 1-in-50 AEP. The U.S. Geological Survey estimated that the instantaneous peak flow at the Vernalis gage in the January 1997 flood event, the most recent flood event, was 75,600 cfs, with a peak mean daily flow of 54,300 cfs (City of Lathrop 2002:4.8-22). As stated above, numerous levee failures occurred in the project region during this event, including one on Stewart Tract; however, no levee failures occurred in the RID Area.

Since the January 1997 flood, the USACE and the Reclamation Board began work on the Sacramento and San Joaquin River Basins Comprehensive Study, which was authorized by the U.S. Congress and the California Legislature (see previous discussion in the "Flood Control/Drainage" portion of Section 4.8.1, "Regulatory Setting"). As part of the study, the USACE performed a new hydrologic analysis of the San Joaquin River basin and developed probability-of-failure curves for the levees in the basin. The probability of failure curve was developed for all of the levees within the River Islands study area and indicated that there is a 100 percent probability of levee failure when the river stage is 3 feet below the top of the levee (City of Lathrop 2002:4.8-22).

As noted in Chapter 3, "Description of the Proposed Project," flood protection improvements consisting of levees surrounding both the Phase 1 area and Phase 2 development area have been completed, consistent with plans and entitlements for the provision of a 200-year level of flood protection to meet the Urban Level of Flood Protection requirements under SB 5. The entire River Islands Project site was in the 100-year floodplain at the time of project approval in 2003. To provide flood protection for the RID Area (i.e., all new urban development associated with the project), various flood protection measures have been incorporated into the project design, primarily consisting of constructing and strengthening levees and creating high-ground corridors in and around the RID Area. Levees sufficient to provide 200-year flood protection currently surround the RID Area.

### Tsunami and Seiche

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. Tsunami can cause catastrophic damage to shallow or exposed shorelines. The project site is more than 40 miles from San Francisco Bay and 60 miles from the coast, which is sufficiently distant to preclude effects from a tsunami.

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

## **WATER QUALITY**

Much of the general water quality information presented herein was drawn from data included in the City of Lathrop's Environmental Impact Report for the Lathrop Water, Wastewater, and Recycled Water Master Plan (EDAW 2001, cited in City of Lathrop 2002) and the SWRCB's 1995 Bay-Delta Water Quality Control Plan (SWRCB 1999), as included in the

2003 SEIR. Site-specific information presented herein is based on technical water quality analyses prepared by HSI Hydrologic Systems specifically for the River Islands Project and included as appendices in the 2003 SEIR.

## **General Delta Water Quality**

The water quality of the lower San Joaquin River drainage and the Delta has been substantially affected by human activities. The existing water quality problems of the Delta may be generally placed in the categories of toxic materials, suspended sediments and turbidity, eutrophication and associated dissolved oxygen fluctuations, salinity, and bacteria. Each of these broad categories is discussed briefly below

### **Toxic Chemicals**

Toxic chemicals have impaired water quality in many Delta waterways. High concentrations of some metals from point and nonpoint sources appear to be ubiquitous in the Delta. Mercury contamination of fish is a national problem that has resulted in the issuance of fish consumption advisories in most states, including California. Mercury is a trace metal that can be toxic to humans and other organisms. Mercury occurs naturally in the environment and is also redistributed in the environment as a result of human activities such as mining and the burning of fossil fuels. Once mercury is released into the environment, it cycles through land, air, and water. In aquatic systems, it undergoes chemical transformation to the more toxic organic form, methylmercury, which accumulates in fish and other organisms. The California Office of Environmental Health Hazard Assessment (OEHHA) issued an advisory in 1994 for fish in San Francisco Bay and the Delta (including striped bass and sturgeon from the Delta) based on mercury and PCBs in the fish that were tested (OEHHA 2007). Since that time, additional studies have been conducted and the advisory has been updated. Current advisories from OEHHA include the following fish species: American Shad, Steelhead Trout, Striped Bass, and White Sturgeon (OEHHA 2018).

Pesticides are found throughout the waters and bottom sediments of the Delta. High levels of chlordane, toxaphene, and DDT from agricultural discharges impair aquatic life throughout the Delta, while diazinon can be found in elevated concentrations at various locations. The more persistent chlorinated hydrocarbon pesticides are consistently found throughout the system at higher levels than the less persistent organophosphate compounds. The sediments having the highest pesticide content are found in the western Delta. Pesticides have concentrated in aquatic life in the Delta, and the long-term effects are unknown. The effects of intermittent exposure of toxic pesticide levels in water and of long-term exposure to these compounds and combinations of them are likewise unknown (SWRCB 1999).

### **Suspended Sediments**

Suspended sediments (silts, clays, and organic matter) are abundant in the Delta and cause turbidity throughout the region. Most of these sediments enter the tidal system with the flow of the major tributary rivers. Some enriched areas are turbid as a result of planktonic algal populations, but inorganic turbidity tends to suppress nuisance algal populations in much of the Delta. Continuous dredging operations to maintain deep channels for shipping have contributed to turbidity problems and are a factor in the temporary destruction of bottom organisms through displacement and suffocation (SWRCB 1999).

### **Eutrophication and Dissolved Oxygen**

The most serious enrichment problems in the Delta (which can lead to eutrophication and low dissolved oxygen) are found along the lower San Joaquin River near Stockton and in certain localized areas receiving waste discharges but having little or no net freshwater flow. Low dissolved oxygen levels result in these areas mainly in late summer and coincide with low river flows and high temperatures.

Dissolved oxygen problems can be further aggravated by channel deepening for navigational purposes. The resulting depressed dissolved oxygen levels have not been sufficient to support fish life and, therefore, prevent fish from moving through the area. In autumn, these conditions, together with reversal of natural flow patterns by CVP/SWP export pumping, have created environmental conditions unsuitable for the passage of anadromous fish (chinook salmon) from the Delta to spawning areas in the San Joaquin Valley. Flow augmentation in the San Joaquin River in the vicinity of Stockton would occur if South Delta channel barriers are constructed by DWR as part of the Interim South Delta Program (SWRCB 1999).

Warm, shallow, dead-end sloughs of the eastern Delta support populations of planktonic blue-green algae during summer months. Floating and semi-attached aquatic plants, such as water primrose and water hyacinths, frequently clog waterways in the lower San Joaquin River system during the summer. Extensive growths of these plants have also been observed in other Delta waterways. These plants interfere with the passage of small boat traffic and contribute to the total organic load in the Bay/Delta system (SWRCB 1999).

### **Salinity**

Localized salinity problems may occur when local diversions in shallow, low-capacity channels exceed flows through the channel. When this happens, water stops flowing out of the channel or begins to flow into the channel from both ends. At the same time, drainage return flows continue to be discharged to the channels. These discharges do not move downstream and out of the area but instead become trapped in "null zones" of zero net flow. The lack of circulation prevents better quality water otherwise available from the main channels from freshening the increasingly saline water in the shallow channel, even in wet years. Null zones in the Delta exist predominantly in three areas: in the San Joaquin River between the head of Old River and the City of Stockton, in Old River between Sugar Cut and the CVP intake, and in Middle River between Old River and Victoria Canal (SWRCB 1999).

Reduced tidal influence contributes to broader scale surface water quality problems (including salinity) in the Delta. Previous reclamation of tidal wetlands and construction of levees in areas such as the eastern Delta have inhibited tidal exchange. Historically, larger volumes of water were exchanged twice daily with adjacent tidal wetlands, and the resulting flows helped keep channels open and reduced the risk of water quality problems (SWRCB 1999).

Broad-scale salinity control is necessary in the Delta region because the Delta is contiguous with the ocean, and its channels are at or below sea level. Unless repelled by continuous seaward flow of fresh water, seawater would advance up the estuary into the Delta and degrade water quality. During winter and early spring, flows through the Delta are usually above the minimum required to control salinity. At least for a few months in summer and fall of most years, however, salinity must be carefully monitored and controlled. The monitoring and control are provided by the CVP and SWP and regulated by the SWRCB under its water rights authority (SWRCB 1999).

At present, salinity problems occur mainly during years of below-normal runoff. In the eastern Delta, these problems are largely associated with the high concentrations of salts carried by the San Joaquin River into the Delta. Operation of the CVP/SWP export pumping plants near Tracy draws high-quality Sacramento River water across the Delta and restricts the low-quality area to the southeast corner. Salinity problems in the western Delta result primarily from the incursion of saline water from the San Francisco Bay when freshwater inflow from the Delta to the bay is low (SWRCB 1999).

### **Bacteria**

The bacteriological quality of Delta waters, as measured by the presence of coliform bacteria, varies depending upon proximity of waste discharges and significant land runoff. The highest concentrations of coliform organisms are generally found in the western Delta. However, in other areas, high concentrations often can be found in the vicinity of major municipal waste discharges.

Another water quality concern related to bacteria is the presence of disinfecting byproducts in the Delta. Delta water contains precursors of trihalomethanes (THMs), which are suspected carcinogens produced when chlorine used for disinfecting reacts with natural substances during the water treatment process.

## **General Delta Water Quality Monitoring Programs**

The need for action to correct water quality problems in the Delta arises from recognition that water quality impairment negatively affects, or has the potential to negatively affect, a number of beneficial uses of these waters. Section 303(d) of the CWA requires states to identify and list water bodies with impaired quality with respect to supporting beneficial uses. Through this process, the San Joaquin River and various Delta waterways have been listed as impaired due to a variety of pollutants and stressors.

Long-term, comprehensive surface water quality evaluations of water bodies adjacent to the proposed project site (San Joaquin River, Old River, and Paradise Cut) are limited. Major monitoring programs include the DWR Municipal Water Quality Investigations Program and the DWR D-1485 Water Quality Monitoring Program. The City of Stockton

also monitors ambient water quality in the San Joaquin River to assess potential impacts associated with discharges from its wastewater treatment plant.

### **Total Dissolved Solids**

The salinity of surface waters is often measured by the concentration of total dissolved solids (TDS) measured in milligrams per liter (mg/l). The analysis of existing TDS data shows that median TDS concentrations are greater during critical (drought) water years than during wet/above-normal water years. Median TDS concentrations were higher in the mainstem San Joaquin River at Vernalis (530-560 mg/l) than in southwestern Delta locations (320-380 mg/l) during critical dry years (City of Lathrop 2002:4.8-25). During wet/above-normal water years, TDS concentrations in the mainstem San Joaquin River and the southwestern Delta were similar (180-200 mg/l). No primary water quality criterion currently exists for TDS, although the secondary criterion is 500 mg/l. Electrical conductivity is commonly used as a surrogate parameter upon which to evaluate TDS. A comparison of electrical conductivity to its relevant regulatory standard is discussed below

### **Total Organic Carbon and Dissolved Organic Carbon**

Organic carbon (in both its total and dissolved forms) in surface waters acts as a precursor to the formation of unwanted chemical byproducts (called disinfection byproducts) resulting from chlorination during the drinking water disinfection process. Organic carbon was measured as both total organic carbon (TOC) and dissolved organic carbon (DOC) at three of the seven monitoring sites evaluated in the 2003 SEIR: two in the San Joaquin River and one in Old River (deeper in the Delta). In general, TOC and DOC levels appear to be similar in the San Joaquin River (2.8 to 3.0 mg/l) and the Old River (3.1 to 3.2 mg/l) monitoring locations during wet/above-normal water years (City of Lathrop 2002:4.8-26).

DOC concentrations during critical water years also showed little difference between levels found in the San Joaquin River (3.3 to 3.4 mg/l) and the Old River/Delta (3.4 to 3.7 mg/l) (City of Lathrop 2002:4.8-26). As expected, organic compound concentrations were greater at all sites during critical dry water years than during wet/above-normal water years.

The RWQCB has not adopted water quality objectives for TOC/DOC in the Basin Plan. To date, no findings have been made by the RWQCB that ambient organic carbon concentrations in the Delta are causing or contributing to an impairment of beneficial uses. However, TOC and DOC concentrations are commonly compared to the 2-mg/l and 4-mg/l treatment thresholds of the Disinfection/Disinfection Byproduct (D/DBP) Rule of the federal Safe Drinking Water Act, which are health-based standards applied at the intakes to drinking water treatment plants. These thresholds are to be applied at raw water intakes and are levels above which additional treatment may (but not necessarily would) be required. In comparing the TOC and DOC data with the D/DBP Rule, essentially all monitoring sites exceed the 2-mg/l treatment threshold criterion, while a number of maximum data points exceed the 4-mg/l threshold for TOC.

### **Fecal Coliform and Pathogens**

Fecal coliform bacteria are used as an indicator of the presence of human pathogens in water. Monitoring data typically measure coliform concentrations in Most Probable Number (MPN) per 100 milliliters (ml). MPN is a measure based on a test of whether coliform bacteria are present. The test has two components: (1) determining whether the coliform organism is present (the presumptive test), and (2) if present, then growing the organism and estimating the concentrations of the organism (the confirmed test). The MPN test is based on statistical analysis of the number of positive and negative results obtained by testing multiple samples of equal volume for the presence of coliform. The MPN is not an absolute concentration of organisms that are present, but rather a statistical estimate of the concentration.

Monitoring data show that fecal coliform concentrations decrease in the downstream direction in the San Joaquin River and into the Delta. Median concentrations range from 192 MPN per 100 ml at Vernalis, decreasing to 128 MPN per 100 ml at Mossdale. Fecal coliform levels in the Delta (Old River near Byron) were 12-24 MPN per 100 ml. This is consistent with the frequency of compliance results with the percentage of compliance ranging from 55.5 percent in the San Joaquin River near Vernalis to 90.9 percent at Old River near Byron. Although monitoring data for the pathogens *Giardia* and *Cryptosporidium* are insufficient to allow summary statistics, all data collected in the San Joaquin River (Vernalis) for these pathogens were below the laboratory detection limits of 10 cysts per 100 liters (City of Lathrop 2002:4.8-27).

### **Dissolved Oxygen**

Dissolved oxygen (DO) levels must be maintained above specified levels to protect aquatic life beneficial uses. The Basin Plan specifies that the DO concentration for the San Joaquin River and the Delta shall not be reduced below 5 mg/l, and in the lower San Joaquin River, within the Stockton Deep Water Ship Channel, the DO concentration shall not be reduced below 6 mg/l from September 1 through November 30.

Monitoring data show that DO concentrations regularly fall below the 5-mg/l and 6-mg/l standards in the San Joaquin River near Stockton (City of Lathrop 2002:4.8-27). Low or negative streamflow past Stockton due to tidal influences reduces dilution and mixing, which reduces re-aeration of the water. Oxygen depletion in the San Joaquin River and other water bodies in the Central Valley is typically highest in late summer and fall when high water temperature reduces the oxygen-carrying capacity of the water. These low DO concentrations are called an "oxygen sag" and may act as a barrier to upstream migration of adult San Joaquin fall-run chinook salmon in the San Joaquin River.

In 1998, the RWQCB adopted a revised 303(d) list that identified low DO levels in the lower San Joaquin River as a high-priority problem and committed to developing a waste load allocation or TMDL by 2011 that achieves the DO objectives of the lower San Joaquin River as established in the Basin Plan.

An analysis of DO data collected during critical water years revealed DO concentrations in the upper San Joaquin River (9.0 to 10.0 mg/l) that were higher than those in the Delta (7.6 to 8.1 mg/l). This same general pattern of upper San Joaquin River DO concentrations being greater than southwestern Delta concentrations was also observed during wet/above-normal water years. Unlike TDS and DOC, DO concentrations during critical dry water years were not dissimilar from DO concentrations collected during wet water years.

Monitoring data for DO show near total compliance with the Basin Plan DO objectives (minimum of 5 mg/l) in the San Joaquin River upstream of the Stockton Deep Water Ship Channel (City of Lathrop 2002:4.8-27). Minimum levels in this reach range from 4.2 to 6.9 mg/l. Similar compliance with objectives is found in the Delta (Old River near Byron).

### **Electrical Conductivity**

Electrical conductivity (EC) is a measurement of the ionic activity of water and is positively correlated with TDS concentrations in water. EC is typically measured as micromhos per centimeter ( $\mu\text{mhos/cm}$ ). The unit  $\mu\text{mhos/cm}$  is a measurement of the ability of water to carry an electrical current and varies according to the number and type of ions in the water (the higher the ions and corresponding salts, the higher the EC). For Delta waters, 1 EC unit is considered equivalent to 0.64 part per million of dissolved solids. Discharges from agriculture, wetlands, mines, industries, and urban areas contribute TDS, and therefore EC, to the San Joaquin River and the Sacramento-San Joaquin River Delta. Seasonal and site-specific objectives for EC are routinely exceeded in the San Joaquin River near Vernalis and at Mossdale Bridge, whereas desired standards are typically met at the other monitoring locations (City of Lathrop 2002:4.8-28). As with TDS, specific conductance values are greater during critical (dry) water years than wet/above-normal water years.

### **pH**

The measurement of pH indicates the concentration of hydrogen ions in solution and expresses the intensity of an acid. Neutral pH has a value of 7.0, with lower values indicating greater acidity and higher values indicating basic conditions. Aquatic life may begin to be adversely affected by pH values that are less than 6.5 or greater than 8.5. In natural waters, pH levels are influenced by both the photosynthesis of algae and aquatic plants and the respiration of plants, animals, and bacteria.

In an effort to limit the exposure of aquatic organisms to potentially harmful pH levels, RWQCB has established a Basin Plan pH range criteria from 6.5 to 8.5 pH standard units. An analysis of critical water year pH data revealed that median pH levels in the main stem San Joaquin River ranged from 7.9 to 8.1 pH units. Slightly lower pH was observed in the Delta (Old River near Byron) (7.6 to 7.7 pH units). During wet/normal water years, pH values are lower than in critical water years and in general are similar in the San Joaquin River and the Delta. Intense algal growth or eutrophication can affect pH. During the process of photosynthesis, algal growth in shallow areas can elevate pH levels. Compliance with the Basin Plan pH objective ranged from 90 percent to 100 percent of the time at all monitoring sites.

### Temperature

Ambient water temperatures have a clear influence on the aquatic species composition of a water body. Separate beneficial uses are designated in the Basin Plan for warm water uses and cold water uses. The Lower San Joaquin and Delta waterways are classified as supporting warm water fisheries, although efforts are underway to improve the San Joaquin River as a migration corridor for various endangered species that favor cold water conditions.

Specific numeric Basin Plan objectives have not been adopted for temperature in the San Joaquin River or the Delta. Median water temperatures collected during critical water years showed the mainstem San Joaquin River to be at least 1 to 3 degrees centigrade cooler than median temperatures calculated for the Delta. Data generally suggest that temperatures increase in the downstream direction in the San Joaquin River. As expected, median temperatures appear to be generally higher during critical (dry) water years, when there is less water in the river, than during wet/above-normal water years. At the San Joaquin River at Mossdale Bridge monitoring site (the site closest to the proposed project), monthly average temperatures range from 49°F in December to 76°F in July (City of Lathrop 2002:4.8-28).

### Ammonia

The distribution of ammonia in fresh waters is highly variable regionally, seasonally, and spatially within rivers and lakes and depends upon the level of productivity of the water body and the extent of inputs from organic matter. At high concentrations for short periods (i.e., hours), ammonia may be acutely toxic. Lower concentrations may also cause chronic (long-term) effects if the period of exposure is sufficiently long (weeks or months). Ammonia toxicity also varies with pH, and EPA standards for ammonia concentrations follow a sliding scale based on pH.

Monitoring data indicate that ammonia concentrations at the seven monitoring sites analyzed are below levels that would cause either acute or chronic toxicity (City of Lathrop 2002:4.8-29). These sites have a 100 percent frequency of compliance with EPA standards. Maximum observed ammonia levels were highest in the San Joaquin River just upstream of the Stockton Deep Water Ship Channel (5.9 mg/l) and in the ship channel itself (2.1 mg/l) (City of Lathrop 2002:4.8-29).

However, if somewhat elevated ammonia concentrations exist during a 1-month period of elevated river pH (exceeding 8.6), these ambient ammonia levels could exceed EPA ammonia chronic criteria (30-day average). During such periods, the potential would exist for sensitive aquatic organisms to be adversely affected by ammonia. Although review of ambient toxicity testing results reveals no confirmed occurrences of ammonia toxicity in the San Joaquin River or the Delta, the available data indicate that conditions for such toxicity may occasionally occur.

### Copper and Other Trace Elements

Trace elements (metals and minerals) may affect aquatic organisms directly or may affect human health or wildlife through water consumption or through bioaccumulation in fish or shellfish consumed by humans or high-end predators. The state is currently developing a TMDL program for mercury in the Delta that would result in the identification of regulatory target(s), determination of sources and their associated loads, development of a quantitative model to predict loading, and implementation of a mercury control program to achieve load reductions that would lead to compliance with water quality objectives.

Available data for dissolved copper indicate 97.8 percent compliance with CTR water quality objectives in the San Joaquin River near Vernalis (City of Lathrop 2002:4.8-29). While dissolved boron data were collected at several of the monitoring sites, no assessment of regulatory compliance can be made because the Basin Plan specifies a criterion only for total boron. Similarly, dissolved selenium data were collected at several sites, but total selenium is the fraction of the metal regulated by both the Basin Plan and the California Toxics Rule; therefore, no estimates of regulatory compliance can be made for this constituent. No other trace elements are included on the 303(d) list for the Delta.

### Trace Organics

Delta waterways are 303(d) listed for several trace organics, including the pesticides diazinon and chlorpyrifos, DDT, PCBs, dioxins, and Group A chlorinated pesticides. Diazinon and chlorpyrifos are listed due to concerns regarding periodic aquatic toxicity to invertebrates that may disrupt the food chain. DDT and Group A pesticides (banned substances) have been observed in fish at levels of concern to humans and aquatic predators. The Stockton Deep Water Channel is listed for dioxin, furans, and PCBs.

## Project Site-Specific Water Quality

### San Joaquin River, Old River, and Paradise Cut

Site-specific data were collected from 1999 to 2001 by HSI Hydrologic Systems (HSI) and ENGEO in the three waterways adjacent to the project site (San Joaquin River, Old River, and Paradise Cut). This information is summarized in Tables 4.8-11 through 4.8-15 of the 2003 SEIR. Water quality can deteriorate in all of these waterways, particularly in a dead-end channel such as Paradise Cut. The San Joaquin River carries high concentrations of nitrates, selenium, nickel, manganese, and boron. Agricultural drainage comprises a significant portion of the flows of all of these waterways during the irrigation season. Agricultural return water is typically saline and has high concentrations of organic compounds and high levels of nutrients (nitrates and sulfates) derived from fertilizers.

### Mass Loading from the RID Area to Paradise Cut

A mass loading analysis was conducted to determine the existing total constituent loading from the RID Area to Paradise Cut. Water quality analyses were performed on samples collected from the discharge pumps at the southwestern corner of the RID Area. These analyses were conducted on March 22, 2002, and April 15, 2002, by HSI. Tables 4.8-16, 4.8-17, and 4.8-18 present the data from these analyses.

## Groundwater Quality

Groundwater quality in shallow aquifers in the Lathrop area is generally considered poor because of saltwater intrusion and because of infiltration of runoff from the San Joaquin River, agricultural areas, and urban areas. Groundwater in the area often has concentrations of chloride above 300 mg/l and TDS above 500 mg/l (and in many instances exceeding 1,000 mg/l). The recommended secondary TDS standard for drinking water is 500 mg/l, although the upper limit is 1,000 mg/l for long-term use and 1,500 mg/l for short-term use. However, the poor-quality shallow groundwater in the area is not used for drinking water purposes. Groundwater used for drinking water in the Lathrop area is generally obtained from depths of 100-250 feet (i.e., the deep aquifer). TDS levels in water from the City's wells have averaged from 245 mg/l to 422 mg/l, with an overall average of 297 mg/l (EDAW 2001, cited in City of Lathrop 2002).

## LOCAL WATER SUPPLIES

The City of Lathrop currently draws its water supply from groundwater and surface water resources. The City has five active municipal groundwater wells, plus a sixth that is currently not in operation (City of Lathrop 2019:3.6-9). Groundwater from the active wells is conveyed along the eastern border of the City along the railroad tracks to the Louise Avenue Water Treatment Facility (LAWTF), where the groundwater is treated to remove arsenic. Brought online in 2012, the LAWTF treats all groundwater for arsenic through a ferric chloride coagulation and filtration process. Removed compounds are disposed of in an approved landfill.

In 2005, SSJID began providing treated surface water from the Stanislaus River to the Cities of Lathrop, Manteca, and Tracy, as part of the South County Water Supply Program (SCWSP). SSJID's supply is the Stanislaus River and is based on pre-1914 water rights and post-1914 appropriative water rights for direct diversion to storage. SSJID's surface water rights are subject to a 1988 Agreement and Stipulation with the USBR regarding the New Melones Reservoir operation. Phase I of the SCWSP construction was completed in July 2005. Phase II, including delivery to the City of Escalon, will be initiated when the participants notify SSJID of an impending need.

The SCWSP provides treated surface water from the Stanislaus River via Woodward Reservoir under a 300,000-afy entitlement. The supply is treated at SSJID's Nick C. DeGroot Water Treatment Plant which includes air floatation clarification and a submerged membrane filtration system. There are three large storage tanks and four pump stations that deliver the water over 20 miles to Lathrop via SSJID's Drinking Water Pipeline (City of Lathrop 2019:3.6-9).

## 4.8.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

Evaluation of potential hydrologic and water quality impacts is based on a review of existing documents and studies that address water resources in the vicinity of the project. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, state, and local laws, ordinances, and regulations.

### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effects at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would cause a significant impact related to hydrology and water quality if it would:

- ▶ ~~violate any water quality standards or waste discharge requirements, including violating NPDES waste discharge or stormwater runoff requirements, state or federal antidegradation policies, enforceable water quality standards contained in the Central Valley Basin Plan or statewide water quality control plans, or federal rulemakings to establish water quality standards in California~~ or otherwise substantially degrade surface or groundwater quality;
- ▶ substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that ~~there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level~~ the project may impede sustainable groundwater management of the basin;
- ▶ substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would
  - result in substantial erosion or siltation onsite or offsite;
  - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or
  - create or contribute runoff water ~~that~~ which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- ▶ substantially degrade water quality;
- ▶ place housing within a 1-in-100-AEP flood hazard area as mapped on a federal flood hazard boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- ▶ place within a 1-in-100-AEP flood hazard area structures that would impede or redirect flood flows;
- ▶ expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam;
- ▶ create inundation by seiche, tsunami, or mudflow;
- ▶ measurably reduce water supplies to other water users;
- ▶ in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- ▶ conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.



## ISSUES NOT DISCUSSED FURTHER

### Tsunami or Seiche

As discussed above, the project site is not within a mapped tsunami inundation area. While the project site is adjacent to waterways, there are no large lakes or other bodies of water in the vicinity that would be subject to seiches. Therefore, these issues are not discussed further.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.8-a: River Islands Area Construction Sediment and Water Quality Contamination

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The 2003 SEIR evaluated the potential for sedimentation and degradation of interior water quality during construction. Project construction could result in impacts to water quality from sedimentation or pollutant discharge. The Phase 2 modifications would result in development of the same footprint as the development area evaluated in the 2003 SEIR and would not include any new areas of construction not previously evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.8-a of the 2003 SEIR evaluated whether construction in the RID Area would result in sediment and water quality contamination. The discussion noted that water pumped and discharged from the River Islands Project area could be of poorer quality than the existing agricultural return flow due to sediment or contaminants (e.g., fuels and equipment lubricants) that may enter surface waters. The impact to water quality was deemed to be potentially significant, but implementation of Mitigation Measure 4-8a would reduce the impact to a less-than-significant level. Mitigation Measure 4.8-a requires preparation and implementation of a SWPPP, which includes an erosion control and construction plan, and an environmental monitoring and mitigation compliance and reporting program.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and transit oriented development (TOD) area within the original boundaries of the Phase 2 area. Developing additional housing and retail and commercial uses would not result in additional land disturbance beyond that analyzed in the 2003 SEIR, but providing for greater development than previously assumed (i.e., 4,010 more dwelling units) could increase the possibility of small incidents of contamination or sedimentation, or larger single releases of contamination or sedimentation due to spilled and leaked liquids from construction equipment or other construction-related pollutants. However, during construction of the modified Phase 2 Project the project applicant would implement Mitigation Measure 4.8-a, which requires preparation and implementation two key plans to avoid contamination, a SWPPP and an environmental monitoring and mitigation compliance report program. The mitigation measure requires the SWPPP to meet the requirements for the California General Permit for construction projects regulated under the NPDES and include specific BMPs to avoid and minimize impacts on water quality during construction activities. The SWPPP would include measures to prevent, control, and minimize impacts from a spill of hazardous, toxic, or petroleum substances during construction of the modified Phase 2 Project. Construction activities would be required to comply with all local, state, and federal regulations related to water quality and discharge during project construction. Preparation and implementation of a SWPPP and an environmental monitoring and mitigation compliance report program and compliance with applicable regulations would reduce the potential for sedimentation and degradation of interior water quality during construction. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.8-a: RID Area Construction Sediment and Water Quality Contamination

*Mitigation Measure 4.8-a shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

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 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.

~~Also addressed in t~~The SWPPP ~~also will identify~~ will be identification 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 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 goal is to ensure that mitigation and all required permit terms and conditions are implemented.~~

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)
- ▶ ~~Reclamation Board~~ Central Valley Flood Protection Board (CVFPB) Encroachment Permit

Spills from construction equipment could release contaminants 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.
- ▶ 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.

Applicable provisions of this mitigation measure have been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.8-a, which requires preparation and implementation of SWPPP and an environmental monitoring and mitigation compliance report program, would reduce potential water quality impacts related to project construction. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After implementation of Modified Mitigation Measure 4.8-a, the project would have a **less-than-significant** impact related to sedimentation and degradation of interior water quality during construction, consistent with the impact conclusion in the 2003 SEIR.

## Impact 4.8-b: Interior Lake Water Quality

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The 2003 SEIR evaluated the potential for project operations to result in impacts the water quality of the interior lake, which could affect the quality of groundwater and surrounding waterways through stormwater runoff. The analysis noted that implementation of BMPs would ensure that the project would not create additional sources of polluted runoff. The interior lake system was subsequently modified to consist of multiple interconnected smaller lakes. This modified system was evaluated in later SEIR Addenda and was determined to result in no change in the impacts identified in the 2003 SEIR. Operation of the existing interconnected Phase 1 lake system have shown total dissolved solids and other water quality parameters in the lake system meeting or exceeding those identified in the 2003 SEIR (ENGEO 2020). The Phase 2 modifications would not change the development footprint of Phase 2 but will result in an increase the total amount of impervious pavement, which will increase stormwater runoff. Implementation of the project specific BMPs would treat and reduce stormwater runoff. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation and performance of the lake system to continue as anticipated (ENGEO 2020; PACE 2020). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-b of the 2003 SEIR evaluated whether project operations would affect the water quality of interior lake which would eventually come into contact with groundwater or other waterways through stormwater runoff. The analysis noted that implementation of project BMPs, including swales, detention ponds, and wetlands to treat stormwater runoff, would result in a high rate of water treatment that would ensure that project operations would have a less-than-significant impact related to water quality related to discharges from the interior lakes. The interior lake system was subsequently modified to consist of multiple pipe interconnected smaller lakes. This modified system was evaluated in later SEIR Addenda and was determined to result in no change in the impacts identified in the 2003 SEIR. Development in the Phase 1 area is applying this lake system and it is operating effectively from both a stormwater management and water quality perspective.

The Phase 2 modifications would increase the number of residential units and the density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. Providing additional housing would not increase the project footprint, but changes in development could allow for a higher percentage of impervious surface and, therefore, increased runoff. The modified Phase 2 Project does not alter the inclusion of BMPs in the Phase 2 area including grassy swales, detention ponds, and wetlands to treat stormwater runoff as it moves throughout the site. Design, construction and operation parameters of the interior lakes, including size and volume relative to stormwater inputs, would remain the same under the modified Phase 2 Project as those effectively implemented in the Phase 1 area (see Chapter 3, "Description of the Proposed Project," for more details). The approximately 195 acres of lakes in the Phase 2 area, and onsite wetlands and BMPs would be adequate to treat stormwater runoff attributed to Phase 2 modifications. The River Islands interior lakes are an integrated system with all lakes to be connected by underground pipes. The first Phase 1 lakes were constructed with these connections and subsequent lakes, as they have been added, have been connected to the overall system. Water quality monitoring has shown total dissolved solids and other water quality parameters in the lake system meeting or exceeding those identified in the 2003 SEIR (ENGEO 2020). Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue as anticipated (PACE 2020). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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## Impact 4.8-c: Earth Moving in or Adjacent to Water Bodies

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The 2003 SEIR evaluated the potential for the River Islands Project to result in construction-related impacts to water quality. Earth moving activities in or adjacent to water bodies could result in impacts to water quality due to sedimentation or pollutant discharge. Levee construction and improvements surrounding both the Phase 1 area and Phase 2 development area have been completed, consistent with plans and entitlements. No additional large-scale earth-moving or disturbing activities associated with the levees would occur under the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.8-c of the 2003 SEIR evaluated whether earth moving activities, specifically levee improvements, in or adjacent to water bodies, would impact hydrology and water quality. The analysis concluded that activities requiring large extensive earth moving adjacent to water bodies, such as levee improvements and construction of manmade features, would result in a significant impact. The impact would be reduced to a less-than-significant level with implementation of Mitigation Measure 4.8-c. Mitigation Measure 4.8-c requires adherence to all applicable local, state, and federal regulations regarding turbidity reduction. Mitigation Measure 4.8-c also establishes requirements for in-river work, or work immediately adjacent to the rivers, during low tide and during low flows and 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. Implementation of Mitigation Measure 4.8-c would reduce impacts to water quality to a less-than-significant level. Docks along the exterior water system identified in the original project design were largely removed as part of project modifications evaluated in the Third Addendum to the SEIR (2012). As modified in that document, the River Islands Project includes 600 interior docks in the interior project lakes that would accommodate up to 604 boats; these would be private docks that would be constructed on interior lakes and would not be connected to any waters of the U.S. Back bays have been entirely removed as a project component since the 2003 SEIR was certified. Therefore, impacts on rivers and waterways surrounding the project site identified in the 2003 SEIR from these project elements would no longer occur.

The Phase 2 modifications would increase the amount and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. Levee construction and improvements surrounding both the Phase 1 area and Phase 2 area have been completed, consistent with plans and entitlements. No additional large-scale earth moving, or disturbing activities associated with the levees would occur under the modified Phase 2 Project. Interior and exterior water features authorized by current entitlements would not be altered by the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, because some earth moving in or near water bodies could still occur as part of Phase 2 (e.g., habitat enhancement work in Paradise Cut), these activities have the potential to impact water quality on a short-term basis. Impacts to water quality related to these activities would be similar to those analyzed under the 2003 SEIR and would be **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Adopted Mitigation Measure 4.8-c: Earth Moving in or Adjacent to Water Bodies

*The following provides the content of Mitigation Measure 4.8-c as it appears in the 2003 SEIR, even though some of the referenced activities are no longer part of the proposed project.*

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 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

#### **Significance after Mitigation**

The requirements of Adopted Mitigation Measure 4.8-c would reduce potential impacts from earth moving activities in or adjacent to water bodies by reducing the possibility for release of construction-related contaminants. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to earth moving in or adjacent to water bodies, consistent with the impact conclusion in the 2003 SEIR.

#### **Impact 4.8-d: In-Water Project Features**

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The 2003 SEIR evaluated the potential for the construction of in-water project features, such as bridges and docks, to cause sedimentation and water quality impacts. Since certification of the 2003 SEIR, in-water features along the San Joaquin River, Old River, and Paradise Cut have been removed from the River Islands project, although bridges remain part of the project. No new or substantially different in-water project features are proposed as part of the modified Phase 2 Project. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because construction of some in-water project features (i.e., bridges) would still occur, this impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.8-d of the 2003 SEIR evaluated whether construction of in-water project features, such as bridges and docks, would impact water quality of the San Joaquin River, Old River, and/or Paradise Cut. The analysis noted that construction of in-water project features could violate water quality standards, waste discharge requirements, or substantially degrade water quality and result in a significant impact. Implementation of Mitigation Measure 4.8-d 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. Mitigation Measure 4.8-d requires implementation of Mitigation Measures 4.8-a and 4.8-c, discussed in Impacts 4.8-a and 4.8-c, respectively.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area but not alter in-water project features as planned bridges will still be needed. As discussed above in Impact 4.8-c, the Third Addendum to the SEIR (2012) eliminated exterior docks and similar in-water features along the San Joaquin River, Old River, and Paradise Cut that were included in the original project evaluated in the 2003 SEIR. Bridges, the remaining in-water feature evaluated in the 2003 SEIR, are still planned for construction consistent with the description and analysis in the 2003 SEIR. The first portion of the Bradshaw's Crossing bridge has been completed and mitigation from the 2003 SEIR proved to be effective in protecting water quality during construction. The northern portion of the Bradshaw's Crossing Bridge, Golden Valley Parkway bridges over the San Joaquin River and Paradise Cut, and an additional two-lane bridge crossing at Paradise Road remain to be built, with the City of Lathrop anticipated as the lead agency for these projects. Construction of these in-water project features would remain the same under the modified Phase 2 Project. No new or substantially different in-water project features are proposed as part of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Adopted Mitigation Measure 4.8-d: In-Water Project Features

*The following provides the content of Mitigation Measure 4.8-d as it appears in the 2003 SEIR, with minor modifications in response to some of the referenced activities (i.e., docks on the exterior waterways) are no longer part of the proposed project.*

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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

#### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.8-d would require implementation of Modified Mitigation Measure 4.8-a and Adopted Mitigation Measure 4.8-c. These measures would protect water quality during work in or near water bodies. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to construction of in-water project features, consistent with the impact conclusion in the 2003 SEIR.

### Impact 4.8-e: Utility Crossings

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The 2003 SEIR evaluated the potential for construction of the natural gas pipeline under the San Joaquin River to result in short-term degradation of water quality from accidental seepage of drilling slurry into the river. Major utilities for the project have been completed under Phase 1 of the River Islands Project, excluding minor utilities and the storm drainage system. However, a directional boring under the San Joaquin River to provide utility service is no longer required. Therefore, this impact mechanism would no longer occur and there would be **no impact**.

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Impact 4.8-e of the 2003 SEIR evaluated whether construction of the natural gas pipeline under the San Joaquin River would impact water quality. The analysis noted that bentonite slurry used during boring/drilling has the potential to escape into soil and contaminate the water of the San Joaquin River. This impact was potentially significant. Implementation of Mitigation Measure 4.8-e would reduce the impact to a less-than-significant level. Mitigation Measure 4.8-e specifies the detection, containment, and prevention procedures to be implemented during directional drilling activities.

Since certification of the 2003 SEIR, natural gas has been provided to the project site through pipelines located in Bradshaw's Crossing and the San Joaquin Bicycle/Pedestrian Bridge. A directional bore under the San Joaquin River, or other waterways, to provide natural gas service or other utilities is no longer part of the River Islands Project. Therefore, this impact would no longer occur and there would be **no impact**.

## Mitigation Measures

No mitigation is required.

### Impact 4.8-f: Diversion Effects on Old River Hydrology

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The 2003 SEIR evaluated the potential for diversion from the Old River into the RID Area to impact hydrology. Water diversions under the proposed project would result in less water that is pumped from Old River into the RID Area compared to agricultural operations and shift diversions to a period when demand from agricultural users outside the project site is reduced. These conditions would remain the same under the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-f of the 2003 SEIR evaluated whether diversion from the Old River into the RID Area would impact hydrology. The analysis found that, compared to agricultural operations on the project site, project implementation would require less water to be diverted during a shifted, shorter period of time (October to November vs. April through August) when agricultural water demand outside the project site and water quality concerns are reduced. This was considered to be a beneficial impact on hydrology, and the impact would be less than significant.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area but would not alter water diversions for management of the interior lake system. The River Islands interior lakes are an integrated system with all lakes to be connected by underground pipes. The first Phase 1 lakes were constructed with these connections and subsequent lakes, as they have been added, have been connected to the overall system. Pumping into the Phase 1 lakes have shown the changes in diversion timing and volumes compared to agricultural diversions identified in 2003 SEIR are occurring. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue with the same diversion volume and timing characteristics as the Phase 1 lakes (PACE 2020). The modified Phase 2 Project would continue to divert less water annually from Old River compared to agricultural operations and would not divert water every year, consistent with the 2003 SEIR. This reduction in diversions compared to agricultural operations would remain the same under the Phase 2 modifications and would continue to occur during the shifted October through November period. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.8-g: Diversion Effects on Old River Water Quality

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The 2003 SEIR evaluated the potential for diversion from the Old River into the RID Area to impact water quality. Water diversions under the Phase 2 modifications would result in less water that is pumped from Old River into the RID Area compared to agricultural operations and shifts diversions to a period when demand from agricultural users outside the project site is reduced. These conditions would remain the same under the modified Phase 2 Project as the conditions evaluated for the Phase 2 Project in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts would be **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-g of the 2003 SEIR evaluated whether diversion from the Old River into the RID Area would impact water quality. The analysis found that, compared to agricultural operations on the project site, project implementation would require less water to be diverted during a shifted, shorter period of time (October to November vs. April through August) when agricultural water demand outside the project site and water quality concerns are reduced. This was considered to be a beneficial impact on water quality, and the impact would be less than significant.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area but would not alter water diversions for management of the interior lake system (see discussion in Impact 4.8-f, above). The modified Phase 2 Project would continue to divert less water annually from Old River compared to agricultural operations and would not divert water every year, consistent with the 2003 SEIR. Diversions remain the same under the Phase 2 modifications and would continue to occur during the shifted October through November period. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.



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### Impact 4.8-h: Water Discharges to the Delta (Hydrology)

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The 2003 SEIR evaluated the potential for water discharged from the RID area into the Delta to impact hydrology. Phase 2 modifications include only minor changes to the proposed stormwater system. Analysis of the addition of the planned modified Phase 2 lakes to the overall stormwater system shows operation and performance of the lake system, including discharges, to continue as anticipated (PACE 2020). In addition, discharge to Paradise Cut is covered under the City's current MS4 permit and would comply with all applicable discharge standards and requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Adherence to the City's current MS4 permit requirements would further ensure that impacts to the Delta hydrology would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-h of the 2003 SEIR evaluated whether water discharged from the RID area into the Delta would adversely impact hydrology. The analysis noted that the reduced amount of water discharged into Paradise Cut under the proposed project compared to existing conditions (i.e., agricultural operations at the time), could potentially alter hydrology of the Paradise Cut channel. The proposed widening of the Paradise Cut channel would compensate for any changes by allowing greater tidal circulation and would result in a less-than-significant impact.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. These changes would only affect the interior lake stormwater management system by causing minor alterations to the configuration of lakes to accommodate the specific development pattern. The proposed Phase 2 modifications would not alter the overall lake system operations or discharge regime. Analysis of the addition of the planned modified Phase 2 lakes to the overall stormwater system shows operation and performance of the lake system, including discharges, to continue as anticipated (PACE 2020). Therefore, potential effects on Delta hydrology from changes in discharges to Paradise Cut would not differ from those identified in the 2003 SEIR. In addition, discharge to Paradise Cut is now covered under the City's current MS4 permit and would comply with all applicable discharge standards and requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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### Impact 4.8-i: Water Discharges to the Delta (Water Quality)

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The 2003 SEIR evaluated the potential for water discharged from the RID area into the Delta to affect water quality. Phase 2 modifications include only minor changes to the proposed storm drainage system. Operation of the existing interconnected Phase 1 lake system have shown the differences in water quality of discharges compared to agricultural operations identified in 2003 SEIR are occurring. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue as anticipated (ENGEO 2020; PACE 2020). In addition, discharge to Paradise Cut is covered under the City's current MS4 permit and would comply with all applicable discharge standards and requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Adherence to the City's current MS4 permit requirements would further ensure that impacts to the Delta water quality would remain **less than significant**, as identified in the 2003 SEIR.

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Impact 4.8-i of the 2003 SEIR evaluated whether water discharged from the RID area into the Delta would adversely impact water quality. The analysis compared existing annual discharge loadings of major contaminant with projected post-project conditions and concluded that 12 contamination parameters (total dissolved solids, hardness, ammonia, phosphorus, dissolved phosphorus, dissolved arsenic, total arsenic, dissolved copper, dissolved nickel, dissolved selenium, dissolved zinc, and total selenium) would decrease while six parameters (nitrate, total copper, dissolved lead, total lead, total nickel, and total zinc) would increase. The analysis noted that under post-project conditions, all

parameters would be well within allowable limits. While project water discharges would alter the concentrations of water quality constituents, the project would result in a less-than-significant impact on Delta water quality.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. These changes would only affect the interior lake stormwater management system by causing minor alterations to the configuration of lakes to accommodate the specific development pattern. These minor modifications would not alter the overall lake system operations, discharge regime, or effectiveness in maintaining water quality. The River Islands interior lakes are an integrated system with all lakes to be connected by underground pipes. The first Phase 1 lakes were constructed with these connections and subsequent lakes, as they have been added, have been connected to the overall system. Water quality monitoring has shown reductions in total dissolved solids from the lake system meeting or exceeding those identified in the 2003 SEIR (ENGE0 2020). Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue with performance similar to current Phase 1 lake system (PACE 2020). Therefore, the water quality performance currently found in the Phase 1 lakes is expected to continue as the lake system continues to be built out. In addition, discharge to Paradise Cut is now covered under the City's current MS4 permit and would comply with all applicable discharge standards and requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.8-j: Maintenance Dredging of Back Bays

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The 2003 SEIR evaluated the potential for maintenance dredging of the nine proposed back bays to release sediments and increase turbidity, adversely affecting water quality in the San Joaquin and Old Rivers. The Third Addendum to the SEIR (2012) eliminated the nine back bays from the River Islands Project. The modified Phase 2 Project does not include back bays and no maintenance dredging would occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. While the 2003 SEIR determined that impacts related to the dredging of the back bays would be less than significant with implementation of mitigation, back bays have been eliminated from the project and **no impact** would occur.

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Impact 4.8-j of the 2003 SEIR evaluated whether maintenance dredging approximately every 5 to 10 years of the nine proposed back bays would impact hydrology and water quality of the site. The analysis found that impacts associated with dredging of the proposed back bays would result in substantial levels of sediment which could violate water quality standards or waste discharge requirements and substantially degrade water quality. The impact associated with maintenance dredging of the back bays was considered significant and mitigation was included to reduce the impact to a less-than-significant level. The Third Addendum to the SEIR (2012) eliminated back bays from the River Islands Project. The modified Phase 2 Project does not include back bays and no maintenance dredging would occur that could release sediments or increase turbidity and adversely affect water quality of the San Joaquin and Old Rivers. Therefore, there would be **no impact** related to maintenance dredging of back bays because such features would not be built.

### Mitigation Measures

No mitigation is required.

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## Impact 4.8-k: Increased Boat Traffic

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The 2003 SEIR evaluated the potential for proposed docks along the San Joaquin River, Old River, and Paradise Cut to result in increased boat traffic that could adversely affect water quality in these surrounding waterways. The Third Addendum to the SEIR (2012) modified the project to eliminate the back bays and docks along the exterior water system. The Phase 2 modifications do not alter this approach and there is no proposal for docks along exterior water features as part of Phase 2. Therefore, the potential for new docks to increase boat traffic on exterior water features would not occur and adverse effects associated with increased boat traffic also would not occur. Therefore, **no impact** would occur.

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Impact 4.8-k of the 2003 SEIR evaluated whether installation of docks on the San Joaquin River, Old River, and Paradise Cut would increase boat traffic in these waterways. Increased erosion from boat wakes and fuel spills from the use and storage of these boats may adversely affect water quality in the surrounding waterways. This impact was determined to be significant, but implementation of Mitigation Measure 4.8-k would reduce the impact to a less-than-significant level. Mitigation Measure 4.8-k requires the establishment of "no-wake zones," providing project residents boater education materials, posting pertinent laws and waste discharge requirements, and providing and maintaining waste collection receptacles.

The Third Addendum to the SEIR (2012) modified the project to eliminate the back bays and docks along the exterior water system. The Phase 2 modifications do not alter this approach and there is no proposal for docks along exterior water features as part of Phase 2. Therefore, the potential for new docks to increase boat traffic on exterior water features would not occur and adverse effects associated with increased boat traffic also would not occur. Therefore, there would be **no impact** related to increased boat traffic caused by docks along the exterior water features.

### Mitigation Measures

No mitigation is required.

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## Impact 4.8-l: Flood Protection for the RID Area

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The 2003 SEIR evaluated the potential to place development in the FEMA 1-in-100-AEP floodplain. However, levee construction and improvements surrounding both the Phase 1 area and Phase 2 area have been completed, consistent with plans and entitlements. The modified Phase 2 Project area will not be located within the FEMA 1-in-100-AEP floodplain when development is initiated. Therefore, there would be **no impact**.

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Impact 4.8-l of the 2003 SEIR evaluated whether development of the RID Area would place housing, people, or structures within a 1-in-100-AEP hazard area. The River Islands Project included the complete construction of new levees and the buttressing of some existing levees and was designed to allow the RID Area to safely pass a flood that has a 1-in-200 AEP. The impact was considered beneficial for the RID Area. Levee construction has been completed to protect the Phase 1 area and it is no longer within a 1-in-100 AEP hazard area.

Levee construction and improvements have also been completed around the Phase 2 area consistent with plans and entitlements. Although the Phase 2 area has not yet received a LOMR from FEMA indicating the area is outside the 1-in-100 AEP hazard area, development will not be initiated until a LOMR is received. The modified Phase 2 Project does not include any modifications to the levee system. Because levees around the Phase 2 area are complete, development will not be initiated in the Phase 2 area until a LOMR verifying the area is outside 1-in-100-AEP hazard area is obtained, and the modified Phase 2 Project does not include any modification to the flood protection system, the modified Phase 2 Project would not place development in the FEMA 1-in-100-AEP floodplain. Therefore, there would be **no impact**.

### Mitigation Measures

No mitigation is required.

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## Impact 4.8-m: Surrounding Flood Stage Elevations

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The 2003 SEIR and subsequent Addenda evaluated the potential for levee improvements to result in increases to flood stage elevations in the surrounding area during severe flood events. The net impact on flooding from the River Islands Project would result in benefits at floods up to the 1-in-100 AEP and only minor increases in flood elevations during floods greater than the 1-in-200 AEP. Compared to the 2003 SEIR and subsequent Addenda, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Because the modified Phase 2 Project does not include any modifications to the levee system, this impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-m evaluated whether flood stage elevations would result in serious flood hazards to the RID Area. The entire River Islands Project site was in the 100-year floodplain at the time of project approval in 2003. The analysis noted that under the existing levee conditions, levee failures along Stewart Tract during flood events result in flooding of the entire island, resulting in lower flood elevations downstream of the island. Implementation of the levee improvements proposed by the River Island Project and evaluated in the 2003 SEIR, which primarily include of construction and strengthening levees and to create high-ground corridors in and around the RID Area to provide 200-year flood protection, would reduce the off-stream flood storage capacity of Stewart Tract and potentially raise flood stage elevations in surrounding waterways. However, the net impact on flooding from the River Islands Project would result in benefits at floods up to the 1-in-100 AEP and only minor increases in flood elevations during floods greater than the 1-in-200 AEP. This impact would be less than significant, and no mitigation was required. Various subsequent Addenda evaluated minor modifications to the flood protection system, such as modified levee alignments due to the removal of back bays from the project and shifts between culvert and trestle options to allow flood waters to move under the UPRR railroad tracks at the southeastern project boundary. None of these modifications altered the conclusions for this impact provided in the 2003 SEIR.

As discussed in Impact 4.8-l, levee construction and improvements surrounding both the Phase 1 area and Phase 2 area have been completed. The modified Phase 2 Project does not include any modifications to the levee system beyond what has been approved in the 2003 SEIR and subsequent Addenda and, therefore, the modified Phase 2 Project would have the same potential to result in increases to flood stage elevations in the surrounding area during severe flood events. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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## Impact 4.8-n: Non-flood Hydrology in Surrounding Waterways

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The 2003 SEIR evaluated the potential for the River Islands Project to affect non-flood water volumes in the surrounding waterways. The Phase 2 modifications would not substantially alter the drainage pattern of the area or the flows in the surrounding waterways. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-n of the 2003 SEIR evaluated whether the project would affect non-flood water volumes in the surrounding waterways. The analysis noted that the non-flood water volumes in the San Joaquin River would not be affected because water would not be flowing over the Paradise Weir, there would be a net increase in water volume left in Old River because of reduced diversions into the RID Area, and the volume of drain water discharged from the RID Area into Paradise Cut would be reduced but other factors would contribute to greater flow exchange between Old River and Paradise Cut. This impact was concluded to be less than significant because although some changes in hydrology would occur, they would be minor relative to the overall water volumes within the system and would not substantially alter the drainage pattern of the area or the flows in the surrounding waterways. No mitigation was required.

The Phase 2 modifications, that are all contained within the RID Area, would not substantially alter the drainage pattern in the RID Area and surrounding waterways identified and analyzed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

## Mitigation Measures

No mitigation is required.

### Impact 4.8-o: Groundwater Quality During Construction

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The 2003 SEIR evaluated the potential for construction-related activities to result in impacts to groundwater quality due to sedimentation or pollutant discharge. Excavation activities could intersect shallow groundwater and result in sediments or contaminants entering the groundwater. The Phase 2 modifications would not substantially alter construction methods, excavations, and contact with groundwater during construction. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.8-o evaluated whether project construction activities, particularly excavations, could intersect with shallow groundwater and adversely affect groundwater through releases of sediment or contaminants during construction activities. This impact was determined to be potentially significant, but implementation of Mitigation Measure 4.8-o would reduce the impact to a less-than-significant level. Mitigation Measure 4.8-o requires that the SWPPP 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.

Impact 4.8-o also evaluated whether sediment entering the lake system could then transfer a portion of that sediment to groundwater. The 2003 SEIR determined that no significant adverse effect on groundwater quality would occur via this mechanism. Subsequent Addenda that evaluated modifications to the interior lake system (e.g., transitioning from a single central lake focus to multiple interconnected lakes) determined that there would be no change to this impact conclusion. The modified Phase 2 Project does not alter the currently approved interior lake system.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. Developing additional housing and retail and commercial development would not substantially alter construction methods, excavations, and contact with groundwater during construction because the same types of buildings and facilities would be constructed in the same project area compared to the approved Phase 2 Project. The proposed changes in the development pattern could result in more multi-story buildings requiring deeper foundation and subsurface support infrastructure. However, as discussed above under Impact 4.8-a, the project would be required to prepare an SWPPP 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 SWPPP will include measures to prevent, control, and minimize impacts from a spill of hazardous, toxic, or petroleum substances during construction of the modified Phase 2 Project. The project builders and contractors would also comply with all local, state, and federal regulations related to water quality and discharge during project construction. Adherence to BMPs, development of a SWPPP, and implementation of Mitigation Measure 4.8-o would minimize impacts to water quality during construction whether development consists of single-story buildings or multi-story buildings. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain a **potentially significant** as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

### **Significance after Mitigation**

Implementation of Adopted Mitigation Measures 4.8-o would require the SWPPP to be developed and implemented as part of Modified 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. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to groundwater quality during construction, consistent with the impact conclusion in the 2003 SEIR.

### **Impact 4.8-p: Groundwater Quality and Supply During Project Operation**

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The 2003 SEIR evaluated whether groundwater quality and supply could be adversely affected during project operation. Water features associated with the River Islands Project would come in contact with groundwater; however, these contacts would not be with groundwater tables used for potable water. In addition, project water that might come contact with the shallow groundwater table (interior lake system water and recycled water used for irrigation) would be of sufficient quality that adverse groundwater quality impacts would not occur. The modified Phase 2 Project does not alter these conditions. The City is projected to have adequate water supplies to serve the modified Phase 2 Project until full buildout in 2040 (Woodard & Curran 2020). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.8-p of the 2003 SEIR evaluated whether project operation could adversely affect groundwater supply and quality. The analysis noted that project operation could intersect groundwater at the interior lake system and the expanded Paradise Cut channel, though the shallow groundwater tables where this would occur are well above (75 feet or more) deeper groundwater tables used for potable water. The water quality in the interior lake system would be sufficiently high due to the installation of multiple BMPs to treat stormwater before it enters the lake and recycled water used for irrigation would meet all applicable water quality standards for Title 22 disinfected tertiary-treated effluent; thus, shallow groundwater would not be adversely affected by contact with these water sources. The analysis also noted that water supply for the River Islands Project would come from a combination of groundwater and treated surface water, and that impacts related to groundwater supply were addressed in Impact 4.11-b in Section 4.11, "Public Utilities," of the 2003 SEIR which concluded that the impact would be less than significant. Therefore, the potential impact on groundwater quality and supply was concluded to be less than significant and no mitigation was required.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area but would not create any new intersections with groundwater not already considered in the 2003 SEIR. As discussed in Impact 4.8-b, the implementation of BMPs would ensure that stormwater is treated such that there would be no significant impacts on water quality in the interior lake system. Quarterly water quality monitoring for the Phase 1 lakes has shown total dissolved solids and other water quality parameters meeting or exceeding those identified in the 2003 SEIR (ENGEO 2020). The quality of recycled water used for irrigation would continue to be sufficiently high to not adversely affect groundwater quality, as is already being validated by the use of recycled water in the Phase 1 area. An analysis of the potential for the Phase 2 modifications to affect groundwater supply is included in Impact 4.11-b of this SEIR. An updated WSA (Woodard & Curran 2020) indicates that the City of Lathrop continues to have sufficient water supply, consisting of combined groundwater and surface water, to serve the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

## Mitigation Measures

No mitigation is required.

### Impact 4.8-q: Water Supplies to Other Users

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The 2003 SEIR evaluated whether the River Islands Project could directly or indirectly affect water supplies to other water users. Phase 2 modifications include increases in the number of dwelling units and density of residential development and a mixed-use Village Center and TOD area. However, the overall demand for potable water is less than originally evaluated in the 2003 SEIR due to less actual water usage by unit experienced with the project (Woodard & Curran 2020). The secured water supplies to serve the overall City development, including Phase 2 is sufficient under buildout conditions, even during single and multi-year drought conditions (Woodard & Curran 2020). The increased development under the modified Phase 2 Project would not alter any of the potential water supply impact considered in Impact 4.8-q in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR

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Impact 4.8-q of the 2003 SEIR evaluated the River Islands Project could directly or indirectly affect water supplies to other water users. The analysis noted that the River Islands Project could directly affect the water supplies of others through two mechanisms; using regional supplies, thereby making them unavailable for others, or using local supplies, making them unavailable to others. The River Islands Project could indirectly affect the water supply of others through three other mechanisms: decreased water quality, decreased water surface elevations in the South Delta, or decreased water supply because of increased special-status fish mortalities. However, through each of these mechanisms, individually and combined, the River Islands Project would not measurably reduce water supplies to other water users. Further, the City of Lathrop has legally secured its water supplies and has rights to use this supply. This impact was concluded to be less than significant, and no mitigation was required.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and TOD area within the original boundaries of the Phase 2 area. These project changes within the RID area would not alter the indirect impact mechanisms identified above, as explained in the discussions of water quality and supply impacts within this section, and the impact analysis in Section 4.15, "Fisheries." The allowance of additional housing potential, increased density of housing, and additional retail and commercial development could increase water demand such that water available to other users would be directly or indirectly affected. However, as discussed in Impact 4.11-a of this SEIR, no additional water supply is required for the Phase 2 modifications (Woodard & Curran 2020). While the Phase 2 modifications include more residential development, the amount of potable water demand is actually less than what was anticipated with the 2003 SEIR since the potable water demand per unit of development is less (due in large part to increased water efficiency requirements in current building codes) and non-potable water sources, including recycled water, are available for irrigation. As a result, existing supplies would be sufficient to serve the Phase 2 Project at buildout, even in multi-year drought conditions (Woodard & Curran 2020). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

## Mitigation Measures

No mitigation is required.

### Impact 4.8-r: Compliance with Water Quality Control Plan or Sustainable Groundwater Management Plan

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The project would comply with all applicable federal, state, and local regulations and requirements for construction and implementation of the project as well as applicable elements of the SWRCB Bay-Delta Plan. The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and therefore the impact would be **less than significant**.

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At the time of the 2003 SEIR, consideration of compliance with a water quality control plan or sustainable groundwater management plan was not included as a threshold of significance.

The Basin Plan for the Central Valley Region establishes control measures to be implemented by the RWQCB as applicable to the project. The Basin Plan also provides water quality objectives and waste discharge requirements to avoid impacts to water quality. NDPEs permits are one method used to regulate waste discharge requirements. As discussed in Impact 4.8-a, the project is covered under the Construction General Permit. Lathrop is within the Tracy Subbasin, which is designated as a Medium priority groundwater basin. The Tracy Subbasin GSAs are required to submit a completed and approved Sustainable Groundwater Management Plan (SGMP) by January 31, 2022, in accordance with SGMA. Upon completion and approval of the SGMP the project would comply with all applicable requirements of the SGMP. The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and therefore the impact would be **less than significant**.

## Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

As with the modified Phase 2 Project, the Paradise Road area is not within a mapped tsunami inundation area. While the Paradise Road area is adjacent to waterways, there are no large lakes or other bodies of water in the vicinity that would be subject to seiches. Therefore, no impacts related to this issue would occur. The Paradise Road expansion is a road widening project that would not include: construction or development that could result in stormwater runoff to the interior lake (Impact 4.8-b), the construction of utilities under the San Joaquin River (Impact 4.8-e), the diversion of water from Old River (Impacts 4.8-f and 4.8-g), the discharge of water to Paradise Cut or the Delta (Impacts 4.8-h and 4.8-i), in-water levee breaching or back bay construction (Impacts 4.8-c and 4.8-j), docks or other boating facilities (Impact 4.8-k), the construction of housing or structures within the 1-in-100-AEP floodplain (Impact 4.8-l), levee improvements which would result in flooding in surrounding areas (Impact 4.8-m), does not include water flowing over the Paradise Weir or an increase in water volume in Old River or water discharged from the RID Area which could affect non-flood water volumes in the San Joaquin River (Impact 4.8-n), and would not require the consumption of water (Impacts 4.8-p and 4.8-q). Therefore, no impacts related to these issues would occur.

The Paradise Road widening and improvement would involve construction, including culverts or bridges across irrigation ditches, drainages, and Tom Paine Slough, which could result in impacts to water quality (including groundwater) from stream bed disturbance, sedimentation, or pollutant discharge (Impacts 4.8-a, 4.8-d, 4.8-k, 4.8-o, and 4.8-p); therefore, the preparation and implementation of a SWPPP would be required, similar to the modified Phase 2 Project. The SWPPP would meet the requirements for the California General Permit for construction projects regulated under the NPDES and include specific BMPs to avoid and minimize impacts on water quality during construction activities.



The Paradise Road widening and improvement would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. As described for the modified Phase 2 Project in Impact 4.8-r, the Basin Plan establishes control measures to be implemented by the RWQCB as applicable to the project. The Basin Plan also provides water quality objectives and waste discharge requirements to avoid impacts to water quality. NDPES permits are one method used to regulate waste discharge requirements. As discussed in Impact 4.8-a, the project is covered under the Construction General Permit and the impact would remain less than significant.

Adopted Mitigation Measure 4.8-c would not apply to the Paradise Road widening and improvement because there would be no levee breaching or back bay construction adjacent to the San Joaquin River, Old River, and Paradise Cut. The remainder of mitigation measures identified above for the modified Phase 2 Project would be required if the entity implementing the Paradise Road widening and improvement uses this SEIR for CEQA compliance. This consists of Modified Mitigation Measure 4.8-a, RID Area Construction Sediment and Water Quality Contamination; Adopted Mitigation Measure 4.8-d, In-Water Project Features; and Adopted Mitigation Measure 4.8-o, Groundwater Quality During Construction. These mitigation measures would be equally effective at reducing any significant hydrology and water quality impacts to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road widening and improvement would have no new significant impact and the impacts are not substantially more severe.

## 4.9 HAZARDOUS MATERIALS AND PUBLIC HEALTH

This section evaluates the potential impacts of the modified Phase 2 Project related to hazardous materials and public health. The evaluation provided in this section is based, in part, on review of the Phase I Environmental Site Assessment (ESA) completed by ENGEO in 2020 (Appendix F).

For purposes of this section, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined in the Code of Federal Regulations (CFR) as “a substance or material that ... is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

“Hazardous material” means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that:

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

Section 4.9, “Hazardous Materials and Public Health,” of the 2003 SEIR evaluated the potential effects of the River Islands project related to hazardous materials and public health. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information in the ESAs prepared for the project to provide detailed analysis. The 2003 SEIR concluded that there would be a less-than-significant impact related to routine use, transport, and disposal of hazardous materials (Impact 4.9-a); and potential health impacts associated with recycled water (Impact 4.9-c). The 2003 SEIR concluded that impacts related to exposure to hazardous materials (Impact 4.9-b) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.9-b, which requires investigation into the extent of soil and/or groundwater contamination prior to demolition of any structures associated with past and current farming operations.

### 4.9.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

##### Management of Hazardous Materials

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as requiring measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The U.S. Environmental Protection Agency (EPA) is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in CFR Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws.

- ▶ The Toxic Substances Control Act of 1976 (15 U.S. Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.

- ▶ The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which EPA regulates hazardous waste from the time the waste is generated until its final disposal (“cradle to grave”).
- ▶ The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.
- ▶ The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.
- ▶ The Spill Prevention, Control, and Countermeasure (SPCC) rule includes requirements for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. The rule requires specific facilities to prepare, amend, and implement SPCC Plans. The SPCC rule is part of the Oil Pollution Prevention regulation, which also includes the Facility Response Plan rule.

### Transport of Hazardous Materials

The U.S. Department of Transportation regulates transport of hazardous materials between states and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transport regulations are enforced by the Federal Highway Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.

### Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

## STATE

### Management of Hazardous Materials

In California, both federal and state community right-to-know laws are coordinated through the Governor’s Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (e.g., produce, use, store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- ▶ emergency planning,
- ▶ emergency release notification,
- ▶ reporting of hazardous chemical storage, and
- ▶ inventory of toxic chemical releases.

The corresponding state law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). Under this law, qualifying businesses are required to prepare a Hazardous Materials Business Plan, which would include hazardous materials and hazardous waste management procedures and emergency response procedures, including emergency spill cleanup supplies and equipment. At such time as the applicant begins to use hazardous materials at levels that reach applicable state and/or federal thresholds, the plan is submitted to the administering agency.

The California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency, has primary regulatory responsibility over hazardous materials in California, working in conjunction with EPA to enforce and implement hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the State, known as the Cortese List. Individual regional water quality control boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up leaking underground storage tanks (USTs). The Central Valley RWQCB has jurisdiction over the River Islands project site.

### **Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan**

The State of California has adopted U.S. Department of Transportation regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies in the project area.

### **Management of Construction Activities**

Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during project construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the Central Valley RWQCB, see Section 4.8, "Hydrology and Water Quality."

The State Water Board adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of the project; the BMPs must address source control and, if necessary, pollutant control.

### **Worker Safety**

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts onsite evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

Title 8 of the CCR also includes regulations that provide for worker safety when blasting and explosives are utilized during construction activities. These regulations identify licensing, safety, storage, and transportation requirements related to the use of explosives in construction.

## **LOCAL**

### **City of Lathrop General Plan**

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Safety Goals and Policies section of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

### Policies

1. The City will continue to give high priority to the support of police protection, and to fire suppression and prevention and life safety functions of the Fire Department. Ultimate expansion of the City's fire service is to include additional stations affording adequate response within a maximum of 3-4 minutes to all parts of the urban area.
2. The City will work to maintain a fire flow standard of 3,000 gpm for all commercial and industrial areas, and 1,500 gpm for residential areas, to assure capability to suppress urban fires.
3. The City will maintain a street system which is capable of providing access to any fires that may develop within the urban area, and which is capable of providing for the adequate evacuation of residents in the event of an emergency condition of magnitude.
4. The City will continue to maintain and update emergency service plans, including plans for managing emergency operations, the handling of hazardous materials and the rapid cleanup of hazardous materials spills.
5. The City will continue to cooperate with the County of San Joaquin and other agencies in predisaster planning activities such as evacuation required in the event of a serious breach of an upstream dam capable of flooding the community.
6. The City will seek to reduce the risks and potential for hazards to the public through planning and zoning practices and regulations which avoid hazardous land use relationships, and by the continued and timely adoption of new-edition building and fire codes.
7. Neighborhood watch programs will be encouraged in all residential areas of the City.

### **City of Lathrop Municipal Code**

Section 12.08 of the Lathrop Municipal Code addresses encroachments into the public right-of-way, including which activities require a permit, permit requirements, access to public service structures, and standards and details.

### **San Joaquin County Office of Emergency Services**

The San Joaquin County Office of Emergency Services (OES) maintains an Emergency Operations Plan (EOP) that serves as the official emergency plan for San Joaquin County. It includes planned operational functions and overall responsibilities of County Departments during an emergency situation. The EOP also contains a threat summary for San Joaquin County, which addresses the potential for natural, technological and human-caused disasters (County Code, Title 4-3007). OES has published evacuation maps for communities within the county, including River Islands (San Joaquin County OES 2019).

### **Certified Unified Program Agency (CUPA)**

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

### **Emergency Operations Plans (Reclamation Districts 2062 and 2017)**

Reclamation District (RD) 2062 is the levee maintaining district for all of the urban areas of River Islands and RD 2107 is the levee maintaining district for the balance of the Stewart Tract. Both districts coordinate efforts together as one system under Federal law. The purpose of the Emergency Operations Plan (EOP) drafted by each district is to ensure the effective performance of each district's responsibilities in a flood emergency in collaboration with other jurisdictions performing emergency functions within and around the Stewart Tract. The EOPs are to be used in conjunction with the emergency operations plans of the State of California and the San Joaquin Operational Area (SJOA) to facilitate multi-jurisdictional coordination within each district's boundaries. The EOPs are required by Section 9650 of the California Water Code.

## 4.9.2 Environmental Setting

The environmental setting provided on pages 4.9-1 through 4.9-5 of the 2003 SEIR is relevant to understanding the potential hazardous materials and public health impacts of the River Islands project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

The River Islands Project is a master planned community, on approximately 4,905 acres on Stewart Tract and Paradise Cut. Much of the Phase 1 area has been constructed with residential dwelling units, a Town Center, a portion of a Business Park, lakes, parks, schools, and other open space. The Phase 2 area is currently mostly undeveloped and/or agricultural land. The project site also contains the Central Drainage Ditch, a long agricultural ditch that bisects Stewart Tract, along with a small pond located near Paradise Cut. Flood protection improvements consisting of levees surrounding both the Phase 1 and Phase 2 area have been completed, consistent with plans and entitlements.

A Phase I ESA was prepared by ENGEO in March 2020 (see Appendix F) to update the previous ESAs prepared by The Denali Group in February 2001 and by GeoResearch in August 1994. The purpose of the Phase I ESAs was to document recognized environmental concerns (RECs) in the project area related to current and historical uses of the area and to evaluate the potential for a release of hazardous materials from onsite or offsite sources that could significantly affect environmental conditions at the project site. The ESAs prepared by GeoResearch and The Denali Group evaluated the River Islands project area in its entirety, as well as other portions of Stewart Tract, the Paradise Cut Conservation Area, and a portion of the Upper Paradise Cut Improvement Project Area. The ESA prepared by ENGEO in March of 2020 evaluated the Phase 2 area, including Paradise Cut.

The results of the 2020 Phase I ESA indicate that past agricultural activities in the Phase 2 area may have included the use of agricultural chemicals. Also, given the age of the existing structures, there is a potential for asbestos, lead, and termiticide around the perimeter of the structures. However, these features are not considered to be RECs. In summary, the assessment found no RECs, no historical RECs, and no controlled RECs on the property. Based on the assessment, ENGEO recommends that a limited agricultural chemical assessment be performed prior to urban development in the project area to determine the presence of agricultural chemicals on the property. The assessment also recommends that an asbestos survey be performed, as well as soils testing, to indicate lead or termiticide around the perimeter prior to demolition of any structures. Finally, the assessment recommends that any removal of wells or septic tanks should be performed in accordance with San Joaquin County guidelines (ENGEO 2020:1-1).

The majority of the Phase 2 area is currently used for agricultural purposes, including row crops. There are several structures on the property, including three residential structures, several barns and sheds, and a stall associated with an existing horse ranch. The majority of the Phase 2 area is surrounded by U.S. Army Corps of Engineers (USACE) levees along Old River and Paradise Cut, and new levees have been constructed to their interior (ENGEO 2020:3).

Groundwater monitoring wells were installed throughout Stewart Tract in 1993 and 1999 by Roger Foot and Associates and Kleinfelder Inc., respectively. Seven of these wells remain in operation. In 2005, 10 additional monitoring wells were installed by ENGEO within the Phase 2 area with the data used to measure fluctuations in groundwater levels and observe groundwater gradients across the Phase 2 area (ENGEO 2020:4).

As part of the Phase I ESA, ENGEO reviewed Department of Conservation, Geologic Energy Management (CalGEM), formerly the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR), website and map database to determine the presence of any historic oil and/or gas wells were on the property. Three wells were mapped within the Phase 2 area and 22 wells were mapped within one mile of the site. All wells were identified as plugged, dry holes (ENGEO 2020:4).

ENGEO also reviewed records from various agencies, including the City of Lathrop Building and Planning Departments, Lathrop-Manteca Fire Department, San Joaquin County Department of Environmental Health (SJCDHEH), California State Water Resources Control Board (GeoTracker website), and the California Department of Toxic Substances Control (EnviroStor website). The review of SJCDHEH's online records reveals several permits associated with septic systems, domestic wells, irrigation wells, and pumps within the Phase 2 site (ENGEO 2020:8). Review of the GeoTracker database indicated no sites within the Phase 2 area or within one mile (ENGEO 2020:9). The EnviroStor

website did not show any sites within the Phase 2 area, but identified the River Islands Middle School/Elementary School site within one mile, though this site does not pose an environmental risk to the Phase 2 area (ENGEO 2020:9).

Site reconnaissance performed during preparation of the Phase I ESA revealed the following features: no above-ground storage tanks or evidence of existing underground storage tanks; stockpiles and fill material associated with site grading; several wells, including domestic wells at the residences, irrigation wells, and 17 monitoring wells; and septic systems at each of the residences (ENGEO 2020:10).

### 4.9.3 Impacts and Mitigation Measures

#### METHODOLOGY

The following reports and data sources document potential hazardous conditions at the project site and were reviewed for this analysis:

- ▶ 2003 SEIR for the River Islands Project;
- ▶ available literature, including documents published by federal, State, County, and City agencies;
- ▶ review of applicable elements from the City of Lathrop General Plan; and
- ▶ Phase I Environmental Site Assessment for the modified Phase 2 Project, prepared by ENGEO (2020); refer to Appendix F.

Project construction and operation were evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur.

#### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would cause a significant impact related to hazards, hazardous materials, and public health if it would:

- ▶ create a public health hazard through the routine transport, use, production, generation, release, or disposal of materials that pose a hazard to humans, animals, or plant populations;
- ▶ create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment;
- ▶ expose construction workers to hazardous materials that would create health risks during construction; ~~or~~
- ▶ emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- ▶ be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- ▶ for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- ▶ impair implementation of or physically interfere with an adopted emergency response plan; or
- ▶ create a health or potential health hazard.

## ISSUES NOT DISCUSSED FURTHER

The Phase 2 area is not located within an airport land use plan or within two miles of a public airport or public use airport and, therefore, the project would not result in a safety hazard or excessive noise for people residing or working in the project area. Thus, the project would have no impact related to being located within an airport land use plan and this issue is not discussed further.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.9-a: Hazardous Materials

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The 2003 SEIR evaluated the potential for hazardous materials to create a significant hazard to the public. The storage, use, transportation, and disposal of hazardous materials is regulated by local, state, and federal regulations. Compliance with all applicable local, state, and federal regulations regarding hazardous materials is required for all development, including implementation of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.9-a of the 2003 SEIR evaluated whether the storage, use, and transportation of hazardous materials at the River Islands project site could create a significant hazard to the public. The analysis noted that the transportation of hazardous materials on area roadways is regulated by CHP and Caltrans, while the use of hazardous materials is regulated by DTSC. Any use, storage, and transportation of hazardous materials must be done in compliance with local, state, and federal regulations. This impact was concluded to be less than significant, and no mitigation was required.

During construction, the project proponents, builders, contractors, business owners, and others would be required to use, store, and transport hazardous materials in accordance with local, state, and federal regulations discussed in Section 4.9.1, "Regulatory Setting." This includes Cal/OSHA standards in Title 8 of the CCR to conduct on-site evaluations and issue notices of violations to enforce necessary improvements to health and safety practices and DTSC requirements under the Resource Conservation and Recovery Act (RCRA) to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. These regulations would minimize the potential for accidental releases from construction. Transportation of hazardous materials on area roadways is regulated by CHP and Caltrans. As part of construction projects over one acre, a SWPPP would be prepared and implemented that would include BMPs and other measures to prevent releases of hazardous materials and contain and clean-up any accidental releases that might occur.

Demolition activities within the plan area would be required to comply with San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4002, which requires compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, 40 CFR, Part 61, Subpart M. Rule 4002 requires that structures to be demolished be inspected for asbestos-containing materials, which must be removed prior to demolition.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would result in similar use of hazardous materials for construction purposes as analyzed in the 2003 SEIR. The increase in the number of residents and workers in the project area over the number anticipated in the 2003 SEIR means that more people could be exposed to hazardous materials during construction and operation. However, all construction and operational activities would be subject to local, state, and federal regulations concerning the use, transportation, storage, and disposal of hazardous materials. Compliance with all local, state, and federal regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction and operation would reduce the risk of significant hazards to the public. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.



## Mitigation Measures

No mitigation is required.

### Impact 4.9-b: Hazardous Materials Sites

Agricultural and farming uses could have resulted in soil and/or groundwater contamination on the project site. Site disturbance could expose people in the area to hazardous materials. The proposed Phase 2 modifications would result in development of the same project site as evaluated in the 2003 SEIR and the same potential for site disturbance to expose people to hazardous materials from soil and/or groundwater contamination. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

Impact 4.9-b of the 2003 SEIR evaluated whether past agricultural and farming operations in the project area could have resulted in contamination of soil or groundwater such that construction workers, residents, and others could be exposed to hazardous materials. The analysis noted that the Phase I ESA prepared by The Denali Group in 2001 identified several locations within the Phase 1 and Phase 2 areas where soil and/or groundwater contamination may have occurred. This impact was determined to be significant, but implementation of Mitigation Measure 4.9-b would reduce the impact to a less-than-significant level. Mitigation Measure 4.9-b requires site investigations prior to demolition activities and requires compliance with applicable regulations for hazardous material removal.

A Phase I ESA was prepared by ENGEO in March 2020 for the Phase 2 area (see Appendix F). As discussed above in Section 4.9.2, "Environmental Setting," the Phase I ESA did not identify any RECs, historical RECs, or controlled RECs in the Phase 2 area (ENGEO 2020:1). Due to the history of agricultural operations in the Phase 2 area, ENGEO recommends that a limited agricultural chemical assessment be performed to determine the potential for agricultural chemicals on a given development project that is proposed within the Phase 2 area (ENGEO 2020:2). Furthermore, ENGEO also recommends that an asbestos survey be performed prior to demolition of any structure, as well as soil testing around the perimeter for lead or termiticide (ENGEO 2020:2)

Mitigation Measure 4.9-b adopted by the City requires investigations for potential hazardous materials. While this measure includes actions that are substantially similar to those of ENGEO's 2020 Phase I ESA, there are some distinctions. Mitigation Measure 4.9-b shown below includes the original language from the measure as it was adopted, with revisions to reflect the recommendations of ENGEO's 2020 Phase I ESA.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that assumed in the 2003 SEIR. However, because the modified Phase 2 Project involves development of land previously used for agricultural and farming activities, it is possible that soil and/or groundwater contamination could be present on the site. There is no new significant impact and the impact is not substantially more severe than identified in the 2003 SEIR. This would remain a **potentially significant** impact as identified in the 2003 SEIR.

#### Modified Mitigation Measure 4.9-b: Exposure of Construction Workers, Residents, and Others to Hazardous Materials

*Mitigation Measure 4.9-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strike through~~ and additional text shown in underline.*

- ▶ 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.

- ▶ 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.
- ▶ 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.
- ▶ 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.

#### Significance after Mitigation

The site investigations required by Modified Mitigation Measure 4.9-b, as modified to include recommendations from the latest Phase I ESA, would reduce potential impacts related to soil and/or groundwater contamination by identifying sites requiring remediation and abating the hazard in compliance with applicable local, state, and federal regulations. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to soil and/or groundwater contamination.

#### **Impact 4.9-c: Exposure of School Sites to Hazardous or Acutely Hazardous Materials, Substances, or Waste within 0.25 mile of an Existing School**

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While exposure of school sites to hazardous materials was not expressly evaluated in the 2003 SEIR, effects of hazardous materials on residents, workers, and others in the River Islands area was evaluated, which would have included the school sites included in the project description for River Islands. Compliance with all applicable local, state, and federal regulations regarding hazardous materials is required for all development, including implementation of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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While the 2003 SEIR did not specifically address potential exposure of school sites to hazardous materials, it was anticipated that three schools would be built within the River Islands area (City of Lathrop 2002:3-22). Impact 4.9-a of the 2003 SEIR evaluated whether the storage, use, and transportation at the River Islands project site could create a significant hazard to the public, which includes schools. Because compliance with local, state, and federal regulations is required for all transport, use, storage, and disposal of hazardous materials, this impact was concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would result in similar use of hazardous materials for construction purposes as analyzed in the 2003 SEIR. The increase in the number of residents and workers in the project area could increase the number of students in the area, which

would be accommodated by existing and future school sites. Existing schools within River Islands include the Next Generation STEAM Academy at River Islands (K-12) and River Islands Technology Academy II (K-8), both charter schools located in the Town Center in the Phase 1 area. As described in Chapter 3, "Project Description," the modified Phase 2 Project includes four schools to serve grades K-8 students and one high school to serve grades 9-12 students (see Figure 3-2 for proposed locations). All construction and operational activities would be subject to local, state, and federal regulations concerning the use, transportation, storage, and disposal of hazardous materials. Compliance with all local, state, and federal regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction and operation would reduce impacts of hazardous materials to school sites. Therefore, there is no new significant impact and the effect is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.9-d: Interfere with Implementation of an Emergency Response Plan

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The modified Phase 2 Project would include work within rights-of-way, which has the potential to interfere with emergency access. This impact would be **potentially significant**.

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At the time of the 2003 SEIR, consideration of interference with implementation of an emergency response plan was not included as a threshold of significance. However, Impact 4.10-a of the 2003 SEIR evaluated whether construction traffic could obstruct emergency vehicles attempting to access the site. The analysis noted that construction activities during Phase 2 could affect areas developed during Phase 1. The analysis stated that ongoing construction activities could result in temporary lane closures, increased truck traffic, and other effects on roadways and concluded that implementation of Mitigation Measure 4.10-a would reduce this impact to a less-than-significant level. Mitigation Measure 4.10-a requires compliance with City of Lathrop requirements for preparation and implementation of traffic control plans for construction activities that may affect rights-of-way.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that assumed in the 2003 SEIR, but could increase the duration and amount of equipment used for construction. This impact would be **potentially significant**.

### Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction

Implement Adopted Mitigation Measure 4.10-a in Section 4.10, "Public Services."

#### Significance after Mitigation

Compliance with Lathrop encroachment permit requirements as required by Adopted Mitigation Measure 4.10-a would reduce potential impacts related to emergency access by using detours only as necessary and implementing other measures to maintain traffic flow through construction areas. Implementation of Adopted Mitigation Measure 4.10-a would reduce potential impacts related to emergency or evacuation access to a **less-than-significant** level.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total

distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the analysis of the modified Phase 2 Project. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

Compliance with all applicable local, state, and federal regulations regarding hazardous materials is required. Therefore, impacts related to the transport, use, disposal, and accidental release of hazardous materials during construction and operation would be the same as evaluated for the modified Phase 2 Project (Impact 4.9-a) and the impact would remain less than significant. The transportation of hazardous materials on area roadways is regulated by CHP and Caltrans, while the use of hazardous materials is regulated by DTSC. Any use, storage, and transportation of hazardous materials must be done in compliance with local, state, and federal regulations. As part of construction projects over one acre, a SWPPP would be prepared and implemented that would include BMPs and other measures to prevent releases of hazardous materials and contain and clean-up any accidental releases that might occur.

A search of hazardous materials databases maintained by state and federal agencies revealed one historical contamination site along Paradise Road. Haley Flying Services (21000 Paradise Road) is the site where a release of gasoline associated with a leaking underground storage tank (LUST) was cleaned up and the SWRCB case was closed in 1998 (SWRCB 2020; DTSC 2020). Because the Paradise Road widening and improvement would involve the disturbance of land previously used for agricultural and farming activities, it is possible that soil and/or groundwater contamination could be present on the site. Therefore, the potential to encounter soil and/or groundwater contamination would be the same as evaluated for the modified Phase 2 Project (Impact 4.9-b).

There are currently no schools located within 0.25 mile of the Paradise Road widening and improvement area; however, as described in Chapter 3, "Project Description," the modified Phase 2 Project includes four schools to serve grades K-8 students and one high school to serve grades 9-12 students (see Figure 3-2 for proposed locations). Therefore, the potential for schools to be exposed to hazardous materials would be the same as evaluated for the modified Phase 2 Project (Impact 4.9-c) and the impact would remain less than significant.

The Paradise Road widening and improvement would involve work within rights-of-way, which has the potential to interfere with emergency access (Impact 4.9-d); therefore, the preparation and implementation of traffic control plans for construction activities would be required, similar to the modified Phase 2 Project.

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening and improvement to support implementation of the road widening would be required to implement all applicable mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Modified Mitigation Measure 4.9-b, Exposure of Construction Workers, Residents, and Others to Hazardous Materials; and Adopted Mitigation Measure 4.10-a, Obstruction of Roadways during Construction. These mitigation measures would be equally effective at reducing any significant hazards impacts to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road widening and improvement would have no new significant impact and the impacts are not substantially more severe.

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## 4.10 PUBLIC SERVICES

This section provides an overview of existing public services for the City of Lathrop and evaluates the potential for implementation of the modified Phase 2 Project to affect availability, service level, and/or capacity of public services, including fire protection services, police protection services, public schools, and solid waste disposal, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Current CEQA Guidelines and thresholds include evaluation of solid waste capacity within the Public Utilities section. However, for the purposes of this SEIR, solid waste is evaluated herein. Other publicly provided utility services, such as water and wastewater treatment, stormwater management, electricity, and natural gas services, are addressed in Section 4.11, "Public Utilities."

Section 4.10, "Public Services," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to public services in the City of Lathrop. The 2003 SEIR concluded that impacts related to obstruction of roadways during construction (Impact 4.10-a), increased demand for fire protection facilities and services (Impact 4.10-b), increased demand for water-related emergency services and facilities (Impact 4.10-c), increased demand for fire flow (Impact 4.10-d), increased demand for police protection facilities and services (Impact 4.10-e), increased demand for animal control facilities and services (Impact 4.10-f), and increased demand for public school facilities and services (4.10-g) would be reduced to a less-than-significant level with the implementation of Mitigation Measures 4.10-a, 4.10-b, 4.10-c, 4.10-d, 4.10-e, 4.10-f, and 4.10-g, respectively. The 2003 SEIR concluded that impacts related to increased generation of solid waste (Impact 4.10-h) would be less than significant.

### 4.10.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws are applicable to the provision of public services for the modified Phase 2 Project.

#### STATE

##### California Fire Code

The 2019 California Fire Code, which incorporates by adoption the 2018 International Fire Code, contains regulations related to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.

##### California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and childcare facility standards, and fire-suppression training.

##### California Building Standards Code (Title 24)

Energy consumption of new buildings in California is regulated by State Building Energy Efficiency Standards contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation,

water heating, and lighting. The 2016 Building Energy Efficiency Standards have improved efficiency requirements from previous codes and the updated standards are expected to result in a statewide energy consumption reduction.

Effective January 1, 2011, CALGreen became California's first green building standards code. It is formally known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. CALGreen establishes mandatory minimum green building standards and requirements for construction and demolition (C&D) material diversion. Under Section 5.408 of the CALGreen Code, projects involving C&D activities are required to recycle and/or salvage for reuse a minimum of 65 percent of their nonhazardous C&D material. Applicable projects, such as the modified Phase 2 Project, are required to prepare and implement a construction waste management plan.

### **California Integrated Waste Management Act**

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of their generated waste from landfill facilities by January 1, 1995 and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated with the county plan. In order of priority, the plans must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

In 1999, Governor Davis signed AB 75 (Chapter 764, Statutes of 1999), which mandated that State agencies comply with AB 939 diversion requirements.

In addition to the requirements of AB 75, the following policies and statutes address State agency recycling:

- ▶ Executive Order W-7-91 requires California State agencies to buy recycled products and set up recycling programs.
- ▶ Public Contract Code (PCC) Sections 12164.5–12167.1 require the California Department of Resources Recycling and Recovery (CalRecycle) to develop a recycling plan and implement recycling programs for the Legislature and all State-owned and leased buildings.
- ▶ PCC 12167.1 requires State agencies and institutions to report materials collected for recycling to CalRecycle.
- ▶ Public Resources Code [PRC] 42560–42562 requires CalRecycle to recycle high-grade white office paper in California State offices.
- ▶ California State Administration Manual Chapter 1990 encourages employees at State facilities to prevent waste, reuse, and recycle.

### **California Department of Education**

The California Department of Education (CDE) School Facilities Planning Division (SFPD) has prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in California. CDE's authority for approving proposed sites for schools is contained in Education Code Section 17251. CDE's approval is a condition for school districts to receive state funds for the acquisition of sites under the state's School Facilities Program administered by the State Allocation Board. Districts using only local funds are still encouraged to seek CDE's approval for the benefits that such outside review can provide.

School site and size recommendations were changed by CDE in 2000 to reflect various changes in educational conditions, such as the lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of CDE recommendations.

CDE provides specific recommendations for school site size in the publication *School Site Analysis and Development*. This document suggests a ratio of 1:2 between buildings and grounds. CDE is aware that in some cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, SFPD may approve an amount of acreage less than the recommended gross site size and building-to-grounds ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of SFPD relating to:

- ▶ proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- ▶ presence of toxic and hazardous substances;
- ▶ hazardous facilities and hazardous air emissions within a quarter mile;
- ▶ proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- ▶ noise;
- ▶ results of geological studies and soils analyses;
- ▶ traffic and school bus safety; and
- ▶ safety issues related to joint-use facilities.

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing City of Lathrop General Plan is the plan that is currently in effect and is the document used for this SEIR for this issue area. The project proponent is proposing amendment of the 2004 General Plan for both land use and circulation. The *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

#### Safety Goals and Policies

- ▶ **Policy 1:** The City will continue to give high priority to the support of police protection, and to fire suppression and prevention and life safety functions of the Fire Department. Ultimate expansion of the City's fire service is to include additional stations affording adequate response within a maximum of 3-4 minutes to all parts of the urban area.
- ▶ **Policy 2:** The City will work to maintain a fire flow standard of 3,000 gpm [gallons per minute] for all commercial and industrial areas, and 1,500 gpm for residential areas, to assure capability to suppress urban fires. In strategic areas, the City should provide above ground water storage with capacities sufficient to supply the City for required durations.
- ▶ **Policy 3:** The City will maintain a street system which is capable of providing access to any fires that may develop within the urban area, and which is capable of providing for the adequate evacuation of residents in the event of an emergency condition of magnitude.

#### Seismic Goals and Policies

- ▶ **Policy 3:** The present building height limit of 50 feet shall be maintained, with a maximum of four stories. This policy shall stay in force until such time that high rise construction is desired and capability for evacuation and fire fighting in upper stories is possible through the availability of appropriate equipment.

#### Air Quality and Solid Waste Management Policies

- ▶ **Policy 7:** Environmental assessments for development projects proposed consistent with the General Plan shall provide all of the information required under the "Waste Plan Format for Development Projects" that is employed by the San Joaquin County Department of Public Works.

The General Plan defers to the West Lathrop Specific Plan (WLSP) for determining needs for schools and other public and semi-public facilities in the portion of Stewart Tract encompassing the project.



## 4.10.2 Environmental Setting

The environmental setting provided on pages 4.7-5 through 4.7-15 of the 2003 SEIR is relevant to understanding the potential public services impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

### FIRE PROTECTION

The Lathrop-Manteca Fire District (LMFD) provides fire prevention and protection services to the entire city, including the River Islands Project site, rural Lathrop, and rural Manteca (LMFD 2020a). The Phase 1 fire station (Fire Station 35) is located at 19050 Golden Valley Parkway, Lathrop, CA and is in operation. The modified Phase 2 Project would provide an approximately 3.5-acre site for Fire Station 36, which would be located in the Woodlands District near River Islands Parkway.

LMFD is an independent special district. In addition to fire prevention and protection services, LMFD manages emergency medical services, a hazardous materials program, a domestic preparedness program, an urban search and rescue task force, and a swift water rescue program. LMFD also maintains automatic aid agreements with all of its neighboring agencies and participates in the State mutual aid response system in coordination with the California Emergency Management Agency.

LMFD staffs five strategically located fire stations throughout the service area with six companies to provide on duty staffing 24 hours per day and 365 days a year. Staffing includes one station staffed with an Engine and Rescue. The District-wide fire suppression force is organized into three shifts, consisting of 13 members each. Each of the shifts is on duty for rotating periods of 24 hours. A minimum of two members are on duty in each of the fire stations at all times. LMFD employs 69 uniformed employees, including:

- ▶ 3 line battalion chiefs;
- ▶ 15 captains;
- ▶ 12 engineers;
- ▶ 9 firefighters; and
- ▶ 30 reserve firefighters.

During 2019, LMFD responded to approximately 4,074 incidents. This included fire/explosion incidents, rescue/emergency medical services incidents, service calls, and special incidents (LMFD 2020a; 2020b).

Fire stations closest to the Phase 2 area include:

- ▶ Station 35 at 19001 Somerston Parkway, Lathrop, CA 95330;
- ▶ Station 34 at 460 River Islands Parkway, Lathrop, CA 95330;
- ▶ Station 31 at 800 East J Street, Lathrop, CA 95330;
- ▶ Station 32 at 22701 South Union Road, Manteca, CA 95337; and
- ▶ Station 33 at 9121 East Lathrop Road, Manteca, CA 95336.

Station 35 would provide first responder service to the project site until the Phase 2 fire station (Station 36) has been completed. Fire apparatus located at Station 35 consist of one Type 1 Pumper, one Type 3 Pumper, and one Type 2 Heavy Rescue. In 2019, Station 35 staff responded to approximately 503 incidents with an average response time of approximately 5 minutes and 26 seconds (LMFD 2020a).

Boat 31 was purchased in 2005 by the City of Lathrop and donated to LMFD. This unit serves over 30 miles of Delta waterways along the San Joaquin River. Boat 31 is also an integral part of LMFD's dive program, and serves as a floating platform for dive operations.

The City of Lathrop strives to maintain adequate response time to a maximum of 3 to 4 minutes for incidents in all parts of urban areas (General Plan Safety Element Policy 1) (City of Lathrop 2004). LMFD's current average response time is approximately 5 minutes and 44 seconds to all incidents (LMFD 2020b).

An important requirement for fire suppression is adequate fire flow, which is the amount of water, expressed in gallons per minute (gpm), available to control a given fire and the length of time this flow is available. The total fire flow needed to extinguish a structural fire is based on a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. The City of Lathrop strives to maintain a fire flow standard of 3,000 gpm for all commercial and industrial areas of the community, and 1,500 gpm for residential areas (General Plan Safety Element Policy 2) (City of Lathrop 2004).

## LAW ENFORCEMENT

### California Highway Patrol

The California Highway Patrol (CHP) provides traffic-related enforcement services on the state highway system throughout San Joaquin County (CHP 2020). The project area is in the CHP's Valley Division. The nearest CHP offices are the Stockton Area Office (265), located at 2720 Wilcox Road in Stockton; and the Tracy Area Office (266), located at 385 West Grant Line Road in Tracy. CHP is responsible for traffic management and investigation of traffic collisions on state highways in the unincorporated areas of San Joaquin County.

### Lathrop Police Services

The City contracts with the San Joaquin County Sheriff's Department for police services. Police protection services are provided by Lathrop Police Services (LPS), a division of the San Joaquin Sheriff's Office, for areas within the city. Patrol units for the City of Lathrop originate at the Lathrop Police Department Station located at 15597 7<sup>th</sup> Street. LPS is currently located at the Sheriff's Office at 7000 Michael Canlis Boulevard, French Camp, CA. A new Lathrop Police Station is under construction in the Phase 1 area near Bradshaw's Crossing bridge at 940 River Islands Parkway, Lathrop. The new police station is expected to be operational by late 2020 or early 2021. LPS is staffed by a total of 26 full-time officers. The LPS staff consists of 16 police patrol staff, two of which are K9 officers, and ten administrative staff that consist of the following police officers:

- ▶ 1 police chief;
- ▶ 2 administrative sergeants;
- ▶ 2 detectives;
- ▶ 1 community resource officer;
- ▶ 2 school resource officers;
- ▶ 1 deputy (traffic); and
- ▶ 1 deputy (motorcycle).

In 2018, LPS had 26 sworn employees (1.1 police officers per 1,000 residents). The 2019-2021 budget provided funding for two additional full-time positions, for a total of 28 sworn officers. This would allow for 1.2 police officers per 1,000 residents (City of Lathrop 2020a; 2020b).

### Lathrop Animal Services

The Lathrop Animal Services Department provides animal control services to the City of Lathrop. Lathrop employs one full time Animal Services Manager, two full time Animal Services Officers, and one full time Animal Services Assistant, with two fully equipped vehicles to patrol City streets (City of Lathrop 2020c).

Lathrop Animal Services contracts with the City of Manteca for shelter services. All Lathrop animals are housed and can be redeemed, surrendered, or adopted at the Manteca Animal Shelter located at 115 E. Wetmore Street in Manteca.

## SCHOOLS

The River Islands Project is located within two different school district boundaries: the Banta Elementary School District (BESD), which serves grades K-8, and the Tracy Unified School District (TUSD), which serves grades 9-12. BESD is a three-school district, consisting of the Banta Elementary School, River Islands Technology Academy, and NextGeneration STEAM Academy. School enrollment is provided in Table 4.10-1.

TUSD is comprised of three comprehensive high schools (John C. Kimball High School, Tracy High School, and Merrill F. West High School) and two alternative education high schools (George & Evelyn Stein Continuation High School and Duncan-Russell Continuation High School) that serve grades 9-12. TUSD currently serves approximately 16,000 students (California Department of Education 2020a; 2020b; 2020c; 2020d; 2020e; TUSD 2020).

As shown in Table 4.10-1, enrollment numbers have slightly fluctuated or increased over the years. In the 2019-2020 school year, TUSD had an enrollment of approximately 5,677 high school students. The total school capacity for TUSD high schools is estimated at 8,273 students and there is existing capacity to accommodate additional high school students (California Department of Education 2020b, 2020c, 2020d; TUSD 2018).

**Table 4.10-1 School Enrollment**

School	Number of Students				
	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
<b>Banta Elementary School District</b>					
Banta Elementary School (K-8)	351	361	373	336	316
River Islands Technology Academy (K-8)	536	603	726	837	963
Next Generation S.T.E.A.M. Academy (K-12)	315	409	450	512	539
<b>Tracy Unified School District</b>					
John C. Kimball High School (9-12)	1,622	1,511	1,476	1,506	1,516
Tracy High School (9-12)	2,121	2,108	2,100	1,999	1,957
Merrill F. West High School (9-12)	2,099	2,105	2,121	2,043	2,204
George & Evelyn Stein Continuation High School (9-12)	200	129	121	110	107
Duncan-Russell Continuation High School (9-12)	21	14	19	19	15

Sources: California Department of Education 2020a, 2020b, 2020c, 2020d, 2020e, 2020f, 2020g, 2020h; California Department of Education et al. 2021

## SOLID WASTE

Foothill Sanitary Landfill, located along the eastern boarder of San Joaquin County, is the largest landfill site in the County at around 800 acres. Foothill Landfill was acquired by the County in 1993. Based on the current permit, Foothill Landfill is projected to be in operation until 2082 (San Joaquin County Solid Waste Division 2020).

Foothill is operated by Foothill, Inc., under contract with the County. Foothill is the destination of wastes generated at both the Tracy Delta Materials Recovery Facility, the Lovelace Transfer Station, local solid waste collectors, and residents of the surrounding areas. Average daily volume is 566 tons; 204,236 tons were delivered to Foothill in 2014. Foothill diverted 3,214 tons of material from disposal in 2014 (San Joaquin County Solid Waste Division 2020).

## 4.10.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

Evaluation of potential public service impacts was based on a review of documents pertaining to the proposed project, including research related to the appropriate public service providers, such as LMF, CHP, LPS, and the applicable school districts; and field review of the project study area and surroundings. Impacts on public services that would result from the project were identified by comparing existing service capacity and facilities against future demand associated with project implementation.

### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline. As noted above, current CEQA Guidelines and thresholds include evaluation of solid waste capacity within the Public Utilities section. However, for the purposes of this SEIR, solid waste is evaluated herein.

The modified Phase 2 Project would cause a significant impact related to public services if it would:

- ▶ ~~create a need for the development of new service facilities, the construction of which could result in significant environmental impacts;~~
- ▶ ~~substantially impede existing service;~~
- ▶ result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
  - fire,
  - police protection,
  - schools,
  - parks, and
  - other public facilities.
- ▶ generate solid waste beyond the capacity of existing landfills; or
- ▶ violate federal, state, or local statutes and regulations related to solid waste.

### ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussions below. See Section 4.12, "Recreation," for a discussion of parks.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.10-a: Obstruction of Roadways during Construction

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The 2003 SEIR evaluated the potential for construction activities associated with the River Islands Project to adversely affect local roadways. It was concluded that the project could obstruct roadways in the vicinity during construction, which could obstruct or slow emergency vehicles attempting to access the area. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for obstruction of roadways during construction, which could obstruct or slow emergency vehicles. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.10-a of the 2003 SEIR evaluated whether construction activities would obstruct roadways within the vicinity of the project area. The analysis stated that construction activities of varying levels would occur over a 20-year period (2005-2025), and that while most construction activities would occur onsite, nearby roadways could be affected. Because ongoing construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, further affecting emergency response times, this impact was determined to be significant. The 2003 SEIR required implementation of Mitigation Measure 4.10-a which would reduce the impact to a less-than-significant level through preparation and implementation of a traffic control plan pursuant to City requirements and Caltrans standards. Therefore, this impact was concluded to be less than significant after mitigation.

The River Islands Project contains two primary elements for the traffic network: external traffic features that connect the project site to highways, regional roads, and other local streets and an internal circulation network. The modified Phase 2 Project does not include modifications to the external traffic features, but it would modify the internal circulation network. Specifically, under the modified Phase 2 Project, the circulation pattern would be modified from the adopted WLSP and General Plan, with River Islands Parkway, Lakeside Drive, and Paradise Road shifting locations to the updated land use pattern (see Figure 3-6). Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the current plan. An additional arterial from the existing terminus of Golden Valley Parkway in the Employment Center would continue into the Phase 2 area for internal circulation. Access to the project's internal circulation system would be maintained via bridges across the San Joaquin River and Paradise Cut. The level of construction required for the Phase 2 modifications of the internal circulation network would be similar to the level of construction analyzed under the 2003 SEIR.

Construction activities could result in temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, temporarily increasing response times and impeding existing service. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for obstruction of roadways during construction, which could obstruct or slow emergency vehicles. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

### Mitigation Measures

#### 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.10-a would reduce impacts associated with obstruction of roadways through preparation and implementation of a traffic control plan pursuant to City requirements and Caltrans standards. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, impacts related to obstruction of roadways during construction would be **less than significant** consistent with the impact conclusion in the 2003 SEIR.

### **Impact 4.10-b: Increased Demand for Fire Protection Facilities and Services**

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The 2003 SEIR evaluated whether the River Islands Project would increase the demand for fire protection facilities and services. The proposed Phase 2 modifications would result in additional residential development compared with what was evaluated in the 2003 SEIR and, thus, an increased demand for fire protection facilities and services. Without new fire stations, existing fire protection facilities and services within the City would not be able to adequately serve the project. The City of Lathrop strives to maintain adequate response times of a maximum of 3 to 4 minutes for incidents in urban areas (City of Lathrop 2004). LMFD does not currently meet the response time goal for the City overall; the current average response time for LMFD is approximately 5 minutes and 44 seconds to all incidents (LMFD 2020b). With the construction of Fire Station 35 and with Fire Station 34 in Mossdale Landing in close proximity to the Town Center via Bradshaw's Crossing Bridge, Phase 1 of River Islands meets the 3- to 4-minute average response time requirement. The construction of a new fire station in the Phase 2 area would help the City meet its response time goal and ensure that adequate fire protection facilities and services are available to serve the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.10-b of the 2003 SEIR evaluated whether the River Islands Project would result in an increased demand for fire protection facilities and services. The 2003 SEIR identified a residential population of 31,680 at full project buildout. As discussed in Impact 4.10-b of the 2003 SEIR, a 1.2:1,000 firefighter-to-resident ratio must be maintained to achieve an appropriate level of service. Therefore, it was determined that 38 additional firefighters would need to be hired to accommodate increased fire protection demands at full project buildout. Additionally, new fire stations and associated equipment would be required. The 2003 SEIR identified that existing fire protection facilities and services could not maintain the established fire-response goal of three to four minutes for all portions of Phase 1a. Because of this, an interim fire station was planned for the Phase 1a development area, and additional fire stations planned for Phase 1 and Phase 2. At the time of publication of the 2003 SEIR, however, specific details regarding the schedule and location for these additional fire protection facilities had not been established. The 2003 SEIR identified that if these stations were not constructed, existing LMFD fire protection facilities would not be able provide adequate service to the project. Mitigation Measure 4.10-b requires delaying construction and occupancy of structures until emergency response times are determined to be acceptable, interim fire stations are established, and permanent fire stations are constructed. Further, Mitigation Measure 4.10-b requires the applicant to pay fair share fire service fees to the City for fire district facilities and services required to serve the project. Therefore, it was determined that implementation of Mitigation Measure 4.10-b would reduce impacts associated with increased demand for fire protection facilities and services to a less-than-significant level.

The approved River Islands Project includes an existing, operating fire station (Fire Station 35) in the Phase 1 area and a proposed site (Fire Station 36) in the Phase 2 area. The City of Lathrop strives to maintain adequate response times of a maximum of 3 to 4 minutes for incidents in urban areas (City of Lathrop 2004). LMFD does not currently meet the response time goal; the current average response time for LMFD is approximately 5 minutes and 44 seconds to all incidents in the City overall (LMFD 2020b). However, Phase 1 of River Islands meets the average 3-4-minute response time with the development of Fire Station 35.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use village center and transit-oriented development within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would result in an increased demand for fire protection and facilities services. The Phase 2 modifications would include a total of 10,726 dwelling units which would generate 32,178 residents for a total

residential population of 45,030 at project buildout. To accommodate the increased residential population, an additional 16 firefighters may be needed for a total of 54 firefighters to maintain a 1.2:1,000 firefighter-to-resident ratio. In 2013, LMFD and the project applicant entered into a mitigation agreement for both phases of River Islands which outlines the terms and conditions to which fire stations are constructed for the Project and how they are staffed and equipped. As discussed in the 2003 SEIR and above in Section 4.10.2, "Environmental Setting," the modified Phase 2 Project includes construction of an additional fire station (Fire Station 36) to provide sufficient fire protection services to the project site. The modified Phase 2 Project provides an approximately 3.5-acre site for Fire Station 36, which would be located in the Woodlands District near River Islands Parkway (see Figure 3-1) and would be sufficiently sized for the level of staffing that would be needed. At this time, specific details regarding the schedule for constructing Fire Station 36 have not been established and are predicated on the location and timing development within the Project 2 area. LMFD will monitor development over time and provide a plan for development of Fire Station 36 based on adopted response times and staffing needs in accordance with the 2013 mitigation agreement. Consistent with the previous environmental analysis for the 2003 SEIR under full project buildout, without Fire Station 36, existing LMFD fire protection facilities and services would not adequately meet the established 1.2:1,000 firefighter-to-resident ratio.

The construction of a new fire station in the Phase 2 area would be required to help the City meet its response time goal and ensure that adequate fire protection facilities and services are available to serve the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.10-b: Increased Demand for Fire Protection Facilities and Services

*Mitigation Measure 4.10-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strickthrough~~ and additional text shown in underline.*

~~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 LMFPD/LMFD methodologies. At some currently undetermined point during Phase 1, 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. LMFPD would build and equip necessary fire stations, as needed, on 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 LMFPD/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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.10-b would reduce impacts associated with an increased demand for fire protection facilities and services to a **less-than-significant** level, consistent with impact conclusion in the 2003 SEIR, by delaying construction and occupancy of structures until emergency response times are determined to be acceptable and permanent fire stations are constructed. Further, Modified Mitigation Measure 4.10-b would require the applicant to pay fair share fire service fees to the City for fire district facilities and services required to serve the project. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

### **Impact 4.10-c: Increased Demand for Water-Related Emergency Services and Facilities**

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The 2003 SEIR determined that as a result of heavy integration of water features in the project design, demand for water-related emergency services and facilities would increase, and LMFD would require additional equipment to meet increased demand. Since certification of the 2003 SEIR, docks along the exterior water system that were identified in the original project design have been largely removed as part of project modifications evaluated in the 2012 Addendum. Interior and exterior water features authorized by current entitlements would not be altered by the modified Phase 2 Project. Further, since certification of the 2003 SEIR, LMFD has acquired Boat 31, which serves over 30 miles of Delta waterways along the San Joaquin River and would provide water-related emergency services to the River Islands Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would be **less than significant**.

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Impact 4.10-c of the 2003 SEIR evaluated the River Islands Project's impacts related to increased demand for water-related emergency services and facilities. Because project implementation would include numerous homes, docks, bridges, and other facilities being constructed on or adjacent to the San Joaquin River, Old River, Paradise Cut, and the internal project lake, a greater number of people would be in contact with these water bodies, resulting in an increased demand for water-related emergency services. Additionally, because homes, other structures, and wildland fuels (vegetation) would be located adjacent to these water bodies, there could also be an increased need for fire suppression/emergency response efforts. The 2003 SEIR determined that LMFD did not have sufficient facilities and equipment to adequately respond to water-related emergency situations. The 2003 SEIR includes Mitigation Measure 4.10-c, which would reduce the impact associated with increased demand for water-related emergency services and facilities to a less-than-significant level by ensuring that fire/rescue boats be available to provide water-related emergency services through a tentative agreement between the applicant and LMFD.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use village center and transit-oriented development within the original boundaries of the Phase 2 area. Docks along the exterior water system identified in the original project design were removed as part of project modifications evaluated in the 2012 Addendum. Interior and exterior water features authorized by current entitlements would not be altered by the modified Phase 2 Project. The removal of the exterior water system decreases the exposure to water features and overall usage of water features. Under the Phase 2 modifications, water-related activities and exposures would be more likely to occur on interior water features where demand for water-related emergency services and facilities due to water depth and proximity to land. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would still in some instances require water-related emergency services and facilities. Since certification of the 2003 SEIR, LMFD has acquired Boat 31, which serves over 30 miles of Delta waterways along the San Joaquin River and would provide water-related emergency services to the River Islands Project. The acquisition of Boat 31 satisfies the requirements of Mitigation Measure 4.10-c and the measure is no longer required.

Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant**.

### **Mitigation Measures**

No mitigation is required.



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## Impact 4.10-d: Increased Demand for Fire Flow

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The 2003 SEIR identifies that project development of residential, commercial, school, and other uses would require adequate fire flow needed for emergency fire suppression and that a lack of available resources would substantially impede the ability of the LMFD to provide effective services at the project site. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and would require adequate fire flow for emergency fire suppression. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.10-d of the 2003 SEIR evaluated an increased demand for fire flow associated with project implementation. For most of the structures associated with the River Islands Project, the minimum fire flow requirement would be between 1,250 gpm and 2,000 gpm for a duration of at least 2 hours. Lack of adequate fire flow would impede the ability of the LMFD to provide effective fire suppression service at the project site. Therefore, this impact was determined to be significant, but implementation of Mitigation Measure 4.10-d would reduce impacts associated with increased demand for fire flow to a less-than-significant level by requiring adequate minimum fire flows, pursuant to the LMFD and the California Fire Code, are confirmed and available prior to any structure occupancy.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use village center and transit-oriented development within the original boundaries of the Phase 2 area. The modified Phase 2 Project would include new residential and commercial development more dense/intense to those analyzed in the 2003 SEIR. However, LMFD maintains oversight authority to ensure that adequate fire flow is available in the district's service area and monitors available fire flow, storage, and pressures necessary to serve such development with approval of each final map for the Project. Methods to calculate minimum fire flow are included in the California Fire Code. Various factors influence the determination of minimum fire flow, including the density of structures, height, the number of stories, square footage, building materials, and structural design. Proposed building heights would be as follows, as established in the River Islands Urban Design Concept and analyzed in the 2003 SEIR: 125 feet for Paradise Cut Village Center and Employment Center/Transit Oriented Development districts; 50 feet for East Village, West Village, and Woodlands districts; and 35 feet for Woodlands and Old River districts. For most of the structures associated with the project, the minimum fire flow requirement would be between 1,250 gpm and 2,000 gpm (measured at 20 pounds per square inch) for a duration of at least 2 hours, consistent with what was described in the 2003 SEIR. In summary, fire flow requirements may be substantially greater in the Employment Center and Town Center where multi-story buildings could be constructed. Lack of adequate fire flow would impede the ability of LMFD to provide effective fire suppression service within the Phase 2 area. The City of Lathrop strives to maintain a fire flow standard of 3,000 gpm for all commercial and industrial areas of the community, and 1,500 gpm for residential areas (General Plan Safety Element Policy 2) (City of Lathrop 2004). The City maintains Fire Engine 31, which has an on-board pump with a flow rating of 1,500 gpm. Consistent with the 2003 SEIR analysis, to adequately meet the requirements of LMFD and the California Building Code, the project applicant would need to demonstrate that adequate minimum flows are available to serve the project.

Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### 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 ~~LMFPD~~LMFD and the California Fire Code.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.10-d would reduce impacts to a **less-than-significant** level, consistent with impact conclusion in the 2003 SEIR, by requiring adequate minimum fire flows, pursuant to the LMFD and the California Fire Code, are confirmed and available prior to any structure occupancy. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

### **Impact 4.10-e: Increased Demand for Police Protection Facilities and Services**

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The 2003 SEIR determined that development of the project would increase the demand for police protection facilities and services as well as result in the need for additional staff members and equipment to maintain an adequate level of service. The proposed Phase 2 modifications would result in additional residential development compared with what was evaluated in the 2003 SEIR and, thus, an increased demand for police protection facilities and services. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.10-e of the 2003 SEIR evaluated whether implementation of the project would result in an increased demand for police protection facilities and services. The 2003 SEIR identified a residential population of 31,680 at full project buildout. Using an existing ratio of 1.4 officers to every 1,000 residents in the City, the 2003 SEIR identified that an additional 44 police officers would need to be hired to maintain a similar level of service to existing City conditions at full project buildout. Administrative staff members would also be required to support the additional patrol officers. The 2003 SEIR determined that emergency police response times would remain within desired goals as long as sufficient patrol officers were available. However, additional police and administrative staff would still be required and funding for police facilities and services comes out of the City of Lathrop General Fund. Mitigation Measure 4.10-e requires the project applicant to fund City-incurred startup costs associated with hiring and training new staff, equipment, and provision of patrol vehicles. Additionally, this mitigation measure requires increased traffic-safety provisions through ensuring the use of 3M Addressable Opticom Traffic Control Pre-emption devices at all traffic stops for which the project is responsible. After mitigation, this impact was determined to be less than significant.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use village center and transit-oriented development within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would result in an increased demand for police protection and facilities services. The Phase 2 modifications would include a total of 10,726 dwelling units, which would generate 32,178 residents, for a total residential population (Phases 1 and 2) of 44,963 at project buildout. The City's standard for new development is to provide 1.5 officers for every 1,000 residents. However, the First Amendment to the River Islands development agreement (July 2005) sets Califia's obligation to fund 1 sworn officers per 1,000 residents and the Mossdale Developers would fund 0.5 sworn officers per the Spray Field Lease Agreement (See First Amendment to the Development Agreement, July 2005, page 2, Subsection E through G). The Third and Fourth Amendments to the Development Agreement reiterated the applicant's obligation to provide staffing at 1 sworn officer per 1,000 residents. Based on the applicant's obligation to fund police services at the ratio of 1 sworn officer per 1,000 residents; an additional 32 sworn officers would be needed. Together, the obligations of Califia and the Mossdale developer would result in 1.5 officers per 1,000 residents in the project area. Since certification of the 2003 SEIR, the City Council also approved an agreement to allocate 60 percent of funds obtained from the Lathrop Public Safety and Essential City Services Transactions and Use (Sales) Tax Ordinance (approved by voters in 2012 as Measure C) to augment and enhance police protection activities for the City.

A new Lathrop police station is under construction in the Phase 1 area near Bradshaw's Crossing bridge at 940 River Islands Parkway, in Lathrop. The new police station is expected to be operational by late 2020 or early 2021. Police services have been temporarily relocated to the San Joaquin County Sheriff's Office located at 7000 Michael Canlis Blvd., in French Camp until completion of the new police station. The completed police station would further expand police protection facilities and services.

Nonetheless, the modified Phase 2 Project would increase demand for police protection services. City-incurred startup costs associated with hiring and training of new staff members, equipment, and provision of patrol vehicles, are typically funded by project applicants as a standard City requirement included in the development agreements for new development. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.10-e: Increased Demand for Police Protection Facilities and Services

*Mitigation Measure 4.10-e shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

~~The project applicant shall pay to the City the startup costs incurred in the hiring and training for each of the new police officer positions needed to serve the project (four for Phase 1a, an additional 13 officers for Phase 1, and 27 more officers for Phase 2 [total of 44], assuming the existing 1.4 officer to 1,000 resident ratio). This fee shall be incurred once per position (i.e., it shall not be used to train turnover staff). In addition, the following equipment costs shall be paid for by the applicant:~~

- ~~▶ standard safety equipment for each officer, including sidearm; belt, holster, etc.; body armor; mobile radio, etc.; and~~
- ~~▶ a fully equipped patrol vehicle for every two officers, including radio, siren, roof lighting, Opticom mobile strobe, mobile computer terminal, and vehicle video recorder.~~

~~The payment of the above startup fees and equipment costs shall be phased to coincide with the need for new officers generated by project development. Each time sufficient dwelling units are developed to generate 714 residents, the fee equivalent for one officer shall be paid to the City (based on a 1.4 officer to 1,000 resident ratio). The resident threshold may be adjusted if City policy results in a different officer to resident ratio. Resident generation rates to be used for this calculation are:~~

- ~~▶ single family: 3.2 persons per dwelling unit,~~
- ~~▶ multifamily: 2.5 persons per dwelling unit, and~~
- ~~▶ active adult: 1.5 persons per dwelling unit.~~

~~As police officers and support staff members are hired to meet demand associated with the proposed project, the planned Government Center, or similar or interim facilities, would be completed before Police Department staff exceed available space in the 7th Street building. 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.~~

The project applicant shall mitigate for the need for sworn police officers at the ratio of 1 sworn officers per 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.

### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.10-e would reduce impacts to a **less-than-significant** level by requiring the project applicant to fund City-incurred costs associated with hiring and training new staff, equipment, and provision of police services in accordance with adopted development agreements; these requirements would ensure that adequate police protection services are available to serve the project. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

### **Impact 4.10-f: Increased Demand for Animal Control Facilities and Services**

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The 2003 SEIR determined that increased population as a result of project development would result in a corresponding increase in demand for animal control facilities and services. Development of new facilities and hiring of additional staff members would be required to maintain the existing level of service in the City. The proposed Phase 2 modifications would result in additional residential development compared with what was evaluated in the 2003 SEIR and, thus, an increased demand for animal control facilities and services. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.10-f of the 2003 SEIR evaluated if impacts to animal control facilities and services would occur as a result of project implementation. The 2003 SEIR determined that increased population associated with the project would result in a corresponding increase in demand for animal control services and wildlife conflicts due to the project's riverine surroundings. Because existing City Animal Control Division facilities and staff were not sufficient to maintain the existing level of service within their service boundary, and because project implementation would further reduce the Animal Control Division's ability to adequately serve the City, this impact was determined to be significant. Mitigation Measure 4.10-f requires an agreement between the applicant and City that would enable expansion of animal control facilities and staff to meet increased demand on animal control services. After mitigation, this impact was determined to be less than significant.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use village center and transit-oriented development within the original boundaries of the Phase 2 area. The Phase 2 modifications would result in an additional 32,178 residents for a total residential population (Phases 1 and 2) of 44,963 at project buildout. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development in a riverine area would result in an increased demand for animal control facilities and services. New residents would increase the number of pets and wildlife encounters on the project site.

Since certification of the 2003 SEIR, the City of Lathrop Animal Control Division has increased their full-time employees from two to four individuals, while maintaining two service vehicles. Lathrop Animal Services contracts with the City of Manteca for shelter services. All Lathrop animals are housed and can be redeemed, surrendered, or adopted at the Manteca Animal Shelter located at 115 E. Wetmore Street in Manteca.

The Third Amendment to the River Islands Development Agreement between the project applicant and City ensures that the City can provide adequate animal control facilities and other public services to the Phase 2 area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.10-f: Increased Demand for Animal Control Facilities and Services

*Mitigation Measure 4.10-f shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

~~The project applicant and City of Lathrop shall negotiate an animal control services agreement element. The agreement shall be designed to ensure that resources are available for animal control facilities and staff to expand to meet demand associated with the proposed project. Credit may be given to the project applicant if a portion of the River Islands Animal Campus is dedicated to use by the City's Animal Control Division.~~

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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.10-f would reduce impacts to a **less-than-significant** level, consistent with impact conclusion in the 2003 SEIR, by requiring an agreement between the applicant and City that would enable expansion of animal control facilities and staff to meet increased demand on animal control services. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

### Impact 4.10-g: Increased Demand for Public School Facilities and Services

The 2003 SEIR determined that project implementation would result in increased demand for elementary and high schools. The approved River Islands Project included construction of seven to eight grade K-8 schools (or six K-6 schools and two grade 6-8 schools), and a single high school. The plan for schools was modified with amendments to Phase 1, which included the construction of two schools (River Islands Technology Academy [K-8] and Next Generation S.T.E.A.M. Academy [K-12]), and would be further altered by the modified Phase 2 Project, which includes construction of four grade K-8 schools and one high school. Schedule and funding mechanisms are agreed to in accordance with the mitigation agreements between the applicant and BESD and TUSD for construction of these schools. It is anticipated that development of the modified Phase 2 Project would generate 6,380 students in grades K-8 and 1,653 students in grades 9-12. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts to public school facilities and services would remain **significant** as identified in the 2003 SEIR.

Impact 4.10-g of the 2003 SEIR evaluated the potential for increased demand on public school facilities and services as a result of increased populations associated with the River Islands Project. At full buildout, the project was estimated to generate 4,800 students in grades K-8 and 1,497 students in grades 9-12. The 2003 SEIR identified that demand for school facilities would exceed availability, and that new services and facilities would be required. As described in the 2003 SEIR, the River Islands Project would involve construction of seven to eight grade K-8 schools, each with an approximately 750-student capacity (or six K-6 schools and two grade 6-8 schools with similar overall student capacity), and a single high school. The 2003 SEIR determined that this school approach would be sufficient to meet student demand at full project buildout. However, at the time of publication of the 2003 SEIR, a set schedule and funding mechanism for construction of the schools had not been established and given the volume of students that would be generated by the project, it was concluded that BESD and TUSD would be substantially overcrowded with excess students. For these reasons, this impact was determined to be significant; however, implementation of Mitigation Measure 4.10-g would reduce impacts associated with increased demands on public school facilities and services to a less-than-significant level by requiring adherence to the existing mitigation agreements between the applicant and

BESD and TUSD for the provision of adequate school services or, if required, applicant payment of the state-mandated school impact fee to the City. The BESD agreement has determined that a K-8 school be developed for 1,080 students.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use village center and transit-oriented development within the original boundaries of the Phase 2 area. Therefore, the allowance of additional housing potential, and increased density of housing would increase the total number of school age children and the demand for public school facilities and services. It is anticipated that development of the modified Phase 2 Project would generate 6,380 students in grades K-8 and 1,653 students in grades 9-12.

The approved Phase 2 Project analyzed in the 2003 SEIR included 106.4 acres of schools. The proposed Phase 2 modifications would add 2.2 acres of schools for a total of 108.6 acres of schools in the Phase 2 area. Specifically, four grade K-8 schools and one high school are proposed (see Figure 3-2 for proposed school locations). As noted above, the approved River Islands Project included seven to eight grade K-8 schools (or six K-6 schools and two grade 6-8 schools) and a single high school. Two schools have been constructed as part of the Phase 1 Project (River Islands Technology Academy II [K-8] and Next Generation S.T.E.A.M. Academy [K-12]). Combined with the modified Phase 2 Project's proposed four additional elementary schools and one high school, the total number of schools would be within the approved development envelope and all Phase 2 schools would be sited within the Phase 2 area already designated for development. It is anticipated that development of the modified Phase 2 Project would generate 6,380 students in grades K-8 and 1,653 students in grades 9-12 (see Chapter 3, "Description of the Proposed Project," for more information). BESD is in the process of unification, which would serve all public grade school children K-12 if approved and TUSD would no longer serve the project. The project applicant is working with both school districts regarding the location and design of the proposed high school and K-8 schools.

Since the certification of the 2003 SEIR, agreements between the project applicant and the applicable school districts have been approved. These agreements ensure that the school districts can provide adequate school facilities and services within the Phase 2 area already designated for development. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.10-g: Increased Demand for Public School Facilities and Services

*Mitigation Measure 4.10-g shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

The City shall not allow occupancy of any project residences until ~~a mitigation agreement has been executed between~~ the project applicant and ~~the BESD and TUSD regarding~~ 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 ~~the a revised~~ mitigation agreement needs to be executed only with the BESD and not with the TUSD 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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.10-g would reduce the impact to a **less-than-significant** level, consistent with impact conclusion in the 2003 SEIR, by requiring an agreement between the applicant and applicable school district(s) for the provision of adequate school services or, if required, applicant payment of the state-mandated school impact fee to the City. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

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## Impact 4.10-h: Increased Generation of Solid Waste

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The 2003 SEIR evaluated the potential for increased solid waste generation as a result of project implementation. Foothill Sanitary Landfill, which would receive solid waste from the River Islands Project, has ample long-term available capacity and would be able to adequately serve the project. The modified Phase 2 Project would generate a similar amount of waste compared with what is described in the 2003 SEIR and would also use the Foothill Sanitary Landfill for solid waste disposal. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.10-h of the 2003 SEIR evaluated whether existing solid waste facilities would be able to adequately serve the increase in solid waste generated by the River Islands Project. The SEIR assumed approximately 11,405 tons per year of solid waste would be generated by project residents and approximately 16,750 tons per year of solid waste would be generated by employees. The overall solid waste generation for the project was estimated to be approximately 28,155 tons per year, which would not be reached until full buildout in 2025. The SEIR determined that the Foothill Sanitary Landfill had sufficient permitted capacity to accommodate the project's solid waste disposal needs during all phases, considering it had approximately 44 million tons of available capacity as of 2003. Because the project would not substantially contribute to the remaining capacity available at the Foothill Sanitary Landfill and because the project would comply with all federal, state, and local regulations related to solid waste reduction and recycling, impacts related to increased solid waste generation were concluded to be less than significant, and no mitigation was required.

The California Integrated Waste Management Board provides an average per capita solid waste disposal rate for San Joaquin County of 0.53 ton per resident per year and 6.88 tons per employee per year (CIWMB 2020). The estimated total population for the modified Phase 2 Project is 32,178 residents and is expected to generate 7,963 jobs; therefore, solid waste generation for project residents would be expected to be approximately 71,840 tons per year at full project buildout of Phase 2. Thus, with the Phase 2 modifications, the project is expected to generate approximately 43,685 tons (or approximately 2.55 times) more solid waste per year at full project buildout than assumed in the 2003 SEIR. The Foothill Sanitary Landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs during all phases because it has approximately 50 million tons of available capacity (CalRecycle 2020); the annual increase in solid waste from the project is around 0.08 percent of total capacity. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less-than-significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The Paradise Road widening and improvement would involve work within rights-of-way, which has the same potential for obstruction of roadways during construction, and could obstruct or slow emergency vehicles (Impact 4.10-a); therefore, the preparation and implementation of traffic control plans for construction activities would be required, similar to the modified Phase 2 Project. The Paradise Road expansion is a road widening project that would not require the construction of any residences and would, therefore, not increase the population in the area such that additional fire protection services and facilities (Impacts 4.10-b and 4.10-d); water-related emergency services and facilities (Impact 4.10-c); police protection facilities and services (Impact 4.10-e); public school facilities and services (Impact 4.10-g); or other public facilities such as animal control facilities (Impact 4.10-f) and landfills (Impact 4.10-h) would be adversely affected. Therefore, no impacts related to these issues would occur.

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening and improvement to support implementation of the road widening would be required to implement all mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Adopted Mitigation Measure 4.10-a, Obstruction of Roadways during Construction. This mitigation measure would be equally effective at reducing impacts related to the obstruction of roadways during construction to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road widening and improvement would have no new significant impact and the impacts are not substantially more severe.



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## 4.11 PUBLIC UTILITIES

This section evaluates the availability of existing utility and infrastructure systems (water, wastewater, stormwater, electricity, and natural gas) to serve the modified Phase 2 Project and the potential for implementation of the project to affect availability, service level, and/or capacity of these systems, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Current CEQA Guidelines and thresholds include evaluation of solid waste capacity within the Public Utilities section. However, for the purposes of this SEIR, solid waste is evaluated in Section 4.10, "Public Services."

Section 4.11, "Public Utilities," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to public utilities in the City of Lathrop. The 2003 SEIR concluded that impacts related to demand for potable water at buildout (Impact 4.11-a), demand for wastewater treatment capacity during Phase 1a and Phase 1 (Impact 4.11-c), demand for wastewater treatment capacity for Phase 2 (Impact 4.11-d), and demand for recycled water storage and disposal capacity for Phase 2 (Impact 4.11-g) would be reduced to less-than-significant levels through implementation of Mitigation Measures 4.11-a, 4-11c, 4.11-d, and 4.11-g, respectively. The 2003 SEIR concluded that impacts related to development of new city wells (Impact 4.11-b), demand for recycled water storage disposal capacity (Impact 4.11-f), stormwater/surface runoff management (Impact 4.11-h), and demand for electricity and natural gas at buildout (Impact 4.11-i) would be less than significant. Finally, the 2003 SEIR concluded that impacts associated with the expansion of the Water Recycling Plant (WRP) #1, which is now called the Lathrop Consolidated Treatment Facility (LCTF), and construction of WRPs #2 and #3 would be significant and unavoidable.

### 4.11.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

##### Water

###### Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, the U.S. Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed every three years. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California's drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

##### Wastewater, Stormwater, and Recycled Water

###### Clean Water Act

The Clean Water Act (CWA) employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Those portions of the CWA that relate to wastewater and stormwater discharges are discussed below.

###### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established under the CWA to regulate municipal and industrial discharges to surface waters of the US. NPDES permit regulations have been

established for broad categories of discharges including point source waste discharges and nonpoint sources (nonpoint source discharges are further discussed in Section 4.10, "Hydrology and Water Quality"). Each NPDES permit identifies limits on allowable concentrations and mass loadings of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

NPDES permits cover various industrial and municipal discharges, including discharges from storm sewer systems in larger cities, stormwater generated by industrial activity, runoff from construction sites disturbing more than 1 acre, and mining operations. Point source dischargers must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). So-called "indirect" point source dischargers are not required to obtain NPDES permits. "Indirect" dischargers send their wastewater into a public sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering any surface water.

The CWA was amended in 1987 with Section 402(p) requiring NPDES permits for nonpoint source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of the NPDES stormwater regulations is to improve the water quality of stormwater discharged to receiving waters to the "maximum extent practicable" using structural and nonstructural best management practices (BMPs). BMPs can include educational measures (e.g., workshops informing the public of what impacts can result when household chemicals are dumped into storm drains), regulatory measures (e.g., local authority of drainage-facility design), public-policy measures (e.g., labeling storm-drain inlets as to impacts of dumping on receiving waters) and structural measures (e.g., filter strips, grass swales, and detention ponds).

## Energy

No federal plans, policies, regulations, or laws are applicable to energy for the modified Phase 2 Project.

## STATE

### Water

#### Urban Water Management Plan

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet (af) of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. This effort includes the adoption of an Urban Water Management Plan (UWMP) by every urban-water supplier and an update of the plan every 5 years on or before December 31, of every year ending in a five or zero. The UWMPA has been amended several times since 1983 with the most recent amendment occurring with Senate Bill (SB) 318 in 2004. The UWMPA and SB 610, described below, are interrelated; the UWMP is typically relied upon to meet the requirements for SB 610. The City of Lathrop adopted its 2015 UWMP in October 2017.

#### Sustainable Groundwater Management Act

Groundwater Management is outlined in the California Water Code, Division 6, Part 2.75, Chapters 1-5, Sections 10750 through 10755.4. The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030 and has since been modified by SB 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the Acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a Groundwater Management Plan.

The Sustainable Groundwater Management Act of 2014 (SGMA) became law on January 1, 2015 and applies to all groundwater basins in the state (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

Pursuant to the SGMA, any local agency that has water supply, water management or land use responsibilities within a groundwater basin may elect to be a “groundwater sustainability agency” (GSA) for that basin (Water Code Section 10723). The City has formed an exclusive GSA for its jurisdiction within the area formerly overlying the Eastern San Joaquin Subbasin, east of the San Joaquin River. The following seven agencies are part of the Tracy Subbasin GSA and are working cooperatively to develop a single groundwater sustainability plan (GSP): Banta–Carbona Irrigation District; Byron–Bethany Irrigation District; City of Lathrop; City of Tracy; County of San Joaquin; Stewart Tract; and West Side Irrigation District (GEI Consultants, Inc. 2020). The portion of the city overlying the Tracy Subbasin is managed by the Stewart Tract GSA, formed by Reclamation District (RD) 2062. In February 2019, DWR approved a Basin Boundary Modification Request that incorporates all of the City of Lathrop in the Tracy Subbasin and removes the City from the Eastern San Joaquin Subbasin. The City will be coordinating with the Tracy Subbasin GSAs to develop a GSP that needs to be completed and approved by January 31, 2022 (City of Lathrop 2020).

### **Senate Bill 610 (SB 610)**

SB 610, codified in California Water Code Section 10910(c)(2), makes changes to the UWMPA to require additional information in UWMPs if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if nonadjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California Department of Water Resources (DWR) publication regarding that basin. If the basin is in overdraft, the plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to CEQA supplied with water from a public water system be provided a specific water supply assessment (WSA), except as specified in the law. Water supply assessments are required under SB 610 for projects that include 500 units of residential development, projects that would demand an amount of water equivalent to or greater than the water required by a project with 500 dwelling units, or projects that would increase the number of the public water system’s existing service connections by 10 percent. An SB 610 WSA was prepared for the River Islands Project and was the basis of the analysis in the 2003 SEIR. A new WSA has been prepared for the modified Phase 2 Project and is included as Appendix E of this SEIR.

### **Senate Bill 221 (SB 221)**

SB 221, codified in the State’s Business and Professions and Government Codes, applies to any proposed development of a residential subdivision that will have either:

- ▶ More than 500 units.
- ▶ Account for an increase of 10 percent or more of the number of the public water system's existing service connections if the public water system has fewer than 5,000 service connections.

If SB 221 applies to the proposed subdivision, then written verification that sufficient water supply is available for the project is required as part of the subdivision approvals.

If the water supply for the proposed subdivision includes groundwater, then in addition to determining whether the landowner can extract additional groundwater to supply the proposed subdivision, SB 1962 amends SB 211 to require the written verification also include an evaluation of additional factors related to the SGMA.

Because the modified Phase 2 Project includes more than 500 residential units, the WSA included in Appendix E includes the required written potable water analysis under SB 221, including the use of groundwater.

### **California Safe Drinking Water Act**

The SWRCB-DDW is responsible for implementing the federal SDWA and its updates, as well as California statutes and regulations related to drinking water. State primary and secondary drinking-water standards are promulgated in California Code of Regulations (CCR) Title 22, Sections 64431–64501.

The California Safe Drinking Water Act (CA SDWA) was passed in 1976 to build on and strengthen the federal SDWA. The CA SDWA authorizes DHS to protect the public from contaminants in drinking water by establishing maximum contaminant levels (MCLs) that are at least as stringent as those developed by EPA, as required by the federal SDWA.

## Wastewater, Stormwater, and Recycled Water

### NPDES Stormwater Permit for Discharges from Small Municipal Separate Storm Sewer Systems

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer systems (MS4). Stormwater is runoff from rain or snow melt that runs off surfaces such as rooftops, paved streets, highways or parking lots and can carry with it pollutants such as oil, pesticides, herbicides, sediment, trash, bacteria and metals. The runoff can then drain directly into a local stream, lake, or bay. Often, the runoff drains into storm drains which eventually drain untreated into a local waterbody.

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

### Waste Discharge Requirements Lathrop Consolidated Treatment Facility

Wastewater treatment and disposal at the City's LCTF is regulated under Waste Discharge Requirements (WDR) Order No. R5-2016-0028. Because the LCTF applies treated effluent to land, it is not subject to the NPDES requirements for discharges to surface water. Wastewater treatment processes at the LCTF include secondary treatment, tertiary infiltration, and disinfection prior to storage and disposal. The LCTF produces disinfected tertiary recycled water suitable for irrigation at parks, landscape strips, median islands, pond berms, and agricultural fields.

### Title 22

The California Department of Public Health (formerly the Department of Health Services) is responsible for establishing criteria to protect public health in association with recycled water use. The criteria issued by this department are found in the California Code of Regulations, Title 22, Division 4, Chapter 3, entitled Water Recycling Criteria. Commonly referred to as Title 22 Criteria, the criteria contain treatment and effluent quality requirements that vary based on the proposed type of water reuse. Title 22 sets bacteriological water quality standards on the basis of the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to come into contact with the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22 requires three levels of secondary treatment, basically differing by the amount of disinfectant required.

Title 22 also specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, the department has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems. The Department of Public Health does not have enforcement authority for the Title 22 criteria; instead, the RWQCBs enforce the criteria through enforcement of their permits containing the applicable criteria.

## Energy

### California Environmental Quality Act

Appendix F of the State CEQA Guidelines sets forth goals for energy conservation, including decreasing per capita energy consumption and reliance on fossil fuels and increasing reliance on renewable energy sources. CEQA requires EIRs to describe potential energy impacts of projects, with an emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Public Resources Code [PRC] Section 21100[b][3]).

The California Energy Commission (CEC) prepares an integrated policy report every two years that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (CEC 2019). Energy efficiency is one of the key components of the state's strategy to reduce greenhouse gas (GHG) emissions and to achieve reduction

targets set forth by AB 32, SB 32, and Governor Brown's Executive Order B-30-15. Efficiency achieved through building codes, appliance standards, and ratepayer-funded programs has had a positive impact on GHG emissions in recent years (CEC 2019). The policy report discusses efforts to decarbonize California's energy system and recognizes transitioning to zero- and near-zero emission vehicles will be a fundamental part of meeting the state's climate goals.

The California Public Utilities Commission (CPUC) *2008 Energy Efficiency Strategic Plan* established goals of having all new residential construction in California be zero net energy (ZNE) by 2020 and all new commercial construction ZNE by 2030 (CPUC 2008). The Strategic Plan was subsequently updated in January 2011 to include a lighting chapter. This comprehensive Plan for 2009 to 2020 is the state's first integrated framework of goals and strategies for saving energy, covering government, utility, and private sector actions, and holds energy efficiency to its role as the highest priority resource in meeting California's energy needs.

### **Clean Energy and Pollution Reduction Act**

On October 7, 2015, the Clean Energy and Pollution Reduction Act (SB 350) was signed into law, establishing new clean energy, clean air and GHG reduction goals for 2030 and beyond. SB 350 codifies Governor Brown's clean energy goals to increase California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030, and is part of California's overall strategy to address climate change (CEC 2017). SB 350 enhances the state's ability to meet its long-term climate goal of reducing GHG emissions to 40 percent of 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (CEC 2017).

### **California Code of Regulations, Energy Efficiency Standards**

Energy consumption in new buildings in California is regulated by State Building Energy Efficiency Standards (CALGreen) contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53. Title 24 applies to all new construction of both residential and nonresidential buildings, and regulates energy consumed for heating, cooling, ventilation, water heating, and lighting. The 2019 Building Energy Efficiency Standards have improved efficiency requirements from previous codes and the updated standards are expected to result in a statewide consumption reduction (CEC 2018).

### **Green Building Initiative**

In 2012, Governor Brown's Executive Order B-18-12 (State of California Governor Office 2012) and its related Green Building Action Plan state the following energy and water efficiency improvement goals for facilities owned, funded, and leased by the State:

- ▶ All new state buildings beginning design after 2025 shall be constructed as ZNE facilities with an interim target for 50 percent of new facilities beginning design after 2020 to be ZNE. State agencies shall also take measures toward achieving ZNE for 50 percent of the square footage of existing state-owned building area by 2025.
- ▶ The state shall identify at least three buildings by January 1, 2013, to pursue ZNE as pilot projects.
- ▶ New and major renovated state buildings shall be designed and constructed to exceed the applicable version of CCR Title 24, Part 6, by 15 percent or more, and include building commissioning, for buildings authorized to begin design after July 1, 2012.
- ▶ Any proposed new or major renovation of state buildings larger than 10,000 square feet shall use clean, onsite power generation such as solar photovoltaic, solar thermal, and wind power generation, and clean backup power supplies, if economically feasible.
- ▶ New and major renovated state buildings larger than 10,000 square feet shall obtain Leadership in Energy and Environmental Design (LEED) "Silver" certification or higher.
- ▶ State agencies shall reduce water use at the facilities they operate by 10 percent by 2015 and by 20 percent by 2020, as measured against a 2010 baseline.
- ▶ All new and renovated state buildings and landscapes shall utilize alternative sources of water wherever cost-effective. Sources may include, but are not limited to: recycled water, graywater, rainwater capture, stormwater retention, and other water conservation measures.

- ▶ Landscape plants shall be selected based on their suitability to local climate and site conditions, and reduced water needs and maintenance requirements.
- ▶ State agencies shall identify and pursue opportunities to provide electric vehicle charging stations, and accommodate future charging infrastructure demand, at employee parking facilities in new and existing buildings.

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The *City of Lathrop General Plan (2004)* contains the following policies that may be applicable to the project:

#### Community Development Element

##### Plan Policies and Proposals

1. The City of Lathrop is the most logical governmental entity to assume management responsibility for water service to the developing urban pattern. However, this preference allows for the creation of other special districts, including Irrigation Districts, especially if these districts can provide utility improvement financing that protects the City's existing rate payers. Development within the City's three sub-plan areas is to be served by the City under development agreements between the City and project developers.
2. Urban development outside the existing city limits shall not be allowed to occur until reasonable certainty is established that additional firm supplies of potable water will be available to meet the needs of urban expansion into perpetuity.
3. Any Water, Wastewater and Recycled Water Master Plan update should provide for the eventual integration of the water well and distribution system serving the existing community with the system(s) needed to serve areas of urban expansion to avoid potential future problems of groundwater quality associated with the existing system.
4. In developing additional groundwater sources to meet requirements for firm water supply, the City will be required to meet State and Federal standards of water quality, including concern for such factors as taste, odor control, color, removal of any unique compounds of minerals identified through water testing, and need for disinfection and/or residual chlorination.
5. Pressurized water for fire suppression should be available at flows in the range of 1000 gallons per minute (gpm) (for all residential areas) to 3000 gpm (for commercial, industrial and institutional areas) for a period of 60 to 120 minutes over and above normal community water uses. The City Fire Chief is to be consulted in establishing specific fire suppression plans for new development, including the need for automatic sprinkling systems in non-residential and multi-family residential developments and the need for above-ground storage to assure capacity for required periods of fire flow.

#### Community Development Element

##### Stewart Tract Flood Control and Drainage Policies

1. Flood control and drainage construction is to meet standards set by the U.S. Corps of Engineers, the Federal Emergency Management Agency (FEMA), the California State Reclamation Board, the California Department of Water Resources, and Reclamation District No. 2062. In each case, the most conservative requirements will govern unless otherwise agreed to by the agencies involved.
2. Levees along the San Joaquin, Old River and Paradise Cut require reconstruction to elevations that meet Project levee Standards (approximately 20 feet above mean sea level at the juncture of the San Joaquin and Old River, 25 feet at Mossdale Bridge, 25 feet at Paradise Cut and Old River and 31 feet on the San Joaquin River at the Union Pacific Railroad right-of-way, one-half mile south of Interstate 5). The required increase in levee height cannot be determined precisely until field mapping and soil investigations of the levees have been completed. All levee

construction (within their authority) is to be accomplished under Encroachment Permits issued by the California State Reclamation Board.

3. Analysis shall be provided during amendments to the Drainage System Master Plans to indicate that no new flood threats will be created external to the Lathrop planning area as a result of flood control and drainage works constructed with and perimeter to the planning area.
4. Amendments to the Drainage System Master Plans will require the determination of required conveyance systems and pumping stations, including the availability of standby power units for pump station operation. The financing of levee reconstruction for the Stewart Tract should provide for local reclamation district management of the funds in accordance with plans approved by appropriate federal, state and local agencies. Phased levee reconstruction should be integrated with City approved plans for phased urbanization. Work should proceed under a financial program and work schedule reviewed by the City of Lathrop, including capital costs, costs of operation and maintenance and methods for achieving periodic repairs, reconstruction and system up-grading.
5. Amendments to the Drainage System Master Plan shall include provision for sites and works that eventually may be required for the removal of surface water contaminants prior to discharge to water courses.
6. The costs of flood control facilities and for surface water drainage systems in all sub-plan areas, should be funded entirely by affected land developers or other non-City financing. These costs must also cover the costs of City review and monitoring of work proposals, permits and land acquisitions, including legal, engineering and right-of-way work to be conducted by or for the City.
7. The costs of operating and maintaining flood control and drainage facilities by the City are to be funded through the creation of maintenance districts or other appropriate mechanisms that avoid burdening the General Plan.
8. The design of surface water detention and conveyance facilities may provide for multi-purpose recreational and wildlife habitat use of surface waters within recreation and other open space corridors to the maximum feasible extent. Detention reservoirs should assist in controlling the rate of surface water runoff and for the control of debris, sediment and contaminants.
9. Positive control of surface water runoff and sediment during wet weather is required for all types of construction activity required as part of the urban development process. This should include requirements for avoiding excessive slopes, trapping of sediments and debris, prohibition of grading during periods of rainfall, requirements for stockpiling and reuse of native topsoil and revegetation or temporary covering of barren areas to avoid sedimentation of drainageways.

### **City of Lathrop Integrated Water Resources Master Plan**

In December 2019, the City of Lathrop adopted its Integrated Water Resources Master Plan (IWRMP), a comprehensive update to the City's water, wastewater and recycled water master plans. The IWRMP is a component of the City's General Plan and is used to support CIP planning, utility operations, regulatory permit compliance, and establishing utility budgets, rates and development fees.

### **City of Lathrop Water Conservation Ordinance**

The City of Lathrop Water Conservation Ordinance is found in Chapter 13.08 of the City Code. Article 120- mandatory requirements in promotion of water conservation establishes prohibited uses for potable water, drinking water, and irrigation water.

### **West Lathrop Specific Plan**

The following objectives in the West Lathrop Specific Plan may be applicable to the project:

- ▶ Objective 1C: Program the timely provision of public improvements with each phase of private development.
- ▶ Objective 1D: Pace the provision of utilities and public services with a manageable rate of urban development.
- ▶ Objective 8B: Ensure that each phase of infrastructure improvements does not jeopardize safe and reliable service for existing development.



## 4.11.2 Environmental Setting

The environmental setting provided on pages 4.11-3 through 4.11-7 of the 2003 SEIR is relevant to understanding the potential impacts to public utilities for the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

Public utilities in the project area are provided by various entities, as identified in Table 4.11-1 and discussed in detail below.

**Table 4.11-1 Utilities Providers for the Phase 2 Area**

Utility	Agency/Provider
Water Supply	City of Lathrop
Wastewater Collection and Conveyance	City of Lathrop
Wastewater Treatment	City of Lathrop
Stormwater Conveyance	City of Lathrop and Reclamation District 2062
Electrical Service	Lathrop Irrigation District
Natural Gas	Pacific Gas and Electric (PG&E)

Source: Data compiled by Ascent Environmental in 2020

## WATER SUPPLY

As discussed above, the project site receives water from the City of Lathrop, which obtains water from both imported surface water and local groundwater sources. The City receives treated Stanislaus River water through the South County Water Supply Program (SCWSP) that is operated by the South San Joaquin Irrigation District (SSJID). The City also owns and operates six groundwater production wells, although Well 9 and Well 21 are currently inactive. Due to the relatively high cost of SCWSP water, the City has historically relied upon its groundwater wells as the primary source of supply. However, the City recently prioritized the use of SCWSP water, to temporarily take several groundwater wells offline. In addition, the City generates recycled wastewater as a non-potable supply for agricultural irrigation, and for urban irrigation. The City also has long-standing water conservation programs which provide supply through reducing current demands and assuring that future water use is efficient (Woodward & Curran 2020:10). Table 4.11-2 provides a summary of the City's water supply as of 2019.

**Table 4.11-2 Summary of Current (2019) City of Lathrop Water Supply**

Supply Source	Capacity		
	Actual Volume (AFY) <sup>1</sup>	Percentage of Potable Water Supply	Annual Contract/Capacity (AFY)
<b>Potable Supplies</b>			
Purchased or Imported Supplies	4,273	96%	6,887 <sup>1</sup>
Groundwater	179	4%	4,720 <sup>2</sup>
<b>Total Potable Supplies</b>	<b>4,452</b>	<b>100%</b>	<b>11,607</b>
<b>Non-Potable Supplies</b>			
Recycled Water	944	N/A	N/A
<b>Total Non-Potable Supplies</b>	<b>944<sup>3</sup></b>	<b>N/A</b>	<b>N/A</b>

Notes: AFY = acre-foot per year

<sup>1</sup> 6,887 AFY is the maximum volume that the City may purchase from SSJID under SCWSP Phase I under their current contract. These supplies are available following the sale of 1,120 AFY to the City of Tracy.

<sup>2</sup> Assumes wells are operated at 50% maximum capacity on an annual basis.

<sup>3</sup> Reflects amount of water applied for irrigation purposes.

Source: Woodward & Curran 2020:Table 4

## Surface Water

The City currently purchases imported surface water from SSJID through the SCWSP. The SCWSP is a partnership between SSJID, and the cities of Lathrop, Manteca, Tracy, and Escalon for the cities to acquire, by purchase, treated water up to the amount specified as a project allotment in the 1995 Water Supply Development Agreement. The SCWSP was planned to be implemented in two phases. Phase I was completed in 2005 and consisted of an intake facility at Woodward Reservoir, the Nick C. DeGroot Water Treatment Plant (DGWTP), and about 35 miles of pipe ending in the City of Tracy. The DGWTP is located near Woodward Reservoir in San Joaquin County, and the treatment process at the facility includes pre-chlorination, coagulation, dissolved air floatation pretreatment for removal of solids and dissolved material, chemical stabilization to minimize internal pipe corrosion, membrane filtration, and chlorination for disinfection. The total Phase I capacity of the SCWSP is approximately 31,500 AFY. Phase II is anticipated to increase the treatment capacity of the DGWTP to approximately 43,000 AFY. SSJID has experienced increased demand in recent years and is exploring options to extend the distribution system constructed in Phase I and potentially expand treatment capacity as part of a Phase II project, but the schedule for these expansions remain uncertain (Woodward & Curran 2020:16). The SSJID in combination with the neighboring Oakdale Irrigation District (OID) receive a major portion of their water supply from the Stanislaus River. Pursuant to existing water rights, SSJID and OID are entitled to a combined 1,816.6 cubic feet per second (cfs) of direct surface water diversions from the Stanislaus River annually. Diverted water is held jointly between the SSJID and the OID (Woodward & Curran 2020:15) Based on a 1988 agreement between SSJID, OID, and the United States Bureau of Reclamation (USBR) the SSJID and OID are entitled to 600,000 acre feet per year (AFY) of supply in years when inflow to New Melones Reservoir is equal to or exceeds 600,000 AF (Woodward & Curran 2020:15). SSJID's share of this allotment is 300,000 AFY. In years when inflow to New Melones Reservoir is less than 600,000 AF, the entitlement is reduced based on a predetermined formula. During periods of normal flow, SSJID's entitlement is 300,00 AFY (Woodward & Curran 2020:15).

The 1995 Water Supply Development Agreement (WSDA) between the City and SSJID and the 2000 amendment to the WSDA provided the City of Lathrop with a Phase I allocation of 8,007 AFY and a total allocation of 11,791 AFY after completion of Phase II (Woodward & Curran:16). In August 2013, the City sold 1,120 AFY of SCWSP water to the City of Tracy. Therefore, the City's remaining SSJID allocation is 6,887 AFY for Phase I and a total of 10,671 AFY after completion of Phase II (Woodward & Curran 2020:16). The City has an agreement with SSJID to received treated water through December 2029. If SSJID and the cities do not agree to extend the contract past 2029, the District agrees to transfer the project to a Joint Powers Authority composed of the four cities, which would then be responsible for operation and maintenance of the SCWSP (Woodward & Curran 2020:16).

### Reliability

Various conditions may influence total water supply available to SSJID. Due to the seniority water rights for the SCWSP, the City has typically considered the SCWSP water source to have a high reliability. However, the recent drought has caused the City to revise its reliability projections for SCWSP water in dry years. In August 2014, due to concerns about decreasing water levels in the New Melones Reservoir, SSJID curtailed water deliveries to the SCWSP contracting cities to 80 percent of their monthly allocations. This 20 percent curtailment translated into an allocation to the City of approximately 85 percent of its annual contractual entitlement in 2014. In 2015, SSJID allocated water to each SCWSP contracting city based upon actual water use in 2013. Under this allocation scheme, the City was assigned 85 percent of its actual water use in 2013. In both 2014 and 2015, however, the City purchased less than its dry year allocation and instead relied primarily on groundwater.

Given the inconsistency in SCWSP allocation in recent years and the uncertainty regarding dry year allocation in the future, the City has relied upon the dry year allocation adopted by SSJID in its 2015 UWMP, which assumes a proportionate reduction in deliveries to urban and agricultural users. The urban demand is assumed to be equal to the SCWSP Phase I contract amount (31,552 AFY). Agricultural demands within the SSJID service area are projected to decrease gradually as irrigation practices become more efficient. (Woodward & Curran 2020:24)

Table 4.11-3 summarizes projected SCWSP supplies and demands in normal years, single-dry years, and multiple-dry years from 2020 to 2040. SSJID supplies are projected to remain constant over time, while the demands are expected to decrease slightly over this period due to improved agricultural water use efficiencies. Consequently, projected

SCWSP shortages decrease over time. The SSJID expects minor shortfalls of less than 2 percent may be experienced by the SCWSP in normal years, based upon the availability of water supplies in 2010 (Woodward & Curran 2020:28). In single-dry years, SSJID projects that the SCWSP will receive a shortfall of up to 26 percent, based upon SSJID's water supplies in 1977. In a three-year, multiple-dry year scenario, SSJID projects SCWSP shortages of up to 15 percent in the first year, up to 12 percent in the second year, and up to 17 percent in the third year. The multiple-dry years reliability assumptions are based upon data gathered on the SSJID from 1990 to 1992.

**Table 4.11-3 SSJID SCWSP Supply Available Under Normal and Dry Year Conditions**

	Estimated Supply and Demand (AFY)				
	2020	2025	2030	2035	2040 <sup>1</sup>
<b>Normal Year</b>					
Total SCWSP Projected Supply	30,969	31,203	31,442	31,684	31,684
Total SCWSP Projected Demand	31,552	31,552	31,552	31,552	31,552
<i>Surplus or Deficit</i>	-583	-349	-110	132	132
<i>Percent Shortfall</i>	1.8%	1.1%	0.3%	--	--
<b>Single-Dry Year</b>					
Total SCWSP Projected Supply	23,226	23,403	23,581	23,763	23,763
Total SCWSP Projected Demand	31,552	31,552	31,552	31,552	31,552
<i>Surplus or Deficit</i>	-8,326	-8,149	-7,971	-7,789	-7,789
<i>Percent Shortfall</i>	26%	26%	25%	25%	25%
<b>Multiple-Dry Year – First Year</b>					
Total SCWSP Projected Supply	26,839	27,043	27,250	27,459	27,459
Total SCWSP Projected Demand	31,552	31,552	31,552	31,552	31,552
<i>Surplus or Deficit</i>	-4,713	-4,509	-4,302	-4,093	-4,093
<i>Percent Shortfall</i>	15%	14%	14%	13%	13%
<b>Multiple-Dry Year – Second Year</b>					
Total SCWSP Projected Supply	27,614	27,823	28,036	28,251	28,251
Total SCWSP Projected Demand	31,552	31,552	31,552	31,552	31,552
<i>Surplus or Deficit</i>	-3,938	-3,729	-3,516	-3,301	-3,301
<i>Percent Shortfall</i>	12%	12%	11%	10%	10%
<b>Multiple-Dry Year – Third Year</b>					
Total SCWSP Projected Supply	26,086	26,284	26,484	26,688	26,688
Total SCWSP Projected Demand	31,552	31,552	31,552	31,552	31,552
<i>Surplus or Deficit</i>	-5,466	-5,268	-5,068	-4,864	-4,864
<i>Percent Shortfall</i>	17%	17%	16%	15%	15%

Notes: AFY = acre-foot per year; SCWSP = South County Water Supply Program

Source: City of Lathrop 2019a:Table 5-6 cited in Woodward & Curran 2020:Table 10

Note: It is assumed that 2040 projected supplies and demand are consistent with 2035 estimates: In summer 2018, the City completed a Phase 2 Expansion of the facility to a total capacity of 2.5 mgd ADWF to accommodate future growth in the Mossdale, Central Lathrop, and River Islands development areas. The LCTF is permitted for a maximum capacity of up to 6.0 mgd with additional expansions.

Table 4.11-4 summarizes projected SSJID supplies available to the City in normal years, single-dry years, and multiple-dry years. The City expects to have access to more than 98 percent of its SCWSP supply in normal years. In single-dry years, the City projects that it will receive between 74 and 75 percent of its SCWSP supply. In a three-year, multiple-

dry year scenario, the projected SCWSP allocations are expected to be between 85 percent to 87 percent in the first year, 88 percent to 90 percent in the second year, and 83 percent to 85 percent in the third year. Section 8(a) of the 1995 Water Supply Development Agreement stipulates that reductions in SCWSP deliveries shall be distributed pro rata among the SCWSP participants based upon each participant's allotment. Based on these assumptions, it is expected that the percent shortfalls will be the same percent shortfall experienced by the City in dry years (Woodward & Curran 2020:25).

**Table 4.11-4 SCWSP Supply Available to the City Under Normal and Dry Year Conditions**

	Estimated Supply (AFY)				
	2020	2025	2030	2035	2040
Contracted Phase I Allotment	6,887	6,887	6,887	--	--
Contracted Phase II Allotment	--	--	--	10,671	10,671
<b>Normal Year</b>					
Projected SCWSP Allocation	98%	99%	100%	100%	100%
Projected SCWSP Supply	6,760	6,811	6,863	10,671	10,671
<b>Single-Dry Year</b>					
Projected SCWSP Allocation	74%	74%	75%	75%	75%
Projected SCWSP Supply	5,070	5,108	5,147	8,037	8,037
<b>Multiple-Dry Year – First Year</b>					
Projected SCWSP Allocation	85%	86%	86%	87%	87%
Projected SCWSP Supply	5,858	5,903	5,948	9,287	9,287
<b>Multiple-Dry Year – Second Year</b>					
Projected SCWSP Allocation	88%	88%	89%	90%	90%
Projected SCWSP Supply	6,027	6,073	6,119	9,555	9,555
<b>Multiple-Dry Year – Third Year</b>					
Projected SCWSP Allocation	83%	83%	84%	85%	85%
Projected SCWSP Supply	5,694	5,737	5,781	9,026	9,026

Notes: AFY = acre-foot per year; SCWSP = South County Water Supply Program

Source: City of Lathrop 2019a:Table 5-7 cited in Woodward & Curran 2020:Table 11

## Groundwater

### Groundwater Basin

Lathrop is located within the Tracy Subbasin (DWR Bulletin 118 number 5-22.15), within the San Joaquin Valley Groundwater Basin. The Tracy Subbasin is bounded to the north and the east by the San Joaquin River (except for a portion of the Subbasin boundary that extends east of the San Joaquin River to follow the jurisdictional boundary of the City of Lathrop), to the south by a combination of the San Joaquin-Stanislaus County line and the jurisdictional boundaries of water agencies, and to the west by the extent of sedimentary deposits bounded by the Diablo Range. The Tracy Subbasin has a surface area of 345,000 acres (539 square miles), and consists of two primary aquifers, a shallow, unconfined aquifer and a deeper confined aquifer, separated by a regional aquitard called the Corcoran Clay. The base of fresh water, defined as water with a total dissolved solids (TDS) concentration of less than 2,000 milligrams per liter (mg/L), ranges from 800 to 2,000 feet below ground surface (ft bgs).

The Tracy Subbasin is identified as a medium priority groundwater basin by DWR and is subject to the requirements of the Sustainable Groundwater Management Act (SGMA). The City will be coordinating with the Tracy Subbasin GSAs to develop a GSP that needs to be completed and approved by January 31, 2022 (City of Lathrop 2020).

The reliability of the City's groundwater supplies has historically been limited by water quality constraints. While groundwater quality constraints contribute to supply uncertainties, they are primarily an issue of treatability, rather than supply limitation. Further, the City has demonstrated the ability to modify its groundwater operations to adapt to changing water quality conditions. Therefore, the City is projecting to receive 100 percent of its groundwater supplies in all year types (Woodward & Curran 2020:28). As SGMA is implemented in the Tracy Subbasin, the City's groundwater supply reliability may need to be re-evaluated. GSP developments can be evaluated during water supply verification if restrictions to groundwater supply are proposed.

### Groundwater Well Infrastructure

The City operates five municipal groundwater supply wells: Wells 6, 7, 8, 9, and 10. Groundwater from Wells 6, 7, 8, 9, and 10 is treated to remove arsenic at the Louise Avenue Water Treatment Facility (LAWTF), which became operational in 2012. The City owns an additional well, Well 21, which includes a water treatment facility (Well 21 WTF) designed for disinfection and manganese treatment. Well 21 has remained inactive since 2013 due to sanding in the well and elevated levels of arsenic and uranium. In the future, the City is reviewing potential increased groundwater production by bringing Well 21 with the Well 21 WTF back online (Woodward & Curran 2020:28).

Since publication of the 2015 UWMP, Well 9 was also taken offline due to elevated polyfluoroalkyl substances (PFAS) above the response level (RL). The City is investigating alternatives to bring this well back online such that the drinking water will be below the RL for PFAS. Potential options include conducting well profiling at Well 9 to evaluate potential modifications, relocating Well 9 to address PFAS and other constituents of concern (COCs), and providing treatment at the LAWTF or Well 21 WTF. The option of upgrading the Well 21 WTF to provide PFAS treatment for Well 9 would remove a potential limitation on groundwater production based on LAWTF treatment capacity. Because Wells 9 and 21 are currently offline, the Current Well Capacity estimate in Table 6 [in the WSA] does not include production from these two wells. (Woodward & Curran 2020:14)

Information regarding the City's groundwater production wells is presented in Table 4.11-5. The combined maximum pumping capacity of Wells 6, 7, 8, and 10 is 5,850 gallons per minute (gpm). With Well 9 not in operation, this pumping rate is not limited by the treatment capacity of the LAWTF (6,250 gpm). For the purposes of this evaluation, it is assumed that the City's wells are pumped at 50 percent of their maximum capacity on an annual basis. Given this supply assumption, the City's current annual groundwater supply capacity for Wells 6, 7, 8, and 10 is equivalent to approximately 4,720 AFY. (Woodward & Curran 2020:14)

**Table 4.11-5 Groundwater Production Well Capacities and Annual Yields**

Well Number & Status	Existing Maximum Pumping Capacity	
	Measured Flow Rate (gpm)	Estimated Annual Yield (AFY) <sup>1</sup>
Well 6 (Active)	1,650	1,330
Well 7 (Active)	1,400	1,130
Well 8 (Active)	1,100	890
Well 10 (Active)	1,700	1,370
<b>Subtotal</b>	<b>5,850</b>	<b>4,720</b>
<b>LAWTF Treatment Capacity<sup>2</sup></b>	<b>6,250</b>	<b>5,850</b>
Well 21 (Inactive since 2013) <sup>3</sup>	1,500	1,210
Well 9 (Currently inactive)	1,400	1,130
<b>Current Well Capacity<sup>4</sup></b>	<b>5,850</b>	<b>4,720</b>
<b>Possible Future Well Capacity<sup>5,6</sup></b>	<b>8,750</b>	<b>7,060</b>

Notes: gpm = gallons per minute; AFY = acre-foot per year; LAWTF = Louise Avenue Water Treatment Facility

<sup>1</sup> Assumes wells are operated at 50% maximum capacity on an annual basis.

<sup>2</sup> Maximum capacity of LAWTF is 6,250 gpm. Estimated annual yield assumes that annual yield of Wells 6-10 is not limited by LAWTF capacity on an annual basis.

- <sup>3</sup> The City is considering upgrading Well 21 and its water treatment facility over multiple phases to be able to utilize its full capacity.
- <sup>4</sup> Does not include Well 21 or Well 9 and is limited by LWATF design capacity.
- <sup>5</sup> Assumes that the Well 21 upgrades have been completed and Wells 9 and 10 are treated at the Well 21 Water Treatment Facility. This includes the full capacity of Wells 6-10 and Well 21.
- <sup>6</sup> While these numbers are consistent with the City of Lathrop 2019 WSMP (City of Lathrop 2019a), relocation or modifications to Wells 9 and 21 to allow pumping from locations within the aquifer with reduced PFAS or other COCs may likely result in lower production rates from these wells. Because a solution has not been confirmed, water from Well 9 and Well 21 are identified as Possible Future Well Capacity.

Source: Woodward & Curran 2020:Table 6

## Projected Water Supply

As discussed above, the City is currently considering upgrades to the Well 21 WTF. If upgrades are implemented as currently planned, the upgrades would eventually expand its treatment capacity to 4,500 gpm. This could allow for the treatment of the total maximum capacity associated with Wells 9, 10, and 21. However, for purposes of supply planning, the City is currently assuming Wells 9 and 21 will remain offline (a conservative assumption).

In addition to groundwater wells, the City's SSJID supply is anticipated to increase from 6,887 AFY to 10,671 AFY with the implementation of Phase II of the SCWSP. The timing of Phase II is unknown, but for water supply planning purposes it is assumed that SSJID Phase II will be available to the City by 2040, consistent with the City of Lathrop 2015 UWMP.

The City's water supply planning efforts anticipate that future potable water supply will remain similar to the current supply portfolio with the addition of Phase II SCWSP surface water. Additionally, the City plans to expand its recycled water program and continue its current conservation efforts to reduce overall water use. Table 4.11-6 presents the City's projected potable supply in five-year increments through 2040. The values presented in this table reflect the City's contractual allotments from the SCWSP and the City's current and planned future groundwater production. The actual availability of these water supplies depends on reliability factors based on water year conditions.

**Table 4.11-6 Current and Projected Potable Water Supply (2020-2040)**

Supply Type	Potable Water Source	Current and Projected Supply (AFY)					
		2015 (Existing)	2020	2025	2030	2035	2040
<b>Current Supplies</b>							
Imported/Purchased Water <sup>1</sup>	SSJID SCWSP Contract	6,887	6,887	6,887	6,887	6,887	6,887
Groundwater <sup>2</sup>	City Wells	4,720	4,720	4,720	4,720	4,720	4,720
<b>Anticipated Future Supplies</b>							
Imported/Purchased Water <sup>3</sup>	SSJID SCWSP Contract	-	-	-	-	-	3,784
Groundwater <sup>4</sup>	City Wells	-	0	0	0	0	0
<b>Total</b>		<b>11,607</b>	<b>11,607</b>	<b>11,607</b>	<b>11,607</b>	<b>11,607</b>	<b>15,391</b>

Notes: AFY = acre-foot per year; SSJID = South San Joaquin Irrigation District; SCWSP = South County Water Supply Program

- <sup>1</sup> The City's total Phase I allotment of SCWSP water, following the 2013 sale to the City of Tracy, of 1,120 AFY is 6,887 AFY.
- <sup>2</sup> Reflects the City's firm groundwater capacity, assuming Wells 21 and 9 remain offline.
- <sup>3</sup> The City's total Phase II allotment of SCWSP water, following the 2013 sale to the City of Tracy, is 10,671 AFY.
- <sup>4</sup> Potential additional groundwater supplies may be obtained through the Well 21 WTF upgrade, which could be completed in two phases. Phase 1 is anticipated to be completed by 2020 and Phase 2 is anticipated to be completed by 2025. Potential additional groundwater may also include bringing Well 9 back online. However, for the 2020 WSA, water from Well 21 and Well 9 are not included as Anticipated Additional Future Supplies.

Source: Woodward & Curran 2020:Table 7

Table 4.11-7 presents the City's projected recycled water supply in five-year increments through 2040, as well as supplemental supplies from other non-potable source that are available to the River Islands development (Phase 1 and Phase 2).

**Table 4.11-7 Current and Projected Non-Potable Water Supply (2020-2040)**

Supply Type	Level of Treatment	Current and Projected Supply (AFY)					
		2018 (from existing data)	2020	2025	2030	2035	2040
Recycled Water <sup>1</sup>	Tertiary	840	1,159	2,103	3,061	3,775	4,479
Other Non-Potable Sources <sup>2</sup>	Chlorination	0	153	367	617	869	1,121

Notes: AFY = acre-foot per year

<sup>1</sup> Recycled water supplies will be supplemented by the River Islands development if needed.

<sup>2</sup> River Islands will have the ability to supplement City recycled water supplies with lake and river water. These supplemental sources can be used to meet up to 100% of River Islands non-potable demands if recycled water supplies are unavailable.

Source: Woodward & Curran 2020:Table 8

## WASTEWATER AND RECYCLED WATER

Wastewater treatment for the city occurs at two facilities: the regional Manteca Wastewater Quality Control Facility (MWQCF) and the City-owned LCTF. Tertiary treated, disinfected effluent is conveyed through the recycled water system and is stored for later use as needed for irrigation and urban purposes.

### Wastewater Treatment and Disposal

Wastewater generated in the areas east of Interstate 5 and north of Louise Avenues is conveyed to the MWQCF. Most of the City's wastewater generated east of I-5 in the Historic Lathrop area is conveyed via gravity sewers and lift stations to a regional pump station, the O Street Pump Station. The O Street Pump Station then conveys wastewater via a 12-inch diameter force main to the McKinley Avenue Pump Station, and ultimately to the MWQCF. From the McKinley Avenue Pump Station, effluent is pumped to the MWQCF via a 12-inch force main and a newer 16-inch force main that runs down McKinley to Yosemite Avenue, then to the MWQCF. The Louise Avenues Water Treatment Facility Pump Station, and other private stations that serve the industrial areas east of the I-5 also pump into these two force mains. In 2015, 1,043 AF of wastewater was collected from the City's service area and conveyed to MWQCF. (Woodward & Curran 2020:24)

Wastewater generated within the Crossroad industrial area and areas west of the I-5, including the RID Area, are conveyed to the LCTF for treatment. Wastewater from the Central Lathrop Specific Plan (CLSP) is conveyed to the LCTF via connection into the force main from the Mossdale Pump Station via the CLSP Sewer Pump Station. The River Islands Interim Pump Station is conveyed directly to the LCTF via two force mains. The City is constructing a new River Islands Pump Station to support both Phases of the River Islands Project and the expected expansion of the LCTF. The new River Islands Pump Station is expected to be fully operational in 2021. In 2015, 429 AF of wastewater was collected from the City's service area and conveyed to LCTF for treatment and reuse. This value was approximately 840 AF in 2018. (Woodward & Curran 2020:24)

### Manteca Water Quality Control Facility

The City owns a total of 14.7 percent of the MWQCF water treatment capacity under a contract with the City of Manteca. However, the City does not receive recycled water from the MWQCF and is not involved in operation of the MWQCF. The current MWQCF design capacity is 9.87 million gallons per day (mgd) and the City's allocated capacity is approximately 1.45 mgd. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated up to 3.97 mgd, should the City elect to maintain its proportional allotment. However, the City of Manteca does not have near term plans to expand the capacity of the MWQCF. (Woodward & Curran 2020:24)

### **Lathrop Consolidated Treatment Facility**

Veolia Water North America maintains and operates the LCTF. The LCTF has a current total water treatment capacity of 2.5 mgd average dry weather flow (ADWF) and a permitted maximum capacity of up to 6.0 mgd with additional expansions to accommodate expected growth and development in Mossdale, Central Lathrop, and River Islands development areas. The permitted capacity is limited by recycled water storage and disposal capacity, currently 1.69 mgd ADWF (Woodward & Curran 2020:25). The City can further upgrade the LCTF to increase the treatment capacity up to 9.0 mgd as needed.

Wastewater treatment and disposal at the City's LCTF is regulated under WDR Order No. R5-2016-0028. Because the LCTF discharges treated effluent to land, it is not subject to the National Pollution Discharge Elimination System (NPDES) requirements for discharges to surface water. Wastewater effluent at LCTF undergoes secondary treatment, tertiary filtration, and disinfection prior to storage and disposal. Disinfected tertiary recycled water produced by the LCTF is suitable for irrigation at parks, landscape strips, median islands, pond berms, and agricultural fields.

The City has constructed and is operating a 10-acre percolation basin at a former land application site, LAS-3, located northeast of the LCTF for the disposal of 0.3 mgd of tertiary treated effluent. For this, the City prepared a comprehensive analysis of percolation basins for groundwater recharge in Percolation Disposal Capacity Evaluation. In addition, a recent study of the percolation capacity at the former LAS-3 supported an increase in capacity from 330,000 gallon per day (gpd) to 361,000 gpd and was approved in September 2019.

### **River Islands Sewer Collection System**

Currently, sewage generated in the constructed portions of River Islands is conveyed to an interim sewer pump station located between Lakes 1 and 2. The interim sewer pump station initially pumped sewage to the Mossdale collection area located just west of I-5. From the Mossdale collection area, it flowed to the LCTF for treatment. The pump station force mains have now been extended to connect directly to the LCTF, without flowing through the Mossdale collection system.

At buildout, the River Islands sewer collection system will consist of up to six separate sewer collection areas based on the service area of the six sewer lift/pump stations. The collection areas will be designed to convey the generated sewage from each service point of connection to the corresponding sewer lift/pump station by gravity. All sewage generated in River Islands will be conveyed to sewer pump station A2 (also known as Site C) located in the southeast of the development. The A2 pump station will pump raw sewage directly to the LCTF through the installation of 12 and 18-inch force mains. (PACE 2020a)

### **Recycled Water Use and Distribution**

Treated tertiary effluent from the LCTF is held in storage ponds and conveyed by the recycled water distribution system to smaller lined storage ponds and agricultural application areas throughout the city. The recycled water distribution system contains approximately 113,000 linear feet of recycled water piping infrastructure and four booster pump stations. Storage pond parcels total approximately 52 acres and have a combined capacity of approximately 139 million gallons. Storage ponds throughout the city hold recycled water during low irrigation demand periods (i.e., winter) for later use in high irrigation demand periods (i.e., summer). During 2018, the City recycled 840 AF of tertiary effluent, which was primarily applied to agricultural irrigation.

In the near-term, the City plans to continue agricultural land applications and construct additional storage and percolation ponds and agricultural sprayfields as the City's wastewater flow to the LCTF increases. Consistent with the City's 2015 UWMP, projected recycled water used for agricultural irrigation is estimated to be approximately equal to the volume of available treated effluent. As stated in the 2015 UWMP, agricultural land application remains as the primary recycling method for the City's tertiary effluent. A limited amount of recycled water is currently used for landscape irrigation, and the percentage of recycled used for this purpose will increase.

For the longer term, the City has developed a recycled water implementation plan that supports the use of recycled water to irrigate public landscaping. All major new City developments (Mossdale, Central Lathrop, and River Islands) are connected to the recycled water system to enable the use of recycled water for public landscape areas. These



landscaping areas include existing and planned, parks and playgrounds, schoolyards, roadway medians, commercial landscaping, and open space.

In addition to the City's anticipated recycled water supplies, River Islands has constructed a municipal irrigation system which utilizes recycled water to supply the needs of the public landscape areas. When that supply is low or not available, lake water (a combination of stormwater and native groundwater) is used to meet non-potable demand within River Islands. The City issued a Recycled Water User Permit to RD 2062 to allow them to irrigate parks, medians, and street side landscaping with recycled water. This recycled water system will be owned and operated by RD 2062.

The Fourth Addendum to the 2003 SEIR (City of Lathrop 2014) evaluated the construction of approximately 65 acres of recycled water storage ponds and 20 acres of designated agricultural spray fields for recycled water disposal immediately southeast of the River Islands Project site. These facilities assist in fulfilling project requirements for offsite recycled water storage and disposal facilities identified in the 2003 SEIR. A portion of the ponds have been constructed and the entire spray field area is in operation.

## STORMWATER

River Islands stormwater system includes both City owned and operated facilities and lakes and pump stations owned and operated by RD 2062. An agreement between the two public agencies was approved and executed in 2019 that ensures coordination between the two agencies and coverage under the City's Small Municipal Separate Storm Sewer Systems (MS4 Permit). The stormwater system for the River Islands Project is unique when compared to other areas of the City since it includes the use of lakes and ancillary improvements such as bio-retention basins, swales and other improvements to improve water quality that are not employed in other areas of the City.

The Phase 2 stormwater system is a continuation of the Phase 1 system and is interconnected to it. The overall storm water system will be managed holistically, to provide maximum flexibility for the storage, cleaning and discharge of storm water. The River Islands lake system includes thirteen (13) lakes in Phase 1 and thirteen (13) lakes within Phase 2. The lakes are connected by underground pipes and as each new lake is constructed it is connected to the overall lake system. Three major pump stations, an existing station in Phase 1 and two planned in Phase 2, provide several functions: 1. Circulate water from lakes via the interconnected piping, 2. Provide non-potable irrigation water to supplement recycled water for urban landscape irrigation, and 3. Evacuate excess storm water during large storm events via an existing outfall structure near Paradise Cut. The proposed discharge would be covered by the City's MS4 Permit. Analysis of the existing lake system shows operation and performance of the lake system meeting design objectives. Evaluation of the addition of the planned Phase 2 lakes shows the overall system continuing to operate as anticipated (ENGEO 2020; PACE 2020b).

## ENERGY

### Electricity and Natural Gas

#### Lathrop Irrigation District

The Lathrop Irrigation District (LID) was formed by the project applicant and approved by voters in 2002 to provide utility infrastructure to the River Islands Project. The LID began providing retail electric service in April 2013 and originally served just two customers: Comcast and River Islands Technology Academy. Eventually, the LID will provide electric service for retail and office facilities, educational and recreational amenities, entertainment, employment and environmental enhancements to the River Islands area and the city. The LID functions as one among other public agencies available to provide utilities and services to the project site and to finance infrastructure development and construction through the use of land bonds, revenue bonds, and other forms of financing available to public agencies. LID has an elected board that is answerable to local residents rather than the CPUC. The board is comprised of locally elected landowners. At this time, there are no plans to serve other areas of the city with power (Lathrop Irrigation District 2020).

### Pacific Gas and Electric

Natural gas is supplied to the project area by PG&E. PG&E gas facilities in the area consist of a high pressure 8-inch natural gas transmission pipeline that enters the project in River Islands Parkway via the Bradshaw's Crossing Bridge to a gas pressure reducing station near the bridge. From the station, a 6-inch distribution main backbone system serves the project via River Islands Parkway and other arterial streets. Additionally, a 6-inch distribution line enters the southern gateway in Stewart Road/Lakeside Drive via the San Joaquin Bicycle/Pedestrian Bridge. This line provides additional capacity and redundancy to the backbone system.

## 4.11.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

Evaluation of potential public utilities impacts is based on a review of existing documents and studies that address public utilities onsite and in the general project vicinity for water usage and disposal, wastewater generation, and energy usage. In particular, the following studies were reviewed:

- ▶ *River Islands Phase 2 Development Water Supply Assessment* (Woodward & Curran 2020);
- ▶ *River Islands at Lathrop Phase 2 Sewer Technical Report – Revision 1* (PACE 2020a);
- ▶ *Stormwater Analysis Report – River Islands Phase 2 Stormwater Mitigation – Revision 2* (PACE 2020b);
- ▶ *River Islands at Lathrop Potable Water Technical Report – Revision 3* (PACE 2021a);
- ▶ *River Islands at Lathrop Final Non-Potable Water Technical Report – Revision 2* (PACE 2021b); and
- ▶ Letter to Ramon Batista of River Islands at Lathrop providing an evaluation of electricity and natural gas demands and system capabilities (Power Systems Design 2020).

The WSA is included in Appendix E and the other studies listed above are included in Appendix G of this SEIR. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, state, and local laws, ordinances, and regulations.

### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effects at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that are applicable to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strikethrough~~ and text additional shown in underline. As noted above, current CEQA Guidelines and thresholds include evaluation of solid waste capacity within the Public Utilities section. However, for the purposes of this SEIR, solid waste is evaluated in Section 4.10, "Public Services."

The modified Phase 2 Project would cause a significant impact related to public utilities if it would:

- ▶ ~~create demand beyond available service capacity;~~
- ▶ ~~create demand for wastewater treatment/disposal beyond available service;~~
- ▶ ~~cause generation of recycled water beyond available disposal capacity;~~
- ▶ ~~substantially increase the rate or amount of surface runoff in a manner that would exceed the capacity of existing/planned drainage facilities and/or result in flooding on- or off-site; or~~
- ▶ ~~create demand for electrical or natural gas service that is substantial in relation to the existing demands.~~

- ▶ require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- ▶ not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years; or
- ▶ result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments.

## ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussions below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.11-a: Demand for Potable Water

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The 2003 SEIR evaluated whether the River Islands Project would create demand for potable water beyond the available service capacity. The modified Phase 2 Project is estimated to generate a potable water demand of 3,038 AFY and a total water demand 3,798 AFY at project buildout in 2045. The WSA prepared for the modified Phase 2 Project noted that projected demand for potable water would decrease as compared with the 2002 WSA discussed in the 2003 SEIR. The 2020 WSA also noted that the 2002 WSA did not anticipate the use of non-potable water. While the modified Phase 2 Project would result in an overall increase in demand for water, the demand for potable water would decrease. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, because overall water demand for the River Islands Project would increase due to the modified Phase 2 Project, this impact would remain **significant**, as identified in the 2003 SEIR.

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Impact 4.11-a of the 2003 SEIR evaluated whether the project's demand for potable water would exceed the City's supplies. The analysis calculated that the River Islands project would require approximately 221 AFY in 2005 (initiation of Phase 1a), or roughly 3 percent of the City of Lathrop's normal year supply; approximately 2,356 AFY in 2015 (completion of Phase 1), or 19 percent of the City's total normal year water supply; and an estimated 5,114 AFY at full buildout in 2025, or 30 percent of the City's total normal year supply. An SB 610 WSA was prepared for the project, which evaluated the adequacy of existing and future water supplies to meet the water demand of the River Islands Project in conjunction with the City's existing and future cumulative demands. The WSA noted that potable water to serve the project would be provided, in part, by the City's municipal well system and that up to five additional wells (#21, #22, and #23 and Emergency Wells #1 and #2) would be required to provide the 2025 normal year deliveries. Because the project's demand for potable water could not be met by existing City water production facilities, the impact was determined to be significant. The impact would be reduced to a less-than-significant level with implementation of Mitigation Measure 4.11-a. Mitigation Measure 4.11-a requires that no part of the project be occupied until sufficient potable water is available to serve that portion of the project.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Transit Oriented Development (TOD) area within the original boundaries of the Phase 2 area. A WSA was prepared for the modified Phase 2 Project (Woodward & Curran 2020) and is included as Appendix E. Table 4.11-8 identifies the water demand factors used in the WSA and Table 4.11-9 includes calculations of the water demand for the modified Phase 2 Project.

**Table 4.11-8 Modified Phase 2 Project Water Demand Factors**

Land Use Category	Residential Density (DU/acre)	Water Demand Factor
Low Density Residential	1.0 – 9.0	315 gpd/DU <sup>2</sup>
Medium Density Residential	9.0 – 15.0	235 gpd/DU <sup>3</sup>
High Density Residential	15.0 – 35.0	135 gpd/DU <sup>4</sup>
Commercial <sup>1</sup>	-	860 gpd/acre <sup>5</sup>
Schools	-	1,500 gpd/acre <sup>6</sup>
Parks and Open Space	-	2,450 gpd/acre <sup>7</sup>
Roadway Landscape Area	-	2,450 gpd/acre <sup>8</sup>

Notes: DU/acre = density unit per acre; gpd/DU = gallons per day per density unit

<sup>1</sup> Includes the planned River Islands Town Center and Employment Center.

<sup>2</sup> Water demand factor is modified from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for Low Density Residential land use to account for efficiencies associated with new construction in the River Islands area.

<sup>3</sup> Water demand factor is modified from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for Medium Density Residential land use to account for efficiencies associated with new construction in the River Islands area.

<sup>4</sup> Water demand factor is from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for High Density Residential land uses.

<sup>5</sup> Water demand factor is from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for Commercial land uses.

<sup>6</sup> Water demand factor is from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for Schools.

<sup>7</sup> Water demand factor is from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for Parks and Open Space land uses.

<sup>8</sup> Water demand factor is from the City of Lathrop's updated demand projections (August 2020) (Appendix B of the 2020 WSA) for Street Landscape Area.

Source: Woodward & Curran 2020:Table 12

**Table 4.11-9 Modified Phase 2 Project Water Demand Projections by Land Use**

Land Use Category	Residential Units (units)	Project Area (acres)	Water Demand Factor	Total Demand (gpd)
Low Density Residential	4,061	-	315 gpd/DU	1,279,215
Medium Density Residential	3,150	-	235 gpd/DU	740,227
High Density Residential	3,515	-	135 gpd/DU	474,552
<i>Total Residential</i>	<i>10,726</i>	-	-	<i>2,493,994</i>
Commercial <sup>1</sup>	-	135.6	860 gpd/acre	116,609
Schools	-	109.7	1,500 gpd/acre	164,550
Parks and Open Space <sup>2</sup>	-	211.5	2,450 gpd/acre	518,198
Roadway Landscape Areas <sup>3</sup>	-	39.7	2,450 gpd/acre	97,228
<b>Total</b>	<b>10,726</b>	<b>496</b>		<b>3,390,578</b>
<b>Total Project Demand (AFY)</b>				<b>3,798</b>

Notes: gpd = gallons per day; AFY = acre-foot per year

<sup>1</sup> Includes the planned River Islands Town Center and Employment Center.

<sup>2</sup> Includes only irrigated parks and open space areas.

<sup>3</sup> Includes only irrigated roadway landscape areas.

Source: Woodward & Curran 2020:Table 13

As shown in Table 4.11-9, the modified Phase 2 project would require 3,785 AFY at project buildout in 2040. A non-potable water supply will serve landscape irrigation for the planned Town Center, Employment Center, schools, parks, open spaces, and roadway landscape areas. Table 4.11-10 provides a breakdown of the non-potable demands compared to total demands. Non-potable water supplies would meet approximately 760 AFY (or nearly 20 percent) of the project's 3,798 AFY total demand.

**Table 4.11-10 Modified Phase 2 Project Potable and Non-Potable Demand by Land Use**

Land Use Category	Total Demand (gpd)	% Demand for Non-Potable Water <sup>1</sup>	Non-Potable Demand (gpd)	Potable Demand (gpd)
Residential	2,493,994	N/A	0	2,493,994
Commercial <sup>2</sup>	116,609	15%	17,491	99,117
Schools	164,550	50%	106,958	57,593
Parks and Open Space	518,198	90%	466,378	51,820
Roadway Landscape Areas <sup>3</sup>	97,228	90%	87,505	9,723
<b>Total</b>	<b>3,379,358</b>		<b>678,332</b>	<b>2,712,246</b>
<b><i>Project Demand (AFY)</i></b>	<b>3,785</b>		<b>760</b>	<b>3,038</b>

Notes: gpd = gallons per day; AFY = acre-foot per year

<sup>1</sup> Non-potable water demand data provided by Califia, the project developer in July 2020.

<sup>2</sup> Commercial non-potable demand is for frontage landscaping and does not include on-site use.

<sup>3</sup> Roadway landscape areas will be irrigated with non-potable water where access allows.

Source: Woodward & Curran 2020:Table 14

The 2002 WSA previously developed for the River Islands development (Phase 1 and Phase 2) anticipated 11,000 new residential dwelling units by buildout in 2025. In addition, the analysis anticipated a 164,000 square-foot school, 175,111 square feet of village commercial development, and 478,288 square feet of service commercial development. Table 4.11-11 presents the projected water demands for the anticipated River Islands development as available for the 2003 SEIR.

Table 4.11-12 compares the water demand in the 2002 WSA and the WSA prepared by Woodward & Curran for the proposed Phase 2 modifications. As shown in Table 4.11-12, an additional 610 AFY in projected demands at buildout in 2040 are estimated beyond the 2002 projections. However, the 2002 WSA did not specify which demands would be met by non-potable supplies. Thus, when non-potable demands are broken out, the 2002 WSA overestimates the development's total potable water needs by 511 AFY. Non-potable water supplies are anticipated to meet an additional 1,121 AFY.

**Table 4.11-11 2002 Water Supply Assessment Projected Demand**

Land Use Category	Water Demand Factor (gpd/acre)	Projected Water Use (AFY)									
		2005		2010		2015		2020		2025	
		Average Daily Demand (gpd)	Annual Demand (AFY)	Average Daily Demand (gpd)	Annual Demand (AFY)	Average Daily Demand (gpd)	Annual Demand (AFY)	Average Daily Demand (gpd)	Annual Demand (AFY)	Average Daily Demand (gpd)	Annual Demand (AFY)
Low Density Residential	1,760	192,896	216.1	651,024	729.3	1,302,048	1,458.6	2,246,904	2,517.0	3,191,760	3,575.5
Medium Density Residential	3,000	-	-	49,200	55.1	98,100	109.9	130,050	145.7	162,000	181.5
High Density Residential	4,200	-	-	66,780	74.8	133,140	149.1	197,400	221.1	261,660	293.1
Town Center	1,500	4,500	5.0	35,250	39.5	70,500	79.0	70,500	79.0	70,500	79.0
Employment Center	1,500	-	-	196,950	220.6	393,900	441.3	393,900	441.3	393,900	441.3
Retail Commercial	1,500	-	-	-	-	-	-	7,800	8.7	15,450	17.3
Golf Clubhouses	1,500	-	-	-	-	-	-	14,850	16.6	29,550	33.1
Animal Campus	1,500	-	-	13,650	15.3	13,650	15.3	13,650	15.3	13,650	15.3
Schools	3,000	-	-	91,800	102.8	91,800	102.8	259,050	290.2	426,300	477.5
<b>Total</b>		<b>197,396</b>	<b>221</b>	<b>1,104,654</b>	<b>1,237</b>	<b>2,103,138</b>	<b>2,356</b>	<b>3,334,104</b>	<b>3,735</b>	<b>4,564,770</b>	<b>5,114</b>

Notes: AFY = acre-foot per year; gpd = gallons per day

Source: Woodward & Curran 2020:Table 17

**Table 4.11-12 Comparison of 2002 WSA and Updated Demands**

	Projected Water Use (AFY)									
	2020		2025		2030		2035		2040 (Buildout)	
	Potable	Non-Potable	Potable	Non-Potable	Potable	Non-Potable	Potable	Non-Potable	Potable	Non-Potable
2002 WSA Projected Demands <sup>1</sup>	3,735	0	5,114	0	5,114	0	5,114	0	5,114	0
Updated Phase 1 Demands <sup>2</sup>	779 <sup>3</sup>	153	1,287	258	1,387	341	1,476	351	1,565	361
Updated Project Demands (Phase 2)	0	0	268	109	1,186	276	2,112	518	3,038	760
Total Updated Demands (Phase 1 and Phase 2)	779	153	1,556	367	2,573	617	3,588	869	4,603	1,121
<b>Net Change in Demand</b>									<b>-511</b>	<b>1,121</b>

Notes: AFY = acre-foot per year; gpd = gallons per day

<sup>1</sup> Source: City of Lathrop 2002 WSA (Table 9).

<sup>2</sup> Land use data and phasing assumptions were provided by the project developer and are detailed in Appendix C of the 2020 WSA. Demands for existing Phase 1 development are included in this total. Existing Phase 1 demands were calculated based on land use and water demand factors, rather than using actual demands.

Source: Woodward & Curran 2020:Table 18

The City updated its citywide water demand projections through 2040 as part of developing its 2019 WSMP. That projection was based on historical water use, population, and employment projections. As shown in Table 4.11-13, the modified Phase 2 Project is projected to account for about 39 percent of the citywide potable demand at buildout.

**Table 4.11-13 City of Lathrop Projected Demands through 2040**

	Projected Water Use (AFY)				
	2020	2025	2030	2035	2040 (Buildout)
<b>Potable Demands</b>					
City of Lathrop <sup>1</sup>	4,794	6,076	6,584	6,678	7,129
River Islands Phase 1 Demand <sup>2</sup>	779	1,287	1,387	1,476	1,565
River Islands Phase 2	0	268	1,186	2,112	3,038
<b>Total City Demand<sup>3</sup></b>	<b>5,573</b>	<b>7,632</b>	<b>9,157</b>	<b>10,266</b>	<b>11,732</b>
<b>Non-potable Demands</b>					
City of Lathrop <sup>4</sup>	1,006	1,736	2,444	2,906	3,358
River Islands Phase 1 Demand	153	258	341	351	361
River Islands Phase 2	0	109	276	518	760
<b>Total City Demand<sup>5</sup></b>	<b>1,159</b>	<b>2,103</b>	<b>3,061</b>	<b>3,775</b>	<b>4,479</b>

Notes: AFY = acre-foot per year

<sup>1</sup> Source: City of Lathrop updated demand projections (August 2020) (Appendix B of the 2020 WSA).

<sup>2</sup> Land use data and phasing assumptions were provided by the Project developer and are detailed in Appendix C of the 2020 WSA. Demands for existing Phase 1 development are included in this total. Existing Phase 1 demands were calculated based on land use and water demand factors, rather than using actual demands.

<sup>3</sup> Includes City of Lathrop updated demand estimates (August 2020) (Appendix B of the 2020 WSA), excluding River Islands, plus Phase 1 and Phase 2 potable demands.

<sup>4</sup> Source: City of Lathrop 2015 UWMP. Consistent with the 2015 UWMP, projected recycled water demands are estimated to be equal to the volume of treated effluent available (volumes presented previously in Table 4.11-7). River Islands Phase 1 and Phase 2 demands have been subtracted from total City demand.

<sup>5</sup> Includes City of Lathrop 2015 UWMP recycled water demands, excluding River Islands, plus Phase 1 and Phase 2 non-potable demands.

Source: Woodward & Curran 2020:Table 19

### Sufficiency Determination

The total water demand anticipated for the modified Phase 2 Project (potable and non-potable) is 3,798 AFY at buildout, as shown previously in Table 4.11-9. Of this total buildout demand, recycled water would satisfy 760 AFY. Table 4.11-14 presents the projected water supply and demand for the entire City of Lathrop service area. As shown, the City's current and planned water supply is sufficient to meet all demands, including those for the modified Phase 2 Project, in normal water years. While the 2019 WSMP shows insufficient supply to meet total demand under normal year conditions in 2035 and at buildout, updated projections below include revised demand estimates for the River Islands project area, and now show the supplies as sufficient to meet total demands (Woodward & Curran 2020:40).

**Table 4.11-14 City of Lathrop Water Demand (Including River Islands) versus Normal Year Water Supply**

Water Use Category	2020	2025	2030	2035	2040 (Buildout)
<b>Potable Water</b>					
Supply (AFY) <sup>1,2</sup>	11,480	11,531	11,583	11,607	15,391
Demand (AFY)	5,573	7,632	9,157	10,266	11,732
<b>Sufficient Supply?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
<b>Recycled Water</b>					

Water Use Category	2020	2025	2030	2035	2040 (Buildout)
Supply (AFY) <sup>3</sup>	1,159	2,103	3,061	3,775	4,479
Demand (AFY)	1,159	2,103	3,061	3,775	4,479
<b>Sufficient Supply?<sup>4</sup></b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

Notes: AFY = acre-foot per year

<sup>1</sup> Source: City of Lathrop 2019a WSMP (Table 5-8). Assumes both Well 21 and Well 9 remain offline.

<sup>2</sup> Groundwater supply assumes that there will be no curtailments or limitations under the GSP currently being developed for the Tracy Subbasin.

<sup>3</sup> Source: City of Lathrop 2015 UWMP. Consistent with the 2015 UWMP, projected recycled water demands are estimated to be equal to the volume of treated effluent available (volumes presented previously in Table 4.11-7). River Islands will have the ability to supplement City recycled water supplies with lake and river water. These supplemental sources can be used to meet up to 100% of River Islands non-potable demands if recycled water supplies are unavailable.

<sup>4</sup> Based on discussions between the River Islands developer Califa and the City of Lathrop, it is anticipated that there will be sufficient recycled water supplies to meet the new recycled water demands of River Islands.

Source: Woodward & Curran 2020:Table 23

As required by SB 610, the 2020 WSA evaluated the sufficiency of water supplies to meet demand under single-dry and multiple-dry water year conditions to determine the potential for shortfalls in supply under such hydrologic conditions. Per the City's 2015 UWMP, the City's water shortage plan includes demand reduction measures that would be implemented to eliminate any supply shortfall. A summary of the City's dry year demands with the River Islands Project is included in Table 4.11-15. A comparison of the projected supplies and demands under single-dry and multiple-dry year conditions is presented in Table 4.11-16. As shown in the table, the City's supply is sufficient to meet total projected demands (the City's planned and future uses and the River Islands Project) in all years in multiple-dry year conditions. In single-dry years conditions, there is an anticipated supply shortage in 2035 of 4 percent before accounting for the implementation of the City of Lathrop's Water Shortage Contingency Plan, which is discussed further in Section 5.2.1 of the 2020 WSA. If the supply is not sufficient, the City will enact conservation and demand management measures to ensure demand does not exceed supply. Therefore, a determination of sufficient supply is provided in Table 4.11-16. For the purpose of this analysis, City water supplies at buildout are assumed to be consistent with 2040 supplies, which makes this a conservative estimate. In addition, per the 2015 UWMP, the City has planned for water shortages and would enact more stringent water conservation measures and/or the appropriate stage of the Water Shortage Contingency Plan described in the City's 2015 UWMP across the entire service area, including the River Islands Project area, to ensure demand does not exceed supply.

**Table 4.11-15 City of Lathrop Potable Water Demand (Including River Islands) During Dry Year Conditions**

Potable Demand <sup>1</sup>	2020	2025	2030	2035	2040
<b>Single-Dry Year (AFY)<sup>2</sup></b>	5,573	7,632	9,157	10,266	11,732
<b>Multiple-Dry Year (AFY)<sup>3</sup></b>					
First Year	5,573	7,632	9,157	10,266	11,732
Second Year	5,573	7,632	9,157	10,266	11,732
Third Year	5,573	7,632	9,157	10,266	11,732

<sup>1</sup> Source: City of Lathrop updated demand projections (August 2020) (Appendix B of the 2020 WSA). City demand estimates for the River Islands area have been excluded, and projected River Islands Phase 1 and Phase 2 potable demands, phased in five-year increments through 2040 were then added to the City demand totals.

<sup>2</sup> Single-dry year demand (AFY) is assumed to be consistent with normal year demand.

<sup>3</sup> Multiple-dry year demand (AFY) is assumed to be consistent with normal year demand.

Source: Woodward & Curran 2020:Table 24



**Table 4.11-16 City of Lathrop Water Demand (Including River Islands) versus Dry Year Supply**

		2020	2025	2030	2035	2040 (Buildout)
Total Supply <sup>1</sup>	Single-Dry Year (AFY)	9,790	9,828	9,867	9,907	12,757
Total Demand – Single-Dry Year (AFY) <sup>2</sup>		<b>5,573</b>	<b>7,632</b>	<b>9,157</b>	<b>10,266</b>	<b>11,732</b>
Sufficient Supply? <sup>3</sup>	Single-Dry Year	Yes	Yes	Yes	Yes	Yes
Supply Exceeded By:		0%	0%	0%	4%	0%
Total Supply <sup>1</sup>	Multiple-Dry Year (AFY)					
	First Year	10,578	10,623	10,668	10,714	14,007
	Second Year	10,747	10,793	10,839	10,887	14,275
	Third Year	10,414	10,457	10,501	10,545	13,746
Total Demand – Multiple-Dry Year (All Years) (AFY) <sup>2</sup>		<b>5,573</b>	<b>7,632</b>	<b>9,157</b>	<b>10,266</b>	<b>11,732</b>
Sufficient Supply? <sup>3</sup>	Multiple-Dry Year					
	First Year	Yes	Yes	Yes	Yes	Yes
	Second Year	Yes	Yes	Yes	Yes	Yes
	Third Year	Yes	Yes	Yes	Yes	Yes
Supply Exceeded By:		0%	0%	0%	0%	0%

<sup>1</sup> Source: City of Lathrop 2019a:Table 5-12 and Table 5-13. Single-dry year supply reduced by 11% beginning in 2025. Third year of multiple-dry year supply reduced by 13% beginning in 2025.

<sup>2</sup> Source: City of Lathrop updated demand projections (August 2020) (Appendix B of the 2020 WSA). City demand estimates for the River Islands area have been excluded, and projected River Islands Phase1 and Phase 2 potable demands, phased in five-year increments through 2040 were then added to the City demand totals.

<sup>3</sup> If the supply is not sufficient, the City will enact conservation and demand management measures to ensure demand does not exceed supply.

Source: Woodward & Curran 2020:Table 25

As discussed in Section 2.3.1.1 of the 2020 WSA, the SWRCB adopted revisions in December 2018 to the Bay-Delta Plan. The adopted changes include increasing flows on the San Joaquin River and its tributaries, including the Stanislaus River, starting at 40 percent of unimpaired flow from February to June, with a range of 30 to 50 percent depending on biological conditions. Based on preliminary estimates made by SSJID in 2016, the 40 percent unimpaired flows criteria would increase the SCWSP supply shortfall in a single-dry year from 25 to 36 percent (11 percent increase), and from 16 to 29 percent (13 percent increase) during the third consecutive year of multiple-dry years by 2040 (City of Lathrop 2019a).<sup>1</sup>

While the 2020 WSA does not account for these reductions, an optional analysis was run to evaluate the potential impact of the Bay-Delta Plan voluntary agreements, should they be implemented using an unimpaired flow criteria of 40 percent. Table 4.11-17 shows how the supply and demand comparison is affected by the voluntary agreements under single-dry and multiple-dry year conditions. As shown in the table, the City's total projected demands (the City's planned and future uses and the River Islands Project) could be met by projected supplies through 2025 under the single-dry year condition, with 4, 16, and 3 percent supply shortages in years 2030, 2035, and 2040, respectively. Projected demands could be met in multiple-dry year conditions through 2025 and at project buildout in 2040, with 0.2 and 12 percent supply shortages in years 2030 and 2035, respectively. Per the City of Lathrop's 2015 UWMP, the City has planned for water shortages and would increase water conservation programming, enact more stringent water conservation measures and/or the appropriate stage of the Water Shortage Contingency Plan described in the

<sup>1</sup> Based on information presented by Oakdale Irrigation District (OID) and SSJID, combined OID and SSJID formula water available under 40 percent unimpaired flow criteria will be 381,000 AFY during 1976-1977, and 422,000 AFY during 2015-2016. These values were used for the basis of a single-dry year and the third consecutive year of multiple-dry years, respectively. The SCWSP projected supplies are calculated as 50 percent of combined OID and SSJID formula water available, similar to what was assumed in SSJID's 2015 UWMP.

City's 2015 UWMP across the entire service area, including the River Islands Project area, to further ensure demand does not exceed supply should the voluntary agreement cutbacks be implemented.

**Table 4.11-17 Supply and Demand Comparison Accounting for Voluntary Agreements**

		2020	2025	2030	2035	2040 (Buildout)
Total Supply <sup>1</sup>	Single-Dry Year (AFY)	9,790	8,747	8,782	8,817	11,354
Total Demand – Single-Dry Year (AFY) <sup>2</sup>		<b>5,573</b>	<b>7,632</b>	<b>9,157</b>	<b>10,266</b>	<b>11,732</b>
Sufficient Supply? <sup>3</sup>	Single-Dry Year	Yes	Yes	No	No	No
Supply Exceeded By:		0%	0%	4%	16%	3%
Total Supply <sup>1</sup>	Multiple-Dry Year (AFY)					
	First Year	10,578	10,623	10,668	10,714	14,007
	Second Year	10,747	10,793	10,839	10,887	14,275
	Third Year	10,414	10,457	10,501	10,545	13,746
Total Demand – Multiple-Dry Year (All Years) (AFY) <sup>2</sup>		<b>5,573</b>	<b>7,632</b>	<b>9,157</b>	<b>10,266</b>	<b>11,732</b>
Sufficient Supply? <sup>3</sup>	Multiple-Dry Year					
	First Year	Yes	Yes	Yes	Yes	Yes
	Second Year	Yes	Yes	Yes	Yes	Yes
	Third Year	Yes	Yes	No	No	Yes
Supply Exceeded By:		0%	0%	0.2%	12%	0%

<sup>1</sup> Source: City of Lathrop 2019a:Table 5-12 and Table 5-13. Single-dry year supply reduced by 11% beginning in 2025. Third year of multiple-dry year supply reduced by 13% beginning in 2025.

<sup>2</sup> Source: City of Lathrop updated demand projections (August 2020) (Appendix B of the 2020 WSA). City demand estimates for the River Islands area have been excluded, and projected River Islands Phase1 and Phase 2 potable demands, phased in five-year increments through 2040 were then added to the City demand totals.

<sup>3</sup> If the supply is not sufficient, the City will enact conservation and demand management measures to ensure demand does not exceed supply.

Source: Woodward & Curran 2020:Table 26

Based on the analysis presented in the 2020 WSA and summarized above, the City of Lathrop has adequate supply to serve the City's water demands inclusive of the modified Phase 2 Project through 2040 under normal year and multiple dry-year supply conditions (Woodward & Curran 2020:45). In single-dry years conditions, there is an anticipated supply shortage in 2035 before accounting for the implementation of the City's WSCP. To avoid a potential supply shortfall, the City would increase water conservation programming and/or the appropriate stage of its Water Shortage Contingency Plan to ensure demand does not exceed supply. Because the shortage in 2035 in a single-dry year condition is less than 10 percent (estimated at 4 percent), it is anticipated that this shortage would be mitigated by the City implementing Stage 1 of its WSCP (Woodward & Curran 2020:45). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

### Significance after Mitigation

The requirements of Adopted Mitigation Measure 4.11-a would reduce potential impacts associated with potable water by requiring sufficient water supply prior to occupancy. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to potable water demand, consistent with the impact conclusion in the 2003 SEIR.

### **Impact 4.11-b: Environmental Impacts Associated with the Development of New City Wells**

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The 2003 SEIR determined that construction and operation of planned new City wells could contribute to significant geotechnical, groundwater, flooding, noise, farmland, aesthetics/views, terrestrial biology, and cultural resources impacts. Since that time, Well 21 and the Well 21 WTF have been constructed, though they are currently offline due to sanding and elevated levels of arsenic and uranium. While the majority of the infrastructure associated with Well 21 and the Well 21 WTF, such as the well head and the pump, have already been completed, the City is evaluating options that would allow Well 21 and the Well 21 WTF to resume production. Remaining improvements would not require large-scale construction that would result in more substantial impacts than those analyzed under the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. These impacts would remain **less than significant** as identified in the 2003 SEIR with implementation of the mitigation measures identified in the various sections of the 2003 SEIR.

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Impact 4.11-b of the 2003 SEIR evaluated impacts associated with the development of new wells within the City. The analysis noted that construction and operation of new wells would result in potentially significant effects related to geotechnical, groundwater, flooding, noise, farmland, aesthetics/views, terrestrial biology, and cultural resources. The analysis determined that with the exception of farmland, these potentially significant impacts would be reduced to less-than-significant through implementation of mitigation measures found throughout the 2003 SEIR. Further, at the time of the 2003 SEIR, the City was preparing plans and a project-level CEQA analysis for a City-sponsored well project. Any significant impacts not identified in the 2003 SEIR that may occur associated with the City-sponsored well project would be identified in the associated project-level CEQA analysis. For these reasons, impacts associated with development of new City wells was concluded to be less than significant.

Since certification of the 2003 SEIR, construction of Well 21 and an associated a treatment facility (Well 21 WTF) were completed. However, Well 21 and the Well 21 WTF have remained inactive since 2013 due to sanding and elevated levels of arsenic and uranium. Due to the pollution issues associated with Well 21 and an elevated potential of higher total dissolved solids (TDS) towards the City's other wells, it is unlikely that the additional wells proposed in the 2003 SEIR would be built. The City is exploring options that would allow Well 21 and the Well 21 WTF to resume production. Upgrades to the Well 21 and the Well 21 WTF would be completed in multiple phases to utilize its full capacity. Improvements to Well 21 and the Well 21 WTF may result in similar environmental impacts as assessed under the 2003 SEIR. However, the majority of the infrastructure associated with Well 21 and the Well 21 Treatment facility, such as the well head and the pump, have already been completed. Improvements would not require large-scale construction that may result in more substantial impacts than those analyzed under the 2003 SEIR. These impacts would be mitigated to less-than-significant level with implementation of the mitigation measures identified in the 2003 SEIR. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This would remain a **less-than-significant** impact as identified in the 2003 SEIR.

### **Mitigation Measures**

No mitigation is required.

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## Impact 4.11-c: Demand for Wastewater Treatment Capacity during Phase 1a and Phase 1

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The 2003 SEIR determined that implementation of Phase 1a and Phase 1 would create a demand for wastewater treatment that could not be met by existing City facilities. In order to accommodate the increased demand for wastewater treatment associated with project implementation, additional facilities would need to be constructed. Because this impact is specific to Phase 1a and Phase 1, the proposed Phase 2 modifications would not affect wastewater treatment capacity for earlier phases. Therefore, there would be **no impact** related to wastewater treatment capacity for Phase 1a and Phase 1.

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Impact 4.11-c of the 2003 SEIR evaluated the potential for increased demand for wastewater treatment capacity during Phase 1a and Phase 1. The analysis noted that the project would generate an estimated 269,320 gpd (0.27 mgd) of wastewater during Phase 1a and 1,588,508 gpd (1.59 mgd) during Phase 1. This would represent approximately 36 percent and 210 percent, respectively, of the 0.76 mgd of wastewater treated by the City's municipal wastewater treatment system at that time, which would substantially exceed the then-current 100,000 gpd of wastewater capacity at WRP #1. The 2003 SEIR noted that WRP #1 had inadequate treatment capacity to serve development under Phase 1a or Phase 1. This impact was concluded to be significant, but implementation of Adopted Mitigation Measure 4.11-c would reduce this impact to a less-than-significant level. Adopted Mitigation Measure 4.11-c requires that adequate wastewater treatment capacity and tertiary treatment to Title 22 standards for unrestricted use be established prior to development of individual developments included in Phase 1a and Phase 1.

Because this impact is specific to Phase 1a and Phase 1, the proposed Phase 2 modifications would not affect wastewater treatment capacity for earlier phases. Therefore, there would be **no impact** related to wastewater treatment capacity during Phase 1a or Phase 1.

### Mitigation Measures

No mitigation is required.

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## Impact 4.11-d: Demand for Wastewater Treatment Capacity for Phase 2

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The 2003 SEIR determined that inadequate wastewater treatment capacity existed to serve the Phase 2 Project. Expansion of existing facilities or development of new facilities would be required for adequate treatment capacity at buildout. The proposed Phase 2 modifications would not result in an increased need for wastewater treatment capacity; therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant**, as identified in the 2003 SEIR.

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Impact 4.11-d of the 2003 SEIR evaluated whether there would be sufficient wastewater treatment capacity to serve the wastewater that would be generated by development of Phase 2. The analysis noted that the River Islands Project would generate an estimated 3,647,036 gpd (3.65 mgd) of wastewater at buildout, inclusive of Phase 2. Because there would be insufficient wastewater treatment capacity, this impact was determined to be significant. Implementation of Mitigation Measure 4.11-d would reduce impacts to a less-than-significant level by requiring that adequate wastewater treatment capacity and tertiary treatment to Title 22 standards for unrestricted use be established prior to development of Phase 2 elements.

The proposed Phase 2 modifications would increase the number of residential units and the density of residential development and add a mixed-use village center within the original boundaries of the Phase 2 area. The sewer technical report prepared for the modified Phase 2 Project calculated total wastewater flows for both Phase 1 and Phase 2 to be 3,014,719 gpd (3.01 mgd) (PACE 2020a:12). Thus, while the proposed Phase 2 modifications would increase the number of dwelling units and residential density, overall wastewater generated would be slightly less than anticipated in the 2003 SEIR. This is due in part to more stringent residential water conservation measures in current building codes than those in place in 2003. Wastewater from River Islands would be conveyed to the LCTF, which is currently capable of treating 2.5 mgd and is permitted for a maximum capacity of 6 mgd with additional expansions (City of Lathrop 2019b:3.9). The City's Wastewater Master Plan (WWMP) estimates that River Islands would generate an estimated 2,370,677 gpd (2.37 mgpd) of wastewater at full buildout (City of Lathrop 2019b:Table 4-5).

The WWMP projects an estimated 5,009,881 gpd (5.01 mgd) of wastewater would be conveyed to the LCTP from all sources at buildout conditions (City of Lathrop 2019b:Table 4-5). The difference between the estimated River Islands wastewater flows in the WWMP and the calculated flows in the sewer technical report is approximately 640,000 gpd (0.64 mgd). Because the LCTP has a maximum permitted capacity with expansion of 6 mgd and projected flows would be 5.01 mgd, there appears to be sufficient capacity for the additional wastewater flow that would be generated by the proposed Phase 2 modifications. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, because current capacity is insufficient to accommodate wastewater flows from buildout of the modified Phase 2 Project, this would remain a **significant** impact as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

#### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.11-d would reduce impacts by requiring that adequate wastewater treatment capacity be established prior to development of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact related to wastewater treatment capacity, consistent with the impact conclusion in the 2003 SEIR.

### Impact 4.11-e: Environmental Impacts Associated with the Expansion of WRP # 1 and Construction of WRPs #2 and #3

The 2003 SEIR determined that the expansion of WRP #1, construction of WRPs #2 and #3, and the potential discharges of treated wastewater to the San Joaquin River during later expansion phases could contribute to significant geotechnical, groundwater, flooding, air, odor, noise, land use, aesthetics/views, terrestrial biology, cultural resources, and emergency response impacts. Several potential impacts would be reduced to less-than-significant levels through implementation of mitigation measures, with the exception of odor and cumulative surface water quality and fisheries impacts. Since the 2003 SEIR, the LCTP (formerly WRP #1) has been completed and has adequate capacity to treat wastewater from the River Island development. The modified Phase 2 Project would not require construction of the WRPs #2 and #3 because the LCTP has sufficient capacity to serve the entirety of River Islands. The proposed Phase 2 modifications would not require additional expansion of wastewater treatment facilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant**, as identified in the 2003 SEIR.

Impact 4.11-e of the 2003 SEIR evaluated impacts associated with the expansion of WRP #1 and construction of WRPs #2 and #3. The analysis noted that impacts related to geology, flooding, water quality, air quality, noise, land use compatibility, aesthetics, biological resources, cultural resources, hazards, and utilities would be significant. While most impacts could be mitigated to a less-than-significant level, these wastewater recycling plant projects would result in significant and unavoidable odor impacts and cumulative surface water quality and fisheries impacts. The analysis noted that if efforts to improve water quality in the river are successful, this impact may no longer be significant.

The LCTF, formerly known as WRP #1, is the primary wastewater treatment plant that serves the River Island Development (RID) Area. The City completed most improvements to the LCTF discussed in the 2003 SEIR, excluding expansions that would facilitate additional wastewater treatment capacity of 6 mgd. The Integrated Water Resources

Master Plan EIR evaluated the expansion of the LCTF to reach maximum capacity, of which the City's WWMP is one component. The proposed Phase 2 modifications would not require additional expansion of wastewater treatment facilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant**, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.11-f: Demand for Recycled Water Storage and Disposal Capacity during Phase 1a and Phase 1

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The 2003 SEIR determined that implementation of the project would result in increased demand for recycled water storage and disposal areas during Phase 1a and Phase 1. However, adequate storage and disposal areas are available to accommodate the quantity of treated wastewater to be generated by the project during Phase 1a and 1. Because this impact is specific to Phase 1a and Phase 1, the proposed Phase 2 modifications would not affect wastewater treatment capacity for earlier phases. Therefore, there would be **no impact** related to wastewater treatment capacity for Phase 1a and Phase 1.

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Impact 4.11-f of the 2003 SEIR evaluated the project's demand for recycled water storage and disposal capacity during Phase 1a and Phase 1. The analysis noted that wastewater generated during Phase 1a and 1 would be conveyed to WRP #1 via wastewater pipelines and treated at WRP #1. Recycled water generated by this wastewater would be disposed of at facilities associated with WRP #1 as well as returned to the project site via recycled water pipelines for disposal. Because sufficient treated wastewater storage and disposal capacity would be provided on the project site and associated with WRP #1 to dispose of the treated wastewater generated by the project during Phase 1a and Phase 1, this impact was concluded to be less than significant, and no mitigation was required.

Because this impact is specific to Phase 1a and Phase 1, the proposed Phase 2 modifications would not affect wastewater treatment capacity for earlier phases. Therefore, there would be **no impact** related to recycled water storage and disposal capacity during Phase 1a or Phase 1.

### Mitigation Measures

No mitigation is required.

### Impact 4.11-g: Demand for Recycled Water Storage and Disposal Capacity for Phase 2

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The 2003 SEIR determined that the Phase 2 Project would result in an incremental increase in project-generated recycled water and that the project site would not have sufficient area to dispose of additional recycled water. Further, no offsite land disposal sites had been identified at that time. Although additional recycled water storage and disposal sites have been approved and constructed since the 2003 SEIR, sufficient existing offsite recycled water disposal capacity may still not be available and there would not be sufficient capacity on the project site. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.11-g of the 2003 SEIR evaluated the project's demand for recycled water storage and disposal capacity during Phase 2. The analysis noted that during development of Phase 2, wastewater generation would increase while the available onsite storage and disposal area would be decreased as a result of operation of Phase 1a and Phase 1. Though storage ponds and agricultural lands in the Phase 2 area would be replaced with development, thus reducing the onsite disposal area, agricultural lands in Paradise Cut would continue to be available for irrigation with recycled water, providing up to approximately 450 acres of disposal area. However, the 2003 SEIR noted that a water balance study had not been conducted to determine whether there would be sufficient area available, and therefore, offsite recycled water disposal and/or river discharge facilities and infrastructure would need to be constructed for Phase 2.

Implementation of Mitigation Measure 4.11-g would reduce this impact to a less-than-significant level. Mitigation Measure 4.11-g requires appropriate water storage and disposal capacity be established prior to buildout of Phase 2.

As noted in Impact 4.11-d above, the sewer technical report prepared for the modified Phase 2 Project calculated total wastewater flows for both Phase 1 and Phase 2 to be 3,014,719 gpd (3.01 mgd) (PACE 2020a:12) compared to the 3.65 mgd estimated in the 2003 SEIR. Thus, while the proposed Phase 2 modifications would increase the number and density of dwelling units, overall wastewater generated would be roughly 0.6 mgd, or approximately 16 percent less than anticipated in the 2003 SEIR. With less wastewater generated, there would be a resulting decrease in recycled water generation and demand for recycled water storage and disposal. The approximately 450 acres of recycled water disposal area in agricultural fields in Paradise Cut remain available. As described above in Section 4.11.2, "Environmental Setting," approximately 65 acres of recycled water storage ponds and 20 acres of designated agricultural spray fields for recycled water disposal immediately southeast of the River Islands Project site were approved by the City in 2014 (City of Lathrop 2014). These facilities assist in fulfilling River Islands Project requirements for offsite recycled water storage and disposal facilities identified in the 2003 SEIR. A portion of the ponds have been constructed and the entire spray field area is in operation.

Although the anticipated demand for recycled water storage and disposal as decreased, and the available offsite storage and disposal facilities have increased, to continue to ensure that sufficient recycled water storage and disposal is available to support project buildout the project would implement Adopted Mitigation Measure 4.11-g.

Beyond project specific activities, as part of its Integrated Water Resources Master Plan (IWRMP), the City adopted its Recycled Water System Master Plan (RWSMP) which assumes buildout of the River Islands project in 2040 (City of Lathrop 2019c). The RWSMP noted that the City will begin using recycled water for landscape irrigation in River Islands during Phase 2a of the planned recycled water system expansion (City of Lathrop 2019c:4-4). While some improvements identified to occur during Phase 2a of the recycled water system expansion have been completed, there are additional improvements in this phase that have not yet been completed (City of Lathrop 2019c:ES-2). While completion of improvements identified in the City's RWSMP would provide storage and disposal capacity for recycled water, current capacity may not be sufficient to accommodate the recycled water generated by the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.11-g requires appropriate storage and disposal capacity be available prior to development of the modified Phase 2 Project elements that would generate increased recycled water. Adopted

Mitigation Measure 4.11-g also provides an option for additional disposal capacity through land disposal or discharge to the San Joaquin River. If selected, development shall not commence until river discharges of recycled water are permitted for expanded and/or new WRPs under the Master Plan. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Either option of Adopted Mitigation Measure 4.11-g would reduce impacts to a **less-than-significant** level by requiring appropriate water storage and disposal capacity be established prior to buildout of the modified Phase 2 Project.

### **Impact 4.11-h: Stormwater/Surface Runoff Management**

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The 2003 SEIR determined that project would generate substantial amounts of stormwater/surface runoff through the development of roughly 2,900 acres of impervious surfaces. However, the project includes BMPs and elements to manage, store, and clean stormwater runoff and provide onsite stormwater storage and discharge capabilities. The proposed Phase 2 modifications will also provide sufficient stormwater management capabilities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.11-h of the 2003 SEIR evaluated the project's impacts related stormwater and surface runoff management. The analysis noted that the project would introduce approximately 2,900 acres of impervious surfaces and would include an extensive system of parks and paseos, created wetlands, and the central lake; as well as other water management BMPs; to manage, store, and clean stormwater runoff. The 2003 SEIR confirmed the adequacy of the proposed stormwater management system to meet project requirements. Because the project's planned stormwater system was determined to be sufficient in managing storm- and surface water runoff, this impact was concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would increase the number of residential units, the density, and add a mixed-use town center within the original boundaries of the Phase 2 area. Providing additional housing and town center land uses would not increase the project footprint, but changes in development could allow for a higher percentage of impervious surface and, therefore, increased runoff. The modified Phase 2 Project does not alter the inclusion of BMPs in the Phase 2 area including grassy swales, detention ponds, and wetlands to treat stormwater runoff as it moves throughout the site. Design, construction and operation parameters of the interior lakes, including size and volume relative to stormwater inputs, would remain the same under the modified Phase 2 Project as those effectively implemented in the Phase 1 area (see Chapter 3, "Description of the Proposed Project," for more details). The approximately 195 acres of lakes in the Phase 2 area, and onsite wetlands and BMPs would be adequate to manage and treat stormwater runoff attributed to Phase 2 modifications. The River Islands interior lakes are an integrated system with all lakes to be connected by underground pipes. The first Phase 1 lakes were constructed with these connections and subsequent lakes, as they have been added, have been connected to the overall system. Monitoring of lake levels has shown adequate management of stormwater volumes. Water quality monitoring has shown total dissolved solids and other water quality parameters in the lake system meeting or exceeding those identified in the 2003 SEIR (ENGEO 2020). Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue as anticipated (PACE 2020). With evidence showing that the lake system will continue to adequately manage stormwater generated under the modified Phase 2 Project, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### **Mitigation Measures**

No mitigation is required.



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## Impact 4.11-i: Demand for Electricity and Natural Gas at Buildout

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The 2003 SEIR determined that the project would generate an increase in the demand for electricity and natural gas, but that PG&E would be able to provide electricity and natural gas to the project and the increase in demand for electricity and natural gas would not be substantial in relation to the existing electricity and natural gas consumption in PG&E's service area. An evaluation of the electricity and natural demand of the River Islands Project with the proposed Phase 2 modifications concluded that LID and PG&E would be able to serve full development of the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant** as identified in the 2003 SEIR.

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Impact 4.11-i of the 2003 SEIR evaluated the project's demand for electricity and natural gas at buildout. The analysis calculated that the River Islands project would result in an increased electricity and natural gas demand of approximately 1,310,000 kilowatt hours per day (kWh/day) and 32,576 cubic feet (cf) per day, respectively. The 2003 SEIR identified that PG&E has acknowledged that it has adequate electricity and natural gas supplies to support the project without affecting service to current users. Therefore, the project's potential impacts on existing electricity and natural gas were concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would increase the density of residential development and add a mixed-use village center within the original boundaries of the Phase 2 area. Electricity would be provided by the LID, which was established in 2002 and began serving customers in April 2013. An evaluation of the electricity demand of the project and LID's ability to meet the demand was completed by Power Systems Design (PSD) in July 2020. The evaluation assumed 15,010 residential units and 5,381,022 square feet of aggregate office, commercial, and retail space, which results in an estimated demand of 83 mega-volt ampere (MVA). The evaluation concluded that the electric distribution system capability is adequate for project assumptions and that the 115kV line constructed 2015 has a capacity of 112 MVA (PSD 2020). Thus, existing electricity infrastructure would be sufficient to support the proposed ultimate build out of the River Islands project. The PSD evaluation also calculated a project natural gas demand of 633,000 cubic feet (633 thousand cubic feet per hour [Mcfh]) and concluded that the natural gas distribution system would be sufficient to serve the project (PSD 2020). Additionally, the proposed electrical and natural gas utility improvements would be required to comply with all existing City, PG&E, and applicable Building Code requirements, it is anticipated that the proposed electricity and natural gas utility improvements would be sufficient to serve the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of the roughly 2.7 miles of roadway would not change the analysis of the modified Phase 2 Project. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The Paradise Road expansion is a road widening project that would not require the construction of any residences and would, therefore, not increase the population in the area such that the demand for potable water (Impacts 4.11-a); the development of city wells (Impact 4.11-b); the demand for wastewater treatment capacity (Impacts 4.11-c, 4.11-d, and 4.11-e); the demand for recycled water storage and disposal areas (Impact 4.11-f); the increase in project-generated recycled water (Impact 4.11-g); or the demand for electricity and natural gas (Impact 4.11-i) would be adversely affected. Therefore, no impacts related to these issues would occur.

Similar to the modified Phase 2 Project, the widening and improvement of Paradise Road would increase the amount of impervious surface, which would increase runoff volumes (Impact 4.11-h). However, the impervious surface of the road would be increased from the existing 60-foot wide to 84-foot wide; the stormwater runoff flow is not anticipated to increase substantially from the narrow linear feature. Stormwater runoff from the existing Paradise Road flows into adjacent culverts; the design of the widened roadway and new culverts would be required to comply with the San Joaquin County Public Works Improvement Standards (San Joaquin County 2016). Figure R-3 shows the cross-section of the road design and Criteria 3-4.07 requires that culverts be designed to pass the peak flow from the 10-year storm without damage to the roadway. The impact would remain less than significant.

None of the mitigation measures identified above for the modified Phase 2 Project would be required for the Paradise Road widening and improvement. These include Adopted Mitigation Measure 4.11-a, Demand for Potable Water at Buildout; Adopted Mitigation Measure 4.11-d, Demand for Wastewater Treatment Capacity for Phase 2; and Adopted Mitigation Measure 4.11-g, Demand for Recycled Water Storage and Disposal Capacity for Phase 2. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.

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## 4.12 RECREATION

This section describes the existing recreational facilities in the City of Lathrop and the region and evaluates the potential impacts of the modified Phase 2 Project on these facilities. This section also evaluates the adequacy of the recreational facilities included as part of the project in meeting the demand generated by the proposed development.

Section 4.12, "Recreation," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to recreational resources in the City of Lathrop and the region. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information available. The 2003 SEIR concluded that there would be beneficial impacts related to demand for neighborhood and community parks (Impact 4.12-a) and consistency with the General Plan's open space requirements (Impact 4.12-c), and a less-than-significant impact related to reduced recreational boating opportunities (Impact 4.12-b). No mitigation measures were required.

### 4.12.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws related to recreation are applicable to the modified Phase 2 Project.

#### STATE

##### The Quimby Act

The Quimby Act (California Government Code Section 66477) preserves open space and parkland in urbanizing areas of the state by authorizing local governments to establish ordinances requiring developers of new subdivisions to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan recreation element if it is to adopt a parkland dedication/fee ordinance.

The City of Lathrop has collected Quimby Act fees since its incorporation in 1989. Before 1989, the County collected Quimby Act fees in the area and turned these funds over to the City when it was incorporated. These fees contribute to a fund that would be used to acquire properties for parkland. The City would continue to collect fees to meet the General Plan parkland requirement.

The General Plan states that in determining the amount of land dedication, land development, and/or in-lieu fee required of a developer, the requirement shall not exceed a combined standard of 5 acres per 1,000 City residents for neighborhood and community parkland.

#### LOCAL

##### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Resource Management Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

- ▶ **Policy 1:** It is the policy of the City and the School District, functioning under a joint powers or other appropriate written agreement, to provide the quantity and quality of recreation opportunity necessary for individual enjoyment and to assure the physical, cultural, and spiritual benefit of recreation for all people of the community. *[This policy originally applied to the Manteca Unified School District and may be applicable to areas served by other school districts within the city.]*

- ▶ **Policy 4:** The range of recreation opportunities ... will be provided through the development of general and specialized areas and facilities at the neighborhood and community level throughout the urban area.
- ▶ **Policy 7:** The City will encourage and, where appropriate, require the provision of recreation areas and facilities within residential areas and the community as a whole to meet the general and specialized needs of existing and future residents. The Recreation component of the Resource Management Element of the General Plan is intended to meet the criteria and standards required by the State Subdivision Map Act and by the Quimby Act for determining financial responsibilities of developers in meeting recreation needs of the community.

The General Plan identifies neighborhood parks, community parks, and landscaped open space corridors (described below) as the three types of parkland that would fulfill the active and passive recreation needs of the community as described in the recreation policies. In addition to identifying these types of parkland, the General Plan recommends the provision of specialized recreational facilities, such as a senior citizen center, a public golf course, and an auditorium or theater and/or shared facilities with public schools as appropriate.

### **Neighborhood Parks**

A neighborhood park is intended to serve the same area as an elementary school; thus, a neighborhood park is ideally created in conjunction with an elementary school. Where a neighborhood park would not be developed adjacent to a school, the park should occupy an area of generally between 3 and 5 acres, either free standing or in conjunction with drainage basin sites. A neighborhood park should generally be within 1/3 to 1/2 mile of all residences to be served by the park.

### **Community Parks**

Community parks are designed to serve the community at large and may be developed in conjunction with high school facilities and/or specialized facilities. Ideally, all the community parks should be connected by open space corridors. Community parks may include or be adjacent to a sports stadium or public golf course, athletic fields, other sports facilities, family picnic areas, lawn areas, off-street parking, an auditorium or theater, a center for the elderly, or a center for teenagers.

### **Landscaped Open Space Corridors**

A landscaped open space corridor would serve as a linkage between school and park sites, trails, shopping areas, a civic center or cultural center, and other important activity centers in the community. The landscaped open space corridor may be a pedestrian walkway separate from auto traffic, a combined vehicle and pedestrian parkway, a buffer zone between residential and commercial or industrial areas, or a linear park that may connect with other components of the park and recreation system. Communitywide landscaped open space corridors would be publicly owned and maintained. Local facilities may be either publicly or privately owned and maintained.

The General Plan states that a landscaped open space corridor along the San Joaquin River would function as a communitywide open space corridor that may eventually link to regional facilities to the north. A recreation and open space corridor around the perimeter of Stewart Tract is also called for in the General Plan. The San Joaquin River levee system in the Phase 1 Project contains an open space corridor and trail that meets this purpose.

## **City Standards for Provision of Recreation Areas**

The General Plan includes the following standards for the provision of neighborhood and community parkland:

- ▶ 2 acres of neighborhood parkland per 1,000 City residents, and
- ▶ 3 acres of community parkland per 1,000 City residents.

The City has no standards for the provision of a landscaped open space corridor on a per capita basis. However, the General Plan has designated the location of the landscaped open space corridor described above.

## **City of Lathrop Municipal Code**

The Lathrop Municipal Code contains ordinances regulating park fees within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund

improvements to the City's infrastructure. Chapter 12.20 allows the city council to authorize the adoption of fees for recreation programs and for the use of park facilities for non-city functions, and provides other provisions related to parks within the City of Lathrop.

### City of Lathrop Parks and Recreation 2021 Master Plan

The City of Lathrop is in the process of developing the City's first Parks and Recreation Master Plan. The Master Plan will include goals, policies, guidelines, and strategies for ensuring an appropriate balance of facilities, services, and amenities throughout the community now and into the future. The Draft Master Plan was released for public review and comment in December 2020 and is anticipated to be adopted in February 2021.

### City of Lathrop Bicycle Transportation Plan

The *City of Lathrop Bicycle Transportation Plan* (1995) is a long-range plan for a comprehensive bikeway system in the City. This plan was developed in coordination with the San Joaquin County Regional Bicycle Master Plan, the City's General Plan, and the WLSP. The City of Lathrop Bicycle Transportation Plan includes goals, policies, and programs and provides direction for the development of new bikeways in the City. Bikeways are proposed in the plan that would serve the entire City, including those portions on Stewart Tract encompassing the River Islands project site. Planned City bike trails would also connect to a regional bike trail system proposed by San Joaquin County linking Lathrop, Stockton, French Camp, Manteca, and Tracy (City of Lathrop 1995).

## 4.12.2 Environmental Setting

The environmental setting provided on pages 4.12-4 and 4.12-5 of the 2003 SEIR is relevant to understanding the potential recreation impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

### CITY OF LATHROP PARKS AND RECREATION FACILITIES

The City operates a growing parks system that currently consists of 18 park and recreation facilities totaling approximately 90 acres (Jones, pers. comm., 2020; City of Lathrop 2019). The City's two community parks include Mossdale Community Park (20.1 acres) and Valverde Park (11 acres).

The City also operates other types of recreational facilities, including a community center (Lathrop Community Center at 15557 5th Street) and two senior centers (Lathrop Generations Center at 450 Spartan Way and Lathrop Senior Center at 15707 5th Street).

On the basis of the City's General Plan standards, the City has a deficit of 33 acres of parks (Table 4.12-1). In 2014, the City committed to the development of a full-service Parks and Recreation Department, which has resulted in the need to develop a Parks and Recreation Master Plan (described above). Over the next five years, the City anticipates the construction of a number of new parks and recreation facilities and the re-design of existing facilities, as well as the approval and development of additional residential units and a substantial growth in population (City of Lathrop 2019).

**Table 4.12-1 Standards for Provision of Parkland**

Park Type	Existing Park Acreage <sup>1</sup>	Existing Population <sup>2</sup>	General Plan Standard <sup>3</sup>	Park Acreage to Meet General Plan Standards <sup>4</sup>	Existing Surplus or Deficiency (acres)
Neighborhood Park	52.9	23,284	2 acres per 1,000 people	47	5.9
Community Park	31.1	23,284	3 acres per 1,000 people	70	-38.9
Total	84	--	--	117	-33

<sup>1</sup> Source: Jones, pers. comm., 2020; City of Lathrop 2019

<sup>2</sup> Source: U.S. Census Bureau 2020

<sup>3</sup> Source: City of Lathrop 2004

<sup>4</sup> Based on population rounded to the nearest thousand.

## REGIONAL RECREATIONAL OPPORTUNITIES

The City of Lathrop is located in the Sacramento-San Joaquin River Delta, which has nearly 1,000 miles of navigable channels. As such, recreation in the project vicinity is generally water oriented, primarily consisting of boating and fishing. Other common activities include waterskiing, wakeboarding, sailing, operating personal watercraft (e.g., jet skis), houseboating, fishing, swimming, boat camping, and windsurfing. Land-based recreational activities in the Delta include hunting, camping, picnicking, walking, bicycling, viewing and photographing wildlife, sightseeing, and attending festivals and special events.

The existing recreational opportunities in the project vicinity primarily involve the use of the San Joaquin River and Old River. Except for areas near marinas and other boat access points, segments of these rivers in the project vicinity provide boating opportunities that are not limited by speed restrictions. Boat access to these waterways nearest the project site is provided by two public and two private marinas (described below). Shore fishing is also popular in the project area along the rivers, as well as the Paradise Cut channels.

San Joaquin County operates two recreational facilities in the vicinity of the project site: the 8.93-acre Dos Reis Regional Park and the 4.05-acre Mossdale Crossing Regional Park, both located along the San Joaquin River (City of Lathrop 2019). Each of these parks includes boat launch ramps, picnic/barbeque areas, and children's play areas. Dos Reis Regional Park also has camping facilities.

Two private marinas are located in the vicinity of the project site. The Mossdale Marina is a private houseboat marina with 32 boat berths on the west side of the San Joaquin River near the Manthey Road Bridge. The Haven Acres Marina, a private marina, is located on the San Joaquin River north of Dos Reis Regional Park. This facility provides river access to the San Joaquin River and includes parking areas, a boat ramp, and 10 boat berths (City of Lathrop 2019).

An existing bike trail passes near the project site, connecting the City of Lathrop to a regional bike trail that parallels Interstate 205 (I-205). The bike trail begins in East Lathrop at Howland Road near State Route 120 (SR 120), passes under SR 120 and I-5, crosses over the Manthey Road Bridge onto Stewart Tract, continues along Manthey Road across Stewart Tract and Paradise Cut, and then parallels I-205. No other identified bike trails or routes cross the project site, although trails along the levees in the River Islands Phase 1 area are used by bicyclists as well as pedestrians. As stated previously, the Lathrop Bicycle Master Plan envisions a comprehensive bikeway system in the City that would also connect to a regional bike trail system proposed in the San Joaquin County Regional Bicycle Master Plan. The existing bike trail described above would be part of the local and regional system.

### 4.12.3 Environmental Impacts and Mitigation Measures

#### METHODOLOGY

The evaluation of recreational resources is based on a comparison between existing and planned future recreational facilities (including open space) and relevant City of Lathrop General Plan policies to determine whether the existing and proposed facilities would be adequate to meet the demand created by the modified Phase 2 Project. In general, demand for recreational resources was estimated based on General Plan standards for parkland acreage relative to population size. The number of residents on the project site was estimated based on per-dwelling-unit population generation factors provided by the City. Proposed parks and open space included as part of the modified Phase 2 Project are identified in Table 3-3 and Figure 3-5 in Chapter 3, "Description of the Proposed Project," and are the focus of this analysis. This analysis does not address various public and commercial recreational facilities, such as community centers, movie theaters, gymnasiums, and bowling alleys, which can be expected to be developed as part of the River Islands Project (both phases), but that have not been specifically identified at this time. The impact of the modified Phase 2 Project on water-related recreational opportunities in the project vicinity is also evaluated.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR; these thresholds are similar to the current CEQA Guidelines and need not be changed to adequately consider recreational impacts.

The modified Phase 2 Project would cause a significant impact related to recreation if it would:

- ▶ increase demand on existing neighborhood and community parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- ▶ include new recreational facilities, or require the construction or expansion of existing recreational facilities, which might have a substantial adverse physical effect on the environment; or
- ▶ substantially restrict or reduce the availability or quality of existing recreational opportunities in the project vicinity.

## ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussion below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.12-a: Demand for Neighborhood and Community Parks

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The 2003 SEIR evaluated the potential for the River Islands Project to increase demand on existing neighborhood and community parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Residential development proposed for the modified Phase 2 Project would require 160.89 acres of parkland to meet the General Plan standard of 5 acres of parkland (2 acres of neighborhood park and 3 acres of community park) per 1,000 residents. The modified Phase 2 Project would include 162.41 acres of neighborhood and community parks as well as other parkland. As such, the modified Phase 2 Project would create parkland in excess of anticipated demand (by approximately 1.5 acres), thus satisfying and exceeding the General Plan requirements for parkland. The modified Phase 2 Project, therefore, would be expected to alleviate the demand on, and therefore increase availability of, existing parkland in the City of Lathrop. No substantial physical deterioration of existing parkland would result. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **beneficial** as identified in the 2003 SEIR.

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Impact 4.12-a of the 2003 SEIR evaluated the potential for the River Islands Project to increase demand on existing neighborhood and community parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. As identified in the 2003 SEIR, the amount of parkland that would be developed would differ depending on the type of school system implemented, with a traditional school system requiring a larger footprint (thus, providing more parkland because some school acreage would share a dual use as parkland) and a nontraditional school system requiring a smaller footprint (thus, providing less parkland available for dual use). The analysis noted that, with a nontraditional school system, residential development proposed for Phase 1 would require 62 acres of parkland to meet the General Plan standard of 5 acres of parkland per 1,000 residents, and Phase 1 would provide 98.4 acres of parkland. Completion of Phase 2 would increase the total demand to 153.3 acres, and the overall River Islands Project (Phases 1 and 2) would provide 265.3 acres of parkland. As such, development of the River Islands Project with a nontraditional school system would create parkland in excess of anticipated demand. Development of the project with a traditional school system would result in 272.9 or more acres of parkland, which would also exceed demand established by the General Plan standards. In summary, more acres of parkland would be provided with a traditional school system than with a nontraditional school system, but development under either school system would satisfy and exceed the General Plan requirements for parkland. Therefore, the River Islands Project would alleviate the



demand on existing neighborhood and community parks. No substantial physical deterioration of existing parkland would result. This impact was concluded to be beneficial, and no mitigation was required.

Since certification of the 2003 SEIR, there has been a minor redistribution in parkland acreages between the project phases to include 98.6 acres developed in Phase 1 and 166.7 acres to be developed in Phase 2. The total parkland acreage remained unchanged at 265.3 acres.

Table 4.12-2 presents the parkland calculations for the modified Phase 2 Project. The table identifies the amount of parkland that the project is required to provide to meet the Quimby Act and the City’s General Plan standards, the amount of parkland proposed to be developed as part of the modified Phase 2 Project, and the difference between the two. The modified Phase 2 Project would include development of 10,726 dwelling units, which would generate 32,178 new residents based on a project average of 3 persons per house (PPH). On the basis of the City’s General Plan standards of 5 acres of parkland (2 acres of neighborhood park and 3 acres of community park) per 1,000 residents, the new residents in Phase 2 would require 64.36 acres of neighborhood park and 96.53 acres of community park, for a total of 160.89 acres of parkland. The modified Phase 2 Project would include 162.41 acres of neighborhood and community parks. Thus, the modified Phase 2 Project would include neighborhood and community park acreage in excess of anticipated demand (by approximately 1.5 acres), thus satisfying and exceeding the General Plan requirements for parkland. Further, the modified Phase 2 Project includes approximately 68.74 acres of other parkland, including pocket parks, paseos, and linear parks. In the Phase 2 area, neighborhood parks are generally within 1/4 of the residences they serve, meeting or exceeding the General Plan guidance of neighborhood parks being within 1/3 to 1/2 mile of the residences they serve. Compared to the approved Phase 2 calculations presented in the 2003 SEIR, the modified Phase 2 Project would include an additional 65 acres of parkland (or a 38 percent increase).

**Table 4.12-2 Modified Phase 2 Project Parkland Calculations**

	Standard	Requirement	Modified Phase 2 Calculations	Difference
Dwelling Units	—	—	10,726	—
Population	3.0 per dwelling unit	—	32,178	—
Community Parks	3 acres/1,000 people	96.53 acres	96.53 acres	+ 0.00 acre
Neighborhood Parks	2 acres/1,000 people	64.36 acres	65.88 acres	+ 1.52 acre
<b>Subtotal Parks</b>	<b>5 acres/1,000 people</b>	<b>160.89 acres</b>	<b>162.41 acres</b>	<b>+ 1.52 acres</b>
Other Parks	—	—	68.74 acres	—
<b>Total Parks</b>	—	—	<b>231.15 acres</b>	—

Note: Sizes and locations of parks subject to change through Neighborhood Development Plan process and subject to City review and approval.

Source: River Islands 2020 (Table 4-1)

Moreover, the proposed community parks would assist in fulfilling the existing deficit of this park type in the City (see Table 4.12-1, above). This would be expected to reduce demand on, and therefore increase availability of, existing parkland in the City of Lathrop. Although it is likely that River Islands residents would access parks in the City of Lathrop and vice versa, because sufficient park space would be provided and would be conveniently accessed by all River Islands Project residential districts, an imbalance in use between Phase 2 area parks and City parks would be unlikely. No substantial physical deterioration of existing parkland would result.

Construction and operation of parks and recreation facilities could result in physical impacts on the environment, including construction noise, generation of fugitive dust, and increased traffic. The physical impacts on the environment associated with providing recreation facilities in the Phase 2 area are addressed in the resource sections of this SEIR, including Section 4.4, “Traffic and Transportation”; Section 4.5, “Air Quality”; Section 4.6, “Noise and Vibration”; Section 4.8, “Hydrology and Water Quality”; and Section 4.17, “Aesthetics.”

In summary, the amount of proposed parkland in the Phase 2 area would meet City requirements. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, implementing the modified Phase 2 Project would result in a **beneficial** impact as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.12-b: Reduced Recreational Boating Opportunities

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The 2003 SEIR evaluated the potential for the River Islands Project to result in reduced recreational boating opportunities. The approved River Islands Project included the construction of numerous new docks along the San Joaquin River and Old River that would require establishment of new areas with boat speed limits near the project site, thus limiting some recreational boating opportunities (e.g., water skiing). Since certification of the 2003 SEIR, however, docks and boat launch facilities along the exterior waterways have been removed as project features. Therefore, the modified Phase 2 Project would not substantially reduce recreational boating opportunities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.12-b of the 2003 SEIR evaluated the potential for the River Islands Project to result in reduced recreational boating opportunities. The analysis noted that the River Islands Project would increase boating-related recreational opportunities in the project vicinity. The proposed development would substantially increase the number of private and public boat launching facilities and docks, as well as extend and widen the navigable channels in Paradise Cut. Although new watercraft speed restrictions would be required near the proposed docks along the San Joaquin River and Old River, non-speed-restricted use of watercraft would be available elsewhere in the project vicinity, including the Grant Line Canal. Because boat speed restrictions would be instated in a relatively small area of the Delta and new boating-related recreational opportunities would be provided as part of the proposed project, the 2003 SEIR concluded that impacts associated with reductions in available area for waterskiing, wakeboarding, and similar recreational activities would be less than significant, and no mitigation was required.

Although the 2003 SEIR identified docks and boat launch facilities as being part of the project, these elements were removed from the project in subsequent Addenda. As such, the modified Phase 2 Project would not necessitate watercraft speed restrictions that could substantially reduce recreational boating opportunities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.12-c: Consistency with Open Space Designation

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The 2003 SEIR evaluated whether the River Islands Project would be consistent with the General Plan's open space requirements. The General Plan designates a network of landscaped open space corridors on the River Islands Project site. The modified Phase 2 Project includes parks and landscaped parkways in most of these areas and expands the network in other areas (i.e., landscaped areas along the internal lakes and an extensive network of bicycle and pedestrian trails). As such, the modified Phase 2 Project would exceed open space requirements in the General Plan, enhancing the availability of recreational opportunities in the project vicinity. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, this impact would remain **beneficial** as identified in the 2003 SEIR.

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Impact 4.12-c of the 2003 SEIR evaluated whether the River Islands Project would be consistent with the General Plan's open space requirements. The analysis noted that the General Plan designates Paradise Cut and the shoreline of Stewart Tract as open space. Additionally, the major roadways extending from Bradshaw's Crossing bridge to

Paradise Cut are designated as landscaped open space corridors. The River Islands Project was determined to be consistent with the General Plan regarding landscaped open space corridors and would increase the availability of recreational opportunities along the San Joaquin River, along Old River, and in the River Islands development area via the proposed trail system. As such, this impact was concluded to be beneficial, and no mitigation was required.

The approved River Islands Project trail system consists of an interconnected, hierarchical system of trails for pedestrians and bicyclists that provides access to the project neighborhoods and districts. The trail system would connect to existing and planned trails in Lathrop and surrounding areas via pedestrian/bicycle lanes incorporated into project bridges over the San Joaquin River.

The proposed Phase 2 modifications would increase the number of residential units and density of residential development and add a mixed-use village center within the boundaries of the modified Phase 2 Project. Increasing additional housing opportunities, increased density of housing, and additional retail and commercial development would not result in substantial changes to the proposed landscaped open space corridors or the proposed trail system described in the 2003 SEIR. Rather, the modified Phase 2 Project would expand and build upon the approved plans. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. As such, impacts related to project consistency with the General Plan's open space requirements and increased availability of recreational opportunities along the San Joaquin River, along Old River, and in the River Islands development area via the proposed trail system would remain **beneficial** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The Paradise Road expansion is a road widening project that would not require the construction of any residences and would not increase the population in the area. Therefore, use of existing neighborhood and regional parks or other recreational facilities would not change as a result of the road widening and improvement. Because the widening and improvement of Paradise Road would not increase the population in the area, it would not require construction of new parks or recreational facilities or result in the physical deterioration of public recreational facilities. Therefore, no impacts related to these issues would occur. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.

## 4.13 AGRICULTURAL RESOURCES

This section describes existing agricultural resources within the project area and evaluates the modified Phase 2 Project's potential impacts associated with the loss of Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance (collectively, Farmland); and Williamson Act contracted land. The issues of forest land as defined in Public Resources Code (PRC) Section 12220(g) and timberland as defined by PRC Section 4526 are addressed below in the description of "Issues Not Discussed Further" because the area proposed for development contains no forest land or timberland.

Section 4.13, "Agricultural Resources," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to agricultural resources in the City of Lathrop. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information available. The 2003 SEIR concluded that there would be significant impacts related to conversion of Important Farmland (Impact 4.13-a) and Williamson Act contract cancellations (Impact 4.13-b), and a potentially significant impact related to adjacent landowner/user conflicts related to the proximity of agricultural operations and development (Impact 4.13-c). The 2013 SEIR concluded that impacts related to adjacent landowner/user conflicts (Impact 4.13-c) would be reduced to a less-than-significant level with the implementation of Mitigation Measure 4.13-c, which requires phasing of development on agricultural lands, use of buffers, and adherence to the City of Lathrop's Right-to-Farm Ordinance. However, impacts related to conversion of Important Farmland (Impact 4.13-a) and Williamson Act contract cancellations (Impact 4.13-b) were determined to remain significant and unavoidable even after implementation of Mitigation Measures 4.13-a and 4.13-b, which require participation in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which would fund the purchase of agricultural conservation easements.

### 4.13.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws related to agricultural resources are applicable to the project.

#### STATE

##### California Department of Conservation Farmland Mapping and Monitoring Program

Important Farmland in California is classified and mapped according to the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP). Authority for the FMMP comes from Government Code Section 65570(b) and PRC Section 612. Government Code Section 65570(b) requires DOC to collect or acquire information on the amount of land converted to or from agricultural use for every mapped county and to report this information to the legislature. PRC Section 612 requires DOC to prepare, update, and maintain Important Farmland series maps and other soils and land capability information. The classifications in the Important Farmland Inventory System are described below:

- ▶ Prime Farmland: Land that has the best combination of features for the production of agricultural crops
- ▶ Farmland of Statewide Importance: Land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops
- ▶ Unique Farmland: Land of lesser quality soils used for the production of the state's leading agricultural cash crops
- ▶ Farmland of Local Importance: Land that is of importance to the local agricultural economy
- ▶ Grazing Land: Existing vegetation that is suitable to grazing

- ▶ **Confined Animal Agriculture:** Land that includes poultry facilities, feedlots, dairy facilities, and fish farms.
- ▶ **Nonagricultural and Natural Vegetation:** Land that includes heavily wooded, rocky, or barren areas; riparian and wetland areas; grassland areas that do not qualify for grazing land due to their size or land management restrictions; small water bodies; and recreational water ski lakes.
- ▶ **Semi-Agricultural and Rural Commercial Land:** Land that includes farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds.
- ▶ **Vacant or Disturbed Land:** Land that includes open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, off-rad vehicle areas, electrical substations, channelized canals, and rural freeway interchanges.
- ▶ **Rural Residential Land:** Land that includes residential areas of one to five structures per ten acres.
- ▶ **Urban and Built-up Land:** Occupied by structures with a building density of at least one dwelling unit to 1.5 acres.
- ▶ **Water:** Perennial water bodies with an extent of at least 40 acres.

Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are often described together under the term "Important Farmland" or just "Farmland," such as in Appendix G of the CEQA Guidelines, and are considered the type of farmland whose conversion may be considered a significant impact under CEQA.

### **California Land Conservation Act of 1965**

The California Land Conservation Act of 1965, or the Williamson Act, preserves agricultural and open space lands through property tax incentives and voluntary restrictive use contracts. Private landowners voluntarily restrict their land to agricultural and compatible open space uses under minimum 10-year rolling term contracts. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use rather than potential market value.

Cancellation involves an extensive review and approval process, in addition to a payment of fees of up to 12.5 percent of the property value. Under a nonrenewal, a notice is filed by the property owner, after which the 10-year contract expires over time. The nonrenewal allows for tax rates to gradually increase over the remainder of the contract, reaching the market value rate by the end of the term.

### **State Farmland Security Zones**

Farmland Security Zones (FSZs) were established by the DOC with the same intent as Williamson Act contracts. An FSZ must be located in an Agricultural Preserve (area designated as eligible for a Williamson Act contract) and designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Agricultural and open space lands are protected for a minimum of a 20-year term under an FSZ designation and receive an even greater property tax reduction than a Williamson Act valuation. Land protected in an FSZ cannot be annexed by a city or county government or school district (DOC 2020).

An FSZ can be terminated through a nonrenewal or cancellation. The nonrenewal allows for a rollout process to occur over the remainder of the term of the contract, where the tax rates would gradually rise to the full rate by the end of the 20-year term. A cancellation must be applied for and approved by the director of the DOC, and specific criteria must be met. The cancellation must be in the public interest and consistent with the Williamson Act criteria. If a cancellation is approved, a payment of fees equal to 25 percent of the full market value of property must be paid (DOC 2020).

### **Delta Protection Act**

The Delta Protection Commission was created by the Delta Protection Act of 1992 (Act), codified in PRC beginning with section 29700, and amended by SBX7-1 in November 2009. The Act declared that the Delta is a natural resource of statewide, national, and international significance, containing irreplaceable resources, and that it is the policy of the State to recognize, preserve, and protect those resources of the Delta for the use and enjoyment of current and future

generations, in a manner that protects and enhances the unique values of the Delta as an evolving place (PRC Sections 29701-2). The Commission is guided by regulations found in the California Code of Regulations, Title XIV, Division 9.

The Act declared that the Sacramento-San Joaquin Delta, consisting of approximately 738,000 acres, is a natural resource of statewide, national, and international significance, containing irreplaceable resources and that it is the policy of the State to recognize, preserve, and protect those resources for the use and enjoyment of current and future generations.

The Act includes mandates for the designation of primary and secondary zones within the legal Delta and completion of a Land Use and Resource Management Plan for the Primary Zone of the Delta. The entire River Islands Project area, including all of the Stewart Tract, while located in the legal Delta, is designated as part of the Secondary zone, where urban development is allowed by State law. Protections for agriculture and open space lay with the primary zone, which is located north of the project site.

## LOCAL

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

The SJMSCP (SJCOG 2000), provides a strategy for balancing the conservation of open space, the agricultural economy, and the long-term management of special-status plant, fish, and wildlife species. The SJMSCP covers 97 species in 52 vegetative communities throughout San Joaquin County. The plan provides comprehensive mitigation, in compliance with federal and local regulations, for impacts of SJMSCP-permitted activities on these species. The U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife participated in development of the SJMSCP, approved the mitigation, and agreed to issue incidental-take permits for species and activities covered by the SJMSCP. Therefore, participation in the SJMSCP permits activities that result in or may result in incidental take of covered federally listed or state-listed species, as well as other covered nonlisted sensitive species, that may otherwise require a federal or state incidental-take authorization. The SJMSCP aims to minimize potential take by requiring that project proponents implement take avoidance and minimization measures and compensate for incidental take and loss of habitat by paying fees (or making in-lieu land dedications) for conversion of open space. The SJMSCP Joint Powers Authority determines fees to be paid based on the acreage of disturbance by habitat type converted as a result of a given project. The value per acre is adjusted for inflation annually by the SJMSCP Joint Powers Authority and the total amount is paid prior to site preparation activities. These fees are used to preserve and create natural habitats and preserve agricultural lands that are managed in perpetuity through the establishment of habitat preserves. One of the primary goals of the SJMSCP is to preserve productive agricultural land that is compatible with protecting and preserving lands with biological resources and habitat. Participation in the SJMSCP is voluntary for local jurisdictions and project proponents, but participation provides a potential option for streamlining required mitigation and project permitting.

The City of Lathrop is a permittee and has opted for coverage under the SJMSCP for incidental take of covered species associated with future urban growth within the City's service area. As such, it is required to mitigate for the conversion of agricultural habitat lands and natural lands through in-lieu fees, habitat land dedication, purchase of mitigation bank credits, or by proposing an alternative mitigation plan consistent with the goals of the SJMSCP.

Most of the land at the River Islands Project site, including all of the Phase 2 area, is designated as Category C: Ag. Habitat Open Spaces (Pay Zone B [Agricultural]) in the SJMSCP. Under the SJMSCP, the Agricultural Habitat Lands category includes perennial and annual croplands and some ruderal vegetation types (SJCOG 2000:2-12). Agricultural Habitat Lands are found primarily on the County's valley floor and in the Delta. The conversion of Natural Lands and Agricultural Habitat Lands trigger the compensation requirements based on the high plant, fish, or wildlife habitat value of these open space lands to SJMSCP covered species.

Additional details regarding the SJMSCP can be found in Section 4.14, "Terrestrial Biology," of this Draft SEIR.

## City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Resource Management Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

- ▶ **Policy 3:** The protection of agricultural lands outside the three sub-plan areas shall be reinforced by firm policies of the City to not permit the extension of sewerage and water services to such lands.<sup>1</sup>
- ▶ **Policy 4:** The City, the County, and affected landowners should develop a comprehensive approach to the cancellation of Williamson Act contracts on lands needed for early phases of urban development. Projects that are intended to take more than five years to complete shall be phased to allow agricultural operations to continue as long as feasible on lands to be developed after five years.

The General Plan also includes several phasing policies specific to development planned on Stewart Tract, including the following policy that may be applicable to the project:

- ▶ **Policy 3:** All development phasing shall be undertaken to avoid the premature conversion of agricultural land to urban use, and to avoid conflicts with existing farming operations.

## City of Lathrop Right-to-Farm Ordinance

The City of Lathrop Agricultural Land Preservation Ordinance, known as the Right-to-Farm Ordinance, was adopted in 1991 to conserve and protect agricultural land in the City and protect agricultural landowners from nuisance complaints related to cultivation, irrigation, spraying, fertilizing, and other activities related to normal agricultural operations. A disclosure statement is required whenever adjacent property is sold or building permit applications are submitted, notifying the buyer of adjacent agricultural land and possible discomforts related to agricultural operations. The focus of the ordinance is to reduce the loss of agricultural resources in the City by clarifying the circumstances under which agricultural operations may be considered a nuisance.

## 4.13.2 Environmental Setting

The environmental setting provided on pages 4.13-6 through 4.13-9 of the 2003 SEIR is relevant to understanding the potential agricultural impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

### AGRICULTURAL LAND

The River Islands Project site is located on Stewart Tract, an island in the Sacramento-San Joaquin River Delta. In 2001, approximately 88 percent of the River Islands Project site was planted in various types of crops including melons, tomatoes, alfalfa, corn, and safflower; and the remaining approximately 12 percent was considered nonfarmable land consisting of roads, houses, farm structures, channels, and other facilities. As of 2020, agricultural use largely continues on River Islands lands that have not yet been developed with project uses, including Paradise Cut, which supports row crop farming. The Phase 1 Project has been converting agricultural land to urban uses and some agricultural land in the Phase 2 area has been converted to levees as part of previously authorized flood protection improvements.

The Phase 2 area is mostly undeveloped and/or agricultural land. There are a few single-family residences, a horse ranch, and related agriculture-related buildings located in discrete portions of the project site. The Phase 2 area also contains the Central Drainage Ditch, a long agricultural ditch that bisects Stewart Tract, along with a small pond located near Paradise Cut. Flood protection improvements consisting of levees surrounding the Phase 2 area have been completed, consistent with the existing entitlements and 2003 SEIR. Some of the agricultural land in the Phase 2 area is used to dispose of recycled water generated in the City's Water Recycling Plant. These recycled water

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<sup>1</sup> Note: The *City of Lathrop General Plan* divides the General Plan area into three sub-plan areas, one of which (Sub-Plan Area #3) includes Stewart Tract, which is where the River Islands Project is located.

fields are currently planted in alfalfa. Agricultural lands in the Phase 2 area not used for recycled water disposal would be dry farmed with oats or other applicable crop or, when non-potable water sources are available, other irrigated crops until development of project uses.

Of the approximately 2,534 gross acres in the Phase 2 development area, the DOC has designated approximately 2,115 acres as Prime Farmland; roughly 211 acres as Farmland of Statewide Importance; 58 acres as Farmland of Local Importance; 36 acres as Unique Farmland; 14 acres as semi-agricultural and rural commercial land; and 100 acres as non-agricultural or natural vegetation land and vacant or disturbed land (Figure 4.13-1). The DOC mapping is done on a broad scale; therefore, smaller unfarmable features, such as roads, levees, and buildings, are included in the agricultural land designations. In total, the Phase 2 area contains approximately 2,420 acres of Important Farmland, with a portion of this designated acreage consisting of levees, roads, homes, and other non-farmable uses.

In 2016, it was estimated that 615,075 acres of Important Farmland was available in San Joaquin County: 381,634 acres of Prime Farmland, 82,618 acres of Farmland of Statewide Importance, 81,920 acres of Unique Farmland, and 68,903 acres of Farmland of Local Importance (SJCOG 2020). Therefore, the Phase 2 area comprises 0.4 percent (2,420/615,075) of the Important Farmland in the County. Over the past decade, the availability of Important Farmland in San Joaquin County has been consistently declining by small increments from year to year, primarily because of conversions to urban and other developed uses. Table 4.13-1 identifies the acreages of Important Farmland in San Joaquin County calculated by the DOC from 1990 through 2016. It should be noted that declines have been greatest for Prime Farmland and Farmland of Statewide Importance. Designation of new areas as Unique Farmland and Farmland of Local Importance has resulted in net increases for these categories between 1990 and 2016.

**Table 4.13-1 San Joaquin County Land Conversion, 1990-2016**

Year	Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Total Important Farmland
1990	437,859	100,277	46,863	53,145	638,144
1992	436,146	99,566	47,086	53,031	635,829
1994	434,476	99,148	47,206	54,267	635,097
1996	433,134	98,163	48,759	53,479	633,535
1998	429,168	96,795	52,715	53,682	632,360
2000	419,227	93,739	59,118	58,906	630,990
2002	416,307	92,559	61,030	56,506	626,402
2004	412,548	91,225	62,534	57,808	624,115
2006	407,609	89,274	63,232	59,965	620,080
2008	396,964	86,297	66,621	65,788	615,670
2010	385,338	83,308	69,482	76,869	614,997
2012	382,115	82,160	72,053	76,405	612,733
2014	382,877	82,271	76,415	73,429	614,992
2016	381,634	82,618	81,920	68,903	615,075

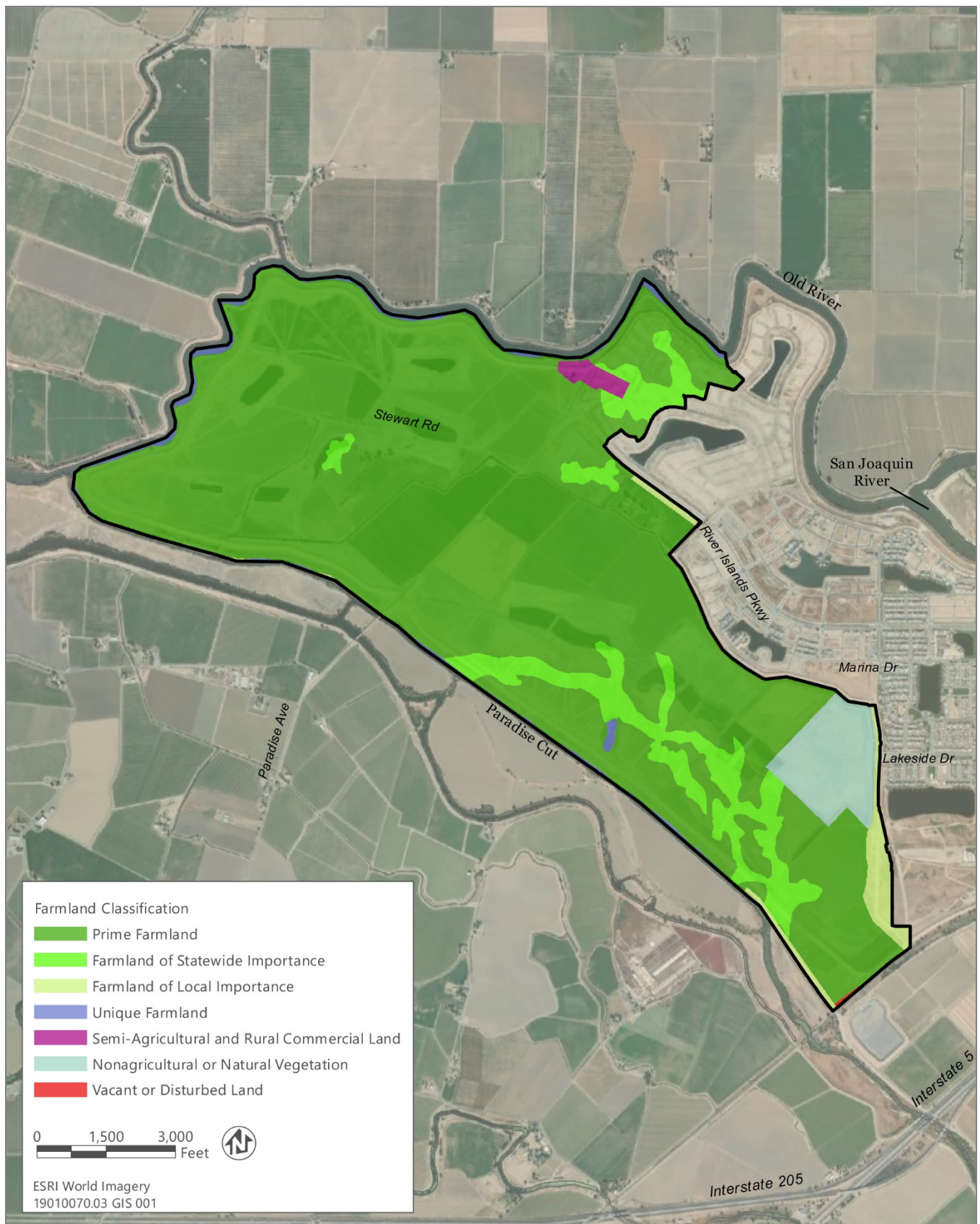
Note: Total Important Farmland = Prime Farmland + Farmland of Statewide Importance + Unique Farmland + Farmland of Local Importance

Source: SJCOG 2020

## Williamson Act Contracts

Although much of the Phase 2 area was under Williamson Act contract at the time of the 2003 SEIR, these contracts have not been renewed. There are no longer any Williamson Act contracts in effect in the Phase 2 area.





Source: Data downloaded from San Joaquin County in 2020 and from FMMP in 2017

Figure 4.13-1 Important Farmland in the Phase 2 Area

## Homesteads and Agricultural Facilities

Lands in the Phase 2 area contain three homesteads, two hay barns, two trailer sites, and a horse boarding area. With the exception of three homes, the remainder of the home sites are temporary field worker residences in various stages of disrepair. Some homes are unoccupied, and some shops are abandoned.

### 4.13.3 Environmental Impacts and Mitigation Measures

#### METHODOLOGY

Evaluation of potential agricultural impacts of the project was based on review of the project description and review of documents pertaining to the project area, including the *City of Lathrop General Plan* and FMMP Important Farmlands data. In determining the level of significance, this analysis assumes that the project would comply with relevant state and local ordinances and regulations, as well as adopted policies of the WLSP.

#### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project and some threshold language has been edited or deleted. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would cause a significant impact related to agricultural resources if it would:

- ▶ result in a conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the ~~CD~~ California Resources Agency, to non-agricultural use;
- ~~▶ cause substantial impairment of the agricultural productivity of Important Farmland;~~
- ▶ cause a conflict with existing zoning for agricultural use;
- ▶ cause a conflict with a Williamson Act contract (this threshold is not clarified in the CEQA Guidelines but is interpreted in this document to mean any action on the land that would not be allowed under an existing Williamson Act contract);
- ▶ conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- ▶ result in the loss of forest land or conversion of forest land to non-forest use;
- ▶ involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use; or
- ▶ result in a conflict between existing agricultural lands and adjacent land uses.

#### ISSUES NOT DISCUSSED FURTHER

As described in the 2003 SEIR, the River Islands Project site does not contain lands in an FSZ; therefore, no impacts would occur relative to this issue. In addition, the River Islands Project would not cause a conflict with existing zoning for agricultural use because the WLSP previously re-designated the zoning of the project site for development. Because these issues were scoped out of the 2003 SEIR and no additional impacts are expected relative to the modified Phase 2 Project, these issues are not discussed further in this SEIR.

The project area does not contain forestland (as defined by PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]). Although there is some riparian habitat in the Paradise Cut Conservation Area, no development is proposed in this portion of the Phase 2 area and the project includes a net increase of riparian habitat in the Paradise Cut Conservation Area as part of habitat restoration/enhancement commitments. There are no adverse impacts to woodlands or forests in the project area and these issues are not discussed further in this SEIR.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.13-a: Conversion of Important Farmland

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The 2003 SEIR evaluated whether the River Islands Project would result in a conversion of Important Farmland to non-agricultural use. Implementation of the River Islands Project as a whole would result in the permanent conversion of approximately 3,620 acres of Prime Farmland and Farmland of Statewide Importance. Because the project footprint has not expanded, implementation of the modified Phase 2 Project would not result in the additional conversion of Important Farmland beyond the project area that was identified and evaluated in the 2003 SEIR. While this SEIR makes a technical correction to the amount of land that would be converted in the Phase 2 area, it does not identify any new areas proposed to be converted; the same land that was identified as being converted in the 2003 SEIR would be converted as a result of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.13-a of the 2003 SEIR evaluated whether the River Islands Project would result in a conversion of Important Farmland to non-agricultural use. The analysis noted that implementation of the River Islands Project would result in the permanent conversion of approximately 3,620 acres of Prime Farmland and Farmland of Statewide Importance. Approximately 43 percent of the conversion (1,555 acres) would be associated with Phase 1, and the remaining 57 percent (approximately 2,065 acres) would be associated with Phase 2. This impact was determined to be significant. Implementation of Mitigation Measure 4.13-a would reduce this impact by requiring the City and applicant to participate in the SJMSCP, resulting in providing funding that would be used, in part, to purchase agricultural conservation easements. However, the establishment of these agricultural conservation easements would not be sufficient to reduce the impact to a less-than-significant level. Therefore, this impact was concluded to be significant and unavoidable.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. Providing additional housing units, increasing density, and developing additional retail and commercial uses would not result in additional land disturbance beyond that assumed in the 2003 SEIR because the development would occur in the same development footprint. As such, implementation of the modified Phase 2 Project would not result in the additional conversion of Important Farmland beyond the project area that was identified and evaluated in the 2003 SEIR. Although the Phase 2 area boundary has not changed compared with what was identified in the 2003 SEIR, this SEIR makes a technical correction to the amount of land that would be converted in the Phase 2 area. As noted above, the 2003 SEIR estimated that approximately 2,065 acres of Important Farmland in the Phase 2 area would be converted by the River Islands Project. Based on current estimates using existing FMMP Important Farmlands data and GIS mapping capabilities, it is estimated that the modified Phase 2 Project would result in the conversion of approximately 2,420 acres of Important Farmland (see Section 4.13.2, "Environmental Setting," above). While this estimate is higher than the estimate provided in the 2003 SEIR (by 355 acres), this difference is due primarily to the 2003 SEIR attempting to adjust for non-farmable acreage (e.g., roads and buildings) and removing this non-farmable acreage from the total Important Farmland. If the same ratio of 88 percent farmland to 12 percent non-farmable land used in the 2003 SEIR is applied to the current data, the net conversion of Important Farmland in the Phase 2 area is reduced to 2,137 acres, which is only 72 acres above the estimate provided in the 2003 SEIR. Regardless, no new areas are proposed to be converted under the modified Phase 2 Project; the same land that was identified as being

converted in the 2003 SEIR would be converted as a result of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

Mitigation Measure 4.13-a is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. The applicant also pays agricultural mitigation fees to the Central Valley Farmland Trust as a result of a settlement agreement; the current fee is \$3,277 per acre urbanized. However, there is no new feasible mitigation available to further reduce impacts related to the conversion of Important Farmland. While this mitigation would require funds be paid to the SJMSCP, a portion of which would be used for preservation of agricultural land, it would not create farmland. Therefore, this impact would remain **significant** as identified in the 2003 SEIR.

### **Modified Mitigation Measure 4.13-a: Conversion of Important Farmland**

*Mitigation Measure 4.13-a shown below includes the original language from the measure as it was adopted, with revisions to reflect the mitigation fees that are being paid to the Central Valley Farmland Trust, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

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 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 Central Valley Farmland Trust partially mitigates conversion by providing funds towards the protection of off-site farmlands. However, ~~Therefore,~~ 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.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.13-a would reduce overall impacts associated with the conversion of Important Farmland, but not sufficiently to reduce the impact to a less-than-significant level because no new farmland would be made available, and the productivity of existing farmland would not be improved. After mitigation, this impact would remain **significant and unavoidable** as identified in the 2003 SEIR.

### **Impact 4.13-b: Williamson Act Contract Cancellations**

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The 2003 SEIR evaluated whether the River Islands Project would cause a conflict with a Williamson Act contract. Implementation of the River Islands Project would result in the cancellation of Williamson Act contracts for at least 415 acres and no more than 1,770 acres in the Phase 1 area. Implementation of the modified Phase 2 Project would not conflict with land under a Williamson Act contract or result in the cancellation of Williamson Act contracts because there are no longer any Williamson Act contracts in effect in the Phase 2 area (since certification of the 2003 SEIR, the Williamson Act contracts in the Phase 2 area were not renewed, and as anticipated, the contracts have since expired). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, there would be **no impact** for the modified Phase 2 Project.

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Impact 4.13-b of the 2003 SEIR evaluated whether the River Islands Project would cause a conflict with a Williamson Act contract. The analysis noted that implementation of the River Islands Project would result in the cancellation of

Williamson Act contracts for at least 415 acres and no more than 1,770 acres in the Phase 1 area. The cancellations were necessary because land uses were proposed that would not be permitted under the existing Williamson Act contracts. No cancellations were anticipated for Phase 2 because the Williamson Act contracts on the land in the Phase 2 area would expire prior to development (after a notice of non-renewal, the contract expires after 10 years). (Since certification of the 2003 SEIR, the Williamson Act contracts in the Phase 2 area were not renewed, and as anticipated, the contracts have since expired.) Because of the Williamson Act contract cancellations required for Phase 1, this impact was determined to be significant in the 2003 SEIR. Implementation of Mitigation Measure 4.13-b would reduce this impact by requiring the City and applicant to participate in the SJMSCP to purchase conservation easements, but not sufficiently to reduce the impact to a less-than-significant level. Therefore, this impact was concluded to be significant and unavoidable.

The proposed Phase 2 modifications would increase the number and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that assumed in the 2003 SEIR. Further, implementation of the modified Phase 2 Project would not conflict with land under a Williamson Act contract or result in the cancellation of Williamson Act contracts because there are no longer any Williamson Act contracts in effect in the Phase 2 area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, there would be **no impact** for the modified Phase 2 Project.

### Mitigation Measures

No mitigation is required.

### Impact 4.13-c: Adjacent Landowner/User Conflicts

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The 2003 SEIR evaluated the potential for the River Islands Project to result in a conflict between existing agricultural lands and adjacent land uses. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same potential for conflicts between project development and agricultural operations would continue during development of the modified Phase 2 Project when the development edge is adjacent to ongoing agricultural operations. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Potential conflicts between onsite agricultural operations and development would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.13-c of the 2003 SEIR evaluated the potential for the River Islands Project to result in a conflict between existing agricultural lands and adjacent land uses. The analysis noted that potential long-term conflicts between River Islands residents and adjacent agricultural operators would be minimal due to the natural buffers of Old River, the San Joaquin River, and the Paradise Cut canal, which separate the proposed development from continuing agricultural operations. The distance between homes on the high-ground corridors and agricultural activities would range from 150 feet to several hundred feet, given the width of the rivers and the Paradise Cut canal and the levees on the opposite side of the rivers. Also, agricultural activities closest to the project perimeter would be directly buffered by the adjacent levees. In the short-term, however, as development of the River Islands Project proceeds, potential conflicts could occur when the development edge is adjacent to ongoing agricultural operations. This impact was determined to be potentially significant. Implementation of Mitigation Measure 4.13-c would reduce this impact by requiring phasing of development on agricultural lands, use of buffers, and adherence to the City of Lathrop's Right-to-Farm Ordinance. Therefore, this impact was concluded to be less-than-significant after mitigation.

As of 2020, agricultural use largely continues on River Islands lands that have not yet been developed with project uses, including Paradise Cut, which supports row crop farming. The Phase 1 Project has been converting agricultural land to urban uses and some agricultural land in the Phase 2 area has been converted to levees as part of previously authorized flood protection improvements. There are a few single-family residences, a horse ranch, and related agriculture-related buildings located in discrete portions of the Phase 2 area. As project development continues, agricultural operations in the Phase 2 area would slowly be replaced by developed land uses.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that assumed in the 2003 SEIR. Nonetheless, the potential for conflicts between project development and agricultural operations would continue during development of the modified Phase 2 Project when the development edge is adjacent to ongoing agricultural operations. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, if appropriate buffers (e.g., fencing, walls, or other suitable barriers such as watercourses) cannot be maintained between development and agricultural operations, conflicts between these two land uses would be **potentially significant** as identified in the 2003 SEIR.

#### **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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

#### **Significance after Mitigation**

Implementation of Adopted Mitigation Measure 4.13-c would reduce impacts associated with potential conflicts at the agriculture/urban interface by requiring phasing of development on agricultural lands, use of buffers, and adherence to the City of Lathrop's Right-to-Farm Ordinance. After mitigation, this impact would be **less than significant** as identified in the 2003 SEIR.

## **PARADISE ROAD WIDENING**

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

As with the Phase 2 area, the widening of Paradise Road would not cause a conflict with existing zoning for agricultural use. Paradise Road and the surrounding area is designated as General Agriculture (A/G) under the *San Joaquin County 2035 General Plan* and is zoned AG-40 (General Agriculture with 40-acre minimum parcel sizes). The A/G designation and zoning do not preclude the expansion of Paradise Road; the 2035 General Plan anticipates improvements to Paradise Road. Figure TM-2 of the 2035 General Plan shows "Planned Roadway Capacity Improvements" and indicates that Paradise Road will be funded by "Traffic Impact Mitigation Fees." Therefore, expansion of the existing road would be consistent with the existing land use and zoning designations and there would be no impact. Similarly, the widening of an existing road does not have the potential to result in a conflict between existing agricultural lands and the roadway (Impact 4.13-c) as a road is compatible with a nearby agricultural land and vice versa; therefore, there would be no impact. In addition, the widening and improvement of an existing roadway would not provide a new facility that would split or segment a property or field.

As with the Phase 2 area, the expansion area is not used or zoned for forestland (as defined by PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]). There are no woodlands or forests in the project area; therefore, there would be no impact.

The expansion of Paradise Road, like the modified Phase 2 Project, would result in the conversion of Important Farmland to a non-agricultural use within the footprint of the development activity (Impact 4.13-a). Although the exact route for the expansion has not been determined, as described in Section 3.5.3, "Offsite Elements," land immediately adjacent to the existing road is primarily classified as Prime Farmland, with small pockets of Rural Residential Land, Semi-Agricultural and Rural Commercial Land, and Confined Animal Agricultural (DOC 2018). For the purposes of this analysis, the widened Paradise Road is assumed to be an 84-foot-wide roadway corridor between Paradise Cut and Canal Boulevard and a 150-foot-wide corridor between Canal Boulevard and I-205. Assuming a 2.7-mile (or 14,256 feet) length of roadway, with approximately 1.9 miles with four lanes and 0.8 mile with six lanes, and considering that a portion of that corridor consists of the existing roadway and other non-agricultural uses, there would be a loss of approximately 28 acres of agricultural land, most of which would likely be Important Farmland. It is assumed that the entity implementing the Paradise Road widening would use the SJMSCP to receive Endangered Species Act authorization for the project; therefore, fees to the SJCOG would be paid on a per-acre basis for lost agricultural land. However, despite this mitigation, this impact would remain significant and unavoidable.

Unlike the modified Phase 2 Project, the expansion of Paradise Road could have the potential to result in the cancellation of Williamson Act contracts (Impact 4.13-b). Many of the parcels adjacent to the road are under Williamson Act Contracts (San Joaquin County 2020). Although the Phase 2 area does not contain lands in an FSZ, one parcel immediately adjacent to the existing road is located in an FSZ (San Joaquin County 2020). FSZs are similar to Williamson Act contracts, but extend the contract time period from 10 to 20 years. However, the conditions of Williamson Act Contracts and FSZs may allow for agricultural lands under the contract to be transferred to public agencies for infrastructure projects. Also, the current County right-of-way for Paradise Road may extend beyond the existing roadway onto a portion of the adjacent agricultural lands, permitting road improvement activities on these lands. Therefore, further site-specific research will be required once a road design is developed to confirm whether or not any Williamson Act or FSZ contracts will need to be cancelled.

Per Modified Mitigation Measure 4.13-b, below, if the entity implementing the Paradise Road widening utilizes this SEIR for CEQA compliance for the project, fees to the SJCOG would be paid on a per-acre basis for lost agricultural land and would be used by SJCOG, in part, to purchase agricultural conservation easements. Despite this mitigation, this impact would remain significant and unavoidable because agricultural lands currently under a Williamson Act contract would likely be converted to a non-agricultural use before the contracts expire, new farmland would not be made available, and the productivity of existing farmland would not be improved.

#### **Modified Mitigation Measure 4.13-b: Williamson Act Contract Cancellations**

*Mitigation Measure 4.13-b shown below includes the original language from the measure as it was adopted, with revisions to apply to the Paradise Road widening. Text deletions are shown in ~~strike through~~ and additional text shown in underline.*

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 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.

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening to support implementation of the road widening would be required to implement all applicable mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Modified Mitigation Measure 4.13-a, Conversion of Important Farmland. This mitigation measure would reduce impacts to agricultural resources, but not to a less-than-significant level because no new farmland would be made available, and the productivity of existing farmland would not be improved. Modified Mitigation Measure 4.13-b, listed above, would not be required for the modified Phase 2 Project, but would be required for the Paradise Road expansion. Adopted Mitigation Measure 4.13-c would not apply to the Paradise Road expansion because the widening and improvement of the road would not result in a conflict between existing agricultural lands and adjacent land uses. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact, but the impact related to Williamson Act contract cancellations (Impact 4.13-b) could be more severe if contract cancellations are ultimately needed.



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## 4.14 TERRESTRIAL BIOLOGY

This section describes existing terrestrial biological resources within the project area and addresses the modified Phase 2 Project's potential impacts on these resources.

Section 4.14, "Terrestrial Biology," of the 2003 SEIR evaluated the potential effects of the River Islands Project related to terrestrial biological resources in the City of Lathrop. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information available.

The 2003 SEIR concluded that the River Islands Project would have the following less-than-significant impacts:

- ▶ Impact 4.14-a: general biological resources;
- ▶ Impact 4.14-g: Aleutian Canada goose and greater sandhill crane;
- ▶ Impact 4.14-i: colonial nesting birds;
- ▶ Impact 4.14-m: snowy egret, American white pelican, double-crested cormorant, and white-faced ibis;
- ▶ Impact 4.14-n: ferruginous hawk; and
- ▶ Impact 4.14-p: special-status bats.

The 2003 SEIR concluded that the River Islands Project would have the following significant or potentially significant impacts:

- ▶ Impact 4.14-b: special-status plants,
- ▶ Impact 4.14-c: valley elderberry longhorn beetle,
- ▶ Impact 4.14-d: giant gartersnake,
- ▶ Impact 4.14-e: western pond turtle,
- ▶ Impact 4.14-f: Swainson's hawk,
- ▶ Impact 4.14-h: burrowing owl,
- ▶ Impact 4.14-j: ground nesting or streamside/lakeside nesting birds,
- ▶ Impact 4.14-k: birds nesting in isolated trees or shrubs outside of riparian habitat,
- ▶ Impact 4.14-l: birds nesting along riparian corridors,
- ▶ Impact 4.14-o: common nesting tree raptors,
- ▶ Impact 4.14-q: riparian brush rabbit,
- ▶ Impact 4.14-r: jurisdictional waters and riparian habitat,
- ▶ Impact 4.14-s: wildlife corridors, and
- ▶ Impact 4.14-t: biological resources associated with offsite facilities.

To reduce these significant and potentially significant impacts to a less-than-significant level, the 2003 SEIR included mitigation measures requiring surveys for sensitive resources and special-status species, enrollment in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (SJCOG 2000a), and implementation of avoidance and minimization measures included in the SHMSCP. Implementation of these mitigation measures was concluded to reduce the potential terrestrial biological impacts of the River Islands Project to less-than-significant levels.

## 4.14.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

### FEDERAL

#### Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), the U.S. Fish and Wildlife Service (USFWS) regulates the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species in any location, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

Two sections of the ESA address incidental take (i.e., take of a species that occurs incidental to an otherwise lawful activity). If a project would result in take of a federally-listed species and federal discretionary action (even if a non-federal agency is the overall lead agency) is involved (i.e., a federal agency must issue a permit), the involved federal agency consults with USFWS under Section 7 of the ESA. Section 10 regulates incidental take if a non-federal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 10 includes two types of permits: 10(a)(1)(A) typically referred to as “recovery” permits; and 10(a)(1)(B) incidental take permits. Take associated with HCPs is addressed through Section 10(a)(1)(B) for take which is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Section 10 requires the issuance of an incidental take permit before any nonfederal action may be taken that would potentially take any individual of an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP), incidental to implementation of the project, which would offset the impact of the taking that may occur by providing for the overall preservation of the affected species through specific mitigation measures. The Project Area is within the plan area of an HCP, the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which is discussed in detail below.

#### Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. Under the MBTA, “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities.” A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

#### Clean Water Act

Section 404 of the Clean Water Act (CWA) requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Many surface waters and wetlands in California meet the criteria for waters of the United States.

In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold state water quality standards.

## STATE

### California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA), a permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could result in the “take” of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species, but does not include “harm” or “harass,” as does the federal definition. As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

### California Fish and Game Code Sections 3503 and 3504.14—Protection of Bird Nests and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3504.14 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

### Fully Protected Species under the California Fish and Game Code

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take.

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Resource management Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

#### Vegetation, Fish and Wildlife Policies

1. The objective of habitat retention calls for:
  - ▶ The integration of waterway habitat areas as part of the area wide system of open space
  - ▶ The preservation of all stands of vegetation along waterways which provide habitat, and achieving a standard of “no net loss of “wetland acreage.”
  - ▶ The protection of fisheries by preventing discharge of contaminated surface waters to waterways.
2. The objective of enhancement calls for:
  - ▶ The improvement of natural habitat along waterways.
  - ▶ The creation of new Habitat within multi-purpose open space area designated for reuse of treated wastewater for wildlife management and recreation.
  - ▶ Cooperative approaches among landowners to manage farmlands so as to increase numbers of desirable species of wildlife.

4. Developments proposed in sensitive biological areas shall be required to provide a site-specific analysis of the impacts of the project on fish and wildlife habitat. Because of the large-scale character of development proposed in the vicinity of biologically sensitive environments, including the conversion of several thousand acres of agricultural land to urban use, project proposals should be made to address ways in which new or enhanced habitat may be created as a trade-off to the general environmental impacts on biological resources associated with development under the General Plan.
5. Land use within areas of riparian habitat shall be restricted to nature-oriented passive recreation, which may include an arboretum, zoological gardens, hiking and nature study, essential linear infrastructure, and other uses compatible with existing or enhanced riparian habitats. Structures, which would reduce the amount of area available for water detention, should be prohibited within the Paradise Cut flood plain unless they are accompanied by concurrent expansion of such detention areas in or adjacent to Paradise Cut.
6. A naturally landscaped corridor shall be provided along the western perimeter of SPA#2, which lies west of Interstate 5. This corridor should be wide enough to serve as a major component of the recreation and open space system, and should provide for a system of pedestrian, bicycle, and equestrian trails where such uses are compatible with riparian habitats, where they exist. This corridor will also assure public access to the San Joaquin River as required by State policy and law and as permitted by RD-17.
7. The visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments but the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams, or similar features, which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites. The multi-purposes use of water bodies for surface water drainage, flood control, wastewater reclamation, wildlife management, recreation and visual amenity is encouraged.

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

The SJMSCP provides a strategy for balancing the desires to conserve open space in San Joaquin County, maintain the agricultural economy, and allow development. It was developed to avoid, minimize, and mitigate impacts on plant and wildlife habitat, projected to occur in San Joaquin County between 2001 and 2051, resulting from conversion of up to 109,302 acres of open space land to non-open space uses (SJCOG 2000a). Ninety-seven species are covered by the SJMSCP, which is intended to provide comprehensive mitigation, pursuant to local, state, and federal regulations, for impacts on these species from SJMSCP-permitted activities. USFWS and CDFW participated in development of the SJMSCP, approved the mitigation, and agreed to issue incidental take permits for species and activities covered by the SJMSCP. Therefore, participation in the SJMSCP permits activities that result in or may result in incidental take of covered state-listed or federally listed species, as well as other covered nonlisted sensitive species, that may otherwise require a federal or state incidental take authorization. The SJMSCP also allows for take under the MBTA of those migratory birds covered by the SJMSCP that are federally listed under the ESA, with the exception of bald and golden eagles. The SJMSCP relies on minimization of potential take through implementation of take avoidance and minimization measures and compensation for incidental take and loss of habitat through payment of fees (or in-lieu land dedication) for conversion of open space lands. These fees shall be used for preservation and creation of natural habitats to be managed in perpetuity through the establishment of habitat preserves. Participation in the SJMSCP is voluntary for local jurisdictions and project proponents. The City of Lathrop adopted the SJMSCP on January 16, 2001 and has signed the implementation agreement. A Section 10 (a)(1)(B) permit was issued by USFWS to the City of Lathrop in 2002. This Section 10 permit also constitutes a special purpose permit for MBTA-covered species. CDFW issued a Section 2081 permit to the City also in 2002. As a result of the City's participation in the SJMSCP and issuance of these permits, project proponents within the City's jurisdiction have the opportunity to seek coverage under the SJMSCP.

## 4.14.2 Environmental Setting

The environmental setting section in the 2003 SEIR described the vegetation, common wildlife, and sensitive resources found within the entire River Islands Development Area (RID Area) including the Phase 2 area. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting within the project area of the Phase 2 modifications rather than the larger RID area.

### VEGETATION AND WILDLIFE

Most of the Phase 2 area consists of agricultural fields with portions of ruderal habitat along agricultural field boundaries, at roadsides, and banks and levees along the Old River. Most plants found in these ruderal areas are nonnative species, including Italian thistle (*Carduus pycnocephalus*), yellow star-thistle (*Centaurea solstitialis*), horseweed (*Conyza canadensis*), milk thistle (*Silybum marianum*), Russian thistle (*Salsola tragus*), knotweed (*Polygonum arenastrum*), ripgut brome (*Bromus diandrus*), and foxtail barley (*Hordeum murinum* ssp. *leporinum*).

Agricultural and ruderal habitats such as those present in the Phase 2 area, generally provide limited value for wildlife species due to high levels of disturbance and low habitat complexity. However, they do provide habitat for a number of common species. Alfalfa often supports small mammals, such as Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), and California meadow vole (*Microtus californicus*). These small mammals are prey for a variety of common raptor species found in the region, including American kestrel (*Falco sparverius*) and red-tailed hawk (*Buteo jamaicensis*). Ruderal habitats in the Phase 2 area are expected to support common mammals, such as western harvest mouse and California meadow vole, and desert cottontail (*Sylvilagus audubonii*). They also provide habitat for common birds, such as white-crowned sparrow (*Zonotrichia leucophrys*), house finch, and American goldfinch (*Carduelis tristis*).

Other vegetation types within the Phase 2 area are found along the banks of agricultural ditches, on the banks of the Old River, within Paradise Cut, at the pond located several hundred feet north Paradise Cut, and within a 5 acre area of riparian habitat long the San Joaquin River. The agricultural ditches are regularly cleared of vegetation to improve water flow, but there are areas that support broad-leaved cattail (*Typha latifolia*) and bulrush (*Scirpus* sp.). The bank of Old River is sparsely vegetated with ruderal species. A small number of scattered riparian shrubs are also present, primarily near the confluence with Middle River. A narrow strip of riparian vegetation also borders the pond located several hundred feet north of Paradise Cut. Vegetation at the pond includes cattail, Goodding's black willow, narrow-leaved willow, and Fremont cottonwood. The railroad track right-of-way adjacent to the southern boundary of the Phase 2 area contains shrubby vegetation, dominated by California wild rose (*Rosa californica*), narrow-leaved willow, and broad-leaved peppergrass (*Lepidium latifolium*), with scattered valley oaks.

Wildlife habitat in agricultural ditches is limited due to regular vegetation clearing and the agricultural and ruderal habitats surrounding the ditches. Common species that may occur along these ditches include, marsh wrens (*Cistothorus palustris*), song sparrows (*Melospiza melodia*), and Pacific tree frog (*Hyla regilla*). Riparian habitat along Paradise Cut provides nesting habitat for a variety of common bird species, including black phoebe (*Sayornis nigricans*), western kingbird (*Tyrannus verticalis*), western scrub-jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), Bewick's wren (*Thryomanes bewickii*), spotted towhee (*Pipilo maculatus*), red-tailed hawk, white-tailed kite (*Elanus leucurus*), and red-shouldered hawk (*Buteo lineatus*). Other wildlife observed during field surveys or expected to occur in riparian habitat in the Phase 2 area include western fence lizard (*Sceloporus occidentalis*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), and opossum (*Didelphis virginiana*).

## SENSITIVE BIOLOGICAL RESOURCES

### Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- ▶ officially listed by California or the federal government as endangered, threatened, or rare;
- ▶ a candidate for state or federal listing as endangered, threatened, or rare;
- ▶ taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- ▶ species identified by CDFW as species of special concern;
- ▶ species listed as Fully Protected under the California Fish and Game Code;
- ▶ species afforded protection under local planning documents including the SJMSCP; and
- ▶ taxa considered by the CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR):
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere; and
  - CRPR 2 - Plants that are rare, threatened, or endangered in California but more common elsewhere.

The term “California species of special concern” is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing, or that historically occurred in low numbers and known threats to their persistence currently exist. CDFW’s fully protected status was California’s first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

The special-status species that could potentially occur within the project area and vicinity were evaluated in the 2003 SEIR. The list of special-status species in the 2003 SEIR was updated by a review of relevant literature and a review of the California Native Plant Society’s Inventory of Rare and Endangered Plants of California (CNPS 2020) and CDFW’s California Natural Diversity Data Base (CNDDDB) (CNDDDB 2020). The CNDDDB is a statewide inventory of the locations and conditions of the State’s rarest plant and animal taxa and vegetation types, was also reviewed for specific information on documented observations of special-status species previously recorded in the project vicinity. The database was queried within the Holt, Stockton West, Stockton East, Union Island, Lathrop, Manteca, Tracy, Vernalis, Ripon, Woodward Island, Clifton Court, Forebay, and Midway U.S. Geological Survey 7.5’ quadrangles surrounding the project area.

### Special-Status Plants

The 2003 SEIR discussed the potential for occurrence of special-status plants within the Phase 2 area. The 2003 SEIR listed eight special-status plants: Suisun marsh aster (*Aster lentus*), slough thistle (*Cirsium crassicaule*), Delta button-celery (*Eryngium racemosum*), woolly rose mallow (*Hibiscus lasiocarpus* var. *occidentalis*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason’s lilaeopsis (*Lilaeopsis masonii*), Sanford’s arrowhead (*Sagittaria sanfordii*), and Wright’s trichocoronis (*Trichocoronis wrightii* var. *wrightii*).

In addition to these eight species, the review of the CNPS (CNPS 2020) and the vegetation within the Phase 2 area indicate that three additional species could occur. The addition of these species is due to an expansion of the database query of the CNPS from the two U.S. quadrangles included in the 2003 SEIR, to the nine-quadrangle search described above that meets current CDFW guidance. These three additional special-status plant species are bristly sedge (*Carex comosa*) (CRPR 2B.1) and marsh skullcap (*Scutellaria galericulata*) (CRPR 2B.2), which could be found in marsh habitats within Paradise Cut and around the pond, and Delta mudwort (*Limosella australis*) (CRPR 2B.1), which could be found within the same marsh habitats and riparian scrub habitat in Paradise Cut.

### **Special-Status Wildlife**

The 2003 SEIR also discussed the potential for occurrence of special-status wildlife within the Phase 2 area. The 2003 SEIR listed twenty-six special-status wildlife species known to occur or have the potential to occur in the Phase 2 area. The review of the CNDDDB for the Project Area and surrounding USGS quadrangles yielded several additional special-status wildlife species with the potential to occur within the Project Area that were not discussed in the 2003 SEIR.

Western bumble bee (*Bombus occidentalis occidentalis*) is a candidate for listing as endangered under the CESA and is documented to occur historically within the project area from a collection made in 1962 (CNDDDB 2020). However, the current range of the species is restricted to outside of the Central Valley (CDFW 2019). Therefore, it is not anticipated that western bumble bees would occur within the project area.

As discussed for special-status plants above, the addition of the American badger (*Taxidea taxus*), a CDFW species of special concern, to the analysis is due to the expanded search area of the CNDDDB implemented to address CDFW guidelines. The riparian scrub habitats within Paradise Cut may provide marginally suitable denning habitat for American badger. However, the distribution of the species in San Joaquin County is limited to natural lands west of Interstate 580 (SJCOG 2000b), and connectivity with suitable habitats in the southwestern part of the county is limited. Therefore, American badger is not considered further in this analysis.

Similarly, pallid bat (*Antrozous pallidus*), a CDFW species of special concern, has also been added to this analysis due to the expanded database search area. Large trees and structures in the project area may be roosting habitat for pallid bats.

Marsh habitats in Paradise Cut and the pond could provide habitat for two additional CDFW species of special concern, short-eared owl (*Asio flammeus*) and yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

Lastly, song sparrow ("Modesto" population) (*Melospiza melodia*) was described in the 2003 SEIR as occurring within agricultural ditches within the Phase 2 area; however, the species was not considered a special-status species in that analysis. Since that time the species has been classified as a CDFW species of special concern and is considered a special-status species for the purpose of this analysis.

### **Sensitive Natural Communities**

As discussed in the 2003 SEIR sensitive riparian vegetation communities and jurisdictional waters occur within the Phase 2 area. Jurisdictional waters within the Phase 2 area include the Old River, which borders the Phase 2 area on the north and west, and open water portions of Paradise Cut. In addition, the pond and agricultural ditch are also jurisdictional. Riparian forest and riparian scrub habitat in the Phase 2 area are located within Paradise Cut.

### **Movement Corridors**

The SJMSCP designates a San Joaquin River Wildlife Corridor from Stewart Tract to the Stanislaus/San Joaquin County border. This corridor includes the portion of the Phase 2 area that borders the San Joaquin River and extends from the river to the top of the levee. However, the development in this area is not proposed under the Phase 2 modifications. SJMSCP-covered development in this corridor would require consultation with the permitting agencies (e.g., CDFW and USFWS) and could require some level of modification to the SJMSCP.



## 4.14.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

This impact evaluation is based on data collected for the 2003 SEIR, review of aerial photographs, review of relevant databases, and information from several previously completed documents that address biological resources in the project vicinity.

### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. These thresholds are similar to the current CEQA Guidelines and need not be changed to adequately consider land use impacts. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would result in significant impacts on terrestrial biological resources if it would:

- ▶ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in any local or regional plans, policies, or regulations, or by CDFW or USFWS;
- ▶ have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a Threatened, Endangered, candidate, sensitive, or special-status species by CDFW, USFWS, ~~or NIMS~~ or in any local or regional plans, policies, or regulations designed to protect biological resources, including the SJMSCP;
- ▶ have a substantial adverse effect on state or federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption or other means;
- ▶ substantially reduce the habitat of a wildlife species, cause a wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community;
- ▶ interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- ▶ conflict with the provisions of the SJMSCP.

### ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussion below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.14-a: General Biological Resources

The 2003 SEIR evaluated the potential conversion of agricultural and ruderal habitats. This impact was determined to be less than significant, because agricultural and ruderal habitats are abundant locally and regionally. These habitats continue to be abundant locally and regionally, and the proposed Phase 2 modifications would not convert additional acres of habitat beyond the area considered in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

Impact 4.14-a in the 2003 SEIR disclosed the impacts that would result to general biological resources through conversion of approximately 3,925 acres of agricultural, ruderal, and previously developed areas, including approximately 2,155 acres proposed for conversion from agricultural, ruderal, and previously developed land to developed area during Phase 2. This impact discussion also included the conversion of an additional 190 acres of

agricultural and ruderal habitats to open water as part of an expansion of Paradise Cut. This impact was determined to be less than significant because the habitats that would be removed are locally and regionally abundant.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing and additional retail and commercial development would not result in additional land disturbance beyond the Phase 2 boundary evaluated in the 2003 SEIR. The proposed Phase 2 modifications would not convert additional acres of habitat beyond the area analyzed in the 2003 SEIR. In addition, agricultural and ruderal habitats continue to be abundant regionally and locally. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on general biological resources, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-b: Special-Status Plants

The 2003 SEIR evaluated the impacts to special-status plants from project implementation and concluded that disturbance to aquatic and riparian habitats could result in impacts to special-status plants should they occur in these areas. The updated CNPS database query conducted for this SEIR yielded three additional special-status plants that may potentially occur in these same aquatic and riparian habitats as those species considered in the 2003 SEIR. The proposed Phase 2 modifications could adversely affect aquatic habitats and riparian habitats where special-status species may occur, but the effects would be the same as those identified in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact to special-status plants would remain **potentially significant** as identified in the 2003 SEIR.

Impact 4.14-b in the 2003 SEIR disclosed impacts to special-status plants that could occur from development of the project area. The special-status plants evaluated in that analysis were Suisun marsh aster, slough thistle, Delta button-celery, rose mallow, Delta tule pea, Mason's lilaopsis, Sanford's arrowhead, and Wright's trichocoronis which could be present in aquatic and riparian habitats. Based on the potential to disturb aquatic and riparian habitat within the project area and the potential presence of these species to occur in these habitats the 2003 SEIR concluded that impacts to these special-status plants would be potentially significant.

As described in Section 4.14.2, "Environmental Setting," three additional species beyond those disclosed in the 2003 SEIR may occur within the Phase 2 area. Those three species, bristly sedge, marsh skullcap, and Delta mudwort have the potential to occur in aquatic habitats and riparian scrub within the project area. These are habitats where plants in the original list of special-status plant species could also occur. The Phase 2 modifications would avoid direct impacts to the pond in the RID Area; however, impacts to aquatic and riparian habitat would still occur with the construction of the Golden Valley Parkway bridge and lowering the bench within Paradise Cut. No additional aquatic or riparian habitats would be affected under the Phase 2 modifications compared to the Approved Project because the Phase 2 modifications would occur within the same development area as the Approved Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. As disclosed in the 2003 SEIR, the impacts of the proposed Phase 2 modifications would remain **potentially significant**.

### Mitigation Measures

#### Modified Mitigation Measure 4.14-b: Terrestrial Special-Status Plants

*The text of the following Mitigation Measure has been modified from the version included in the 2003 SEIR to incorporate the three additional special-status plant species identified in the impact discussion above. Text deletions are shown in ~~strikethrough~~ and additional text is shown in underline.*

The project applicant will implement SJMSCP incidental take avoidance and minimization measures for special-status plants. The following is a summary and clarification of SJMSCP incidental take avoidance and minimization measures for special-status plants 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 ~~the regulatory agencies~~ 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 for these species of~~ Sanford's arrowhead (CRPR 1B.2), Delta button-celery (CESA Endangered), and slough thistle (CRPR 1B.1); therefore, potential impacts on these species ~~could not be~~ 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 mitigation-avoidance and minimization measures for any populations affected by the project, such as creation of offsite populations 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 ~~mitigation-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 lilaepsis, rose mallow, Suisun marsh aster, Delta mudwort, and Delta tule pea:** The SJMSCP considers Mason's lilaepsis (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) These species are considered widely distributed species by the SJMSCP, and 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 mitigate 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) These species is considered a narrowly distributed species by the SJMSCP, 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 ~~determine~~ 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 sponsor shall implement the After the appropriate mitigation has been determined, it shall be implemented by the project proponent 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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-b would avoid and minimize the loss of special-status plant species through the use of preconstruction surveys, construction setbacks, transplantation, and compensation through the SJMSCP. Therefore, implementation of this mitigation measure would reduce the potential impact to special-status plants to a **less-than-significant** level, as identified in the 2003 SEIR.

## Impact 4.14-c: Valley Elderberry Longhorn Beetle

The 2003 SEIR evaluated the impacts to valley elderberry longhorn beetle and concluded that impacts would be significant due to the occurrence of elderberry shrubs in the project area that would be removed by development. The Phase 2 modifications would result in a reduced impact to valley elderberry longhorn beetle when compared to the approved project, because the construction of back bays along Old River would not occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, the modified Phase 2 Project would still result in the removal of some elderberry shrubs and, therefore, this impact would remain **significant** as identified in the 2003 SEIR.

Impact 4.14-c in the 2003 SEIR disclosed that elderberry shrubs are known to occur in the Phase 2 area and could be removed by development, and that this removal would be a significant impact.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. However, the additional housing and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR. Furthermore, the proposed Phase 2 modifications do not include the construction of back bays along Old River described in the 2003 SEIR (as addressed in Addenda to the 2003 SEIR) that may have resulted in loss of elderberry shrubs. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. While the Phase 2 modifications are anticipated to result in loss of fewer elderberry shrubs than what was evaluated in the 2003 SEIR, the loss of elderberry shrubs could still occur and would be considered a **significant** impact on valley elderberry longhorn beetle, as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.14-c: Valley Elderberry Longhorn Beetle

*Mitigation Measure 4.14-c shown below includes the original language from the measure as it was adopted, with text deletions shown in ~~striketrough~~ and additional text shown in underline.*

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 ~~SJMSCP incidental take avoidance and minimization measures for the valley elderberry longhorn beetle (VELB)~~ 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).

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.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.14-c would avoid and minimize the loss of elderberry shrubs and potential loss of valley elderberry longhorn beetle through of the implementation of preconstruction surveys, construction setbacks, transplanted, and compensation with the payment of the SJMSCP fees. Therefore, implementation of this mitigation measure would reduce the potential impact to valley elderberry longhorn beetle to a **less-than-significant** level, as identified in the 2003 SEIR.

#### **Impact 4.14-d: Giant Garter Snake**

The 2003 SEIR disclosed that while giant garter snakes are not known to occur within the project area, potentially suitable aquatic habitat is present and could be adversely affected by project development. The dredge and fill of aquatic habitats that was discussed in the 2003 SEIR would be reduced under the proposed Phase 2 modifications; however, project activities are proposed within Paradise Cut and development would occur adjacent to these potentially suitable habitats that could result in the loss of individual giant garter snakes should they occur in the Phase 2 area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of individual garter snakes would remain a **significant** impact as identified in the 2003 SEIR.

Impact 4.14-d in the 2003 SEIR described potential impacts to giant garter snake from development of the project area. Giant garter snakes are not known to occur within the project area, but potentially suitable habitat for the species was described within the central agricultural ditch in the RID Area and in Paradise Cut. The 2003 SEIR disclosed the loss of potential aquatic habitat during Phase 2 would result from fill of the remaining 5 acres of the agricultural ditch in the West Village and Woodland districts and could result from construction of the Golden Valley Parkway bridge over Paradise Cut.

The Phase 2 modifications would avoid direct impacts to the agricultural ditch; however, construction of the Golden Valley Parkway Bridge over Paradise Cut is still proposed. Therefore, the direct effects to potential giant garter snake habitat is anticipated to be less than the loss evaluated in the 2003 SEIR. However, construction of the Golden Valley Parkway Bridge would result in loss of habitat and potential loss of individuals. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of giant garter snake habitat and individuals should any occur within the Phase 2 area would remain a **significant** impact as identified in the 2003 SEIR.

#### **Mitigation Measures**

##### **Modified Mitigation Measure 4.14-d: Giant Garter Snake**

*Since publication of the 2003 SEIR, the project applicant has participated in ESA consultation with the USFWS regarding giant garter snake. The following mitigation measure updates the text of the 2003 mitigation measure to better align with the results of this ongoing consultation. Text deletions are shown in ~~striketrough~~ and additional text is shown in underline*

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 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.

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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-d and the habitat compensation requirements of the SJMSCP would avoid and minimize the potential loss of giant garter snake through the use of preconstruction surveys, seasonal restrictions on vegetation clearing, and construction setbacks. Therefore, implementation of this mitigation measure would reduce the potential impact to giant garter snake to a **less-than-significant** level, as identified in the 2003 SEIR.

## Impact 4.14-e: Western Pond Turtle

The 2003 SEIR disclosed that development of the River Islands Project would disturb western pond turtle habitat and result in the potential loss of individual turtles. The proposed Phase 2 modifications would result in a reduced acreage of impact overall compared to the approved Phase 2 Project evaluated in the 2003 SEIR, and the modified Phase 2 Project would avoid impacts to aquatic western pond turtle habitat at the pond in the RID Area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, the proposed Phase 2 modifications still include activities that may result in loss of western pond turtle habitat. The loss of western pond turtle habitat would remain a **significant** impact, as identified in the 2003 SEIR.

Impact 4.14-e in the 2003 SEIR disclosed that disturbance of suitable habitat for western pond turtle would result from fill of the pond in the RID Area and construction of Golden Valley Parkway bridge over Paradise Cut. Further the 2003 SEIR determined that this loss, if turtles are present in the pond, would be a significant impact.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR. The proposed Phase 2 modifications do not include the fill of the RID Area pond discussed in the 2003 SEIR; however, the Golden Valley Parkway bridge is still proposed. Therefore, the modified Phase 2 Project may still result in loss of western pond turtle habitat and individuals. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of western pond turtles and habitat would remain a **significant** impact, as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.14-e: Western Pond Turtle

*The text of this Mitigation Measure has been modified compared to what is shown in the 2003 SEIR to better reflect project specific conditions associated with the modified Phase 2 Project. Text deletions are shown in ~~strike through~~ and additional text is shown in underline*

The project applicant will implement the following measures ~~are~~ 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. During dewatering and fill of the pond in the RID Area, a qualified biologist shall be present onsite to search for western pond turtles. 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) and the wetland located near the nesting site. These buffers shall be 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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-e and the habitat compensation requirements of the SJMSCP would avoid and minimize the potential loss of western pond turtle through the use of preconstruction surveys,

seasonal restrictions on vegetation clearing and construction, and construction setbacks. Therefore, implementation of this mitigation measure would reduce the potential impact to western pond turtle to a **less-than-significant** level, as identified in the 2003 SEIR.

### Impact 4.14-f: Swainson's Hawk

The 2003 SEIR described that the River Islands Project area includes suitable foraging habitat and active Swainson's hawk nests that would be disturbed by project implementation. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat than that disclosed in the 2003 SEIR; however, loss of foraging habitat and potential losses of active nests would occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of foraging habitats and active Swainson's hawk nests would remain a **significant** impact, as identified in the 2003 SEIR.

Impact 4.14-f in the 2003 SEIR disclosed that loss of approximately 2,155 acres suitable foraging habitat for Swainson's hawk would occur due to the conversion of agricultural and fallow fields during development of the River Islands Project, and 190 acres would be converted to open water during expansion of Paradise Cut canal. The 2003 SEIR further disclosed that Swainson's hawks are known to nest in the project area and that suitable nesting trees would be removed. The 2003 SEIR determined that loss of foraging habitat and active nests would result in significant impacts to Swainson's hawk.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR. However, loss of foraging habitat and nesting trees would still occur under the proposed Phase 2 modifications. The loss of foraging habitat and nesting trees could result in nest abandonment and mortality of eggs and young. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of active Swainson's hawk nests and foraging habitat would remain a **significant** impact, as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.14-f: Swainson's Hawk

*The text of this Mitigation Measure has been modified compared to what is shown in the 2003 SEIR to remove reference to California Species Act Management Authorization for the West Lathrop Specific Plan (WLSP) as it has been confirmed that this permitting mechanism will not be used to address project effects on Swainson's hawk. Text deletions are shown in ~~strikethrough~~ and additional text is shown in underline.*

~~The City of Lathrop has obtained a California Endangered Species Act Management Authorization from CDFG for the WLSP (1996) to offset the impacts on the Swainson's hawk from development of West Lathrop. The management authorization is dependent on implementation of the WLSP habitat management agreement for Swainson's hawk (Sycamore Environmental Consultants 1995). However, because the project proponent would seek coverage under the SJMSCP, it is anticipated that the SJMSCP would be the mechanism used to mitigate impacts on the Swainson's hawk from the proposed project. As an alternative, the existing management authorization could be used. A summary of both mitigation alternatives is provided below.~~

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. ~~These would be implemented in addition to payment of development fees required by the SJMSCP for funding of the establishment of habitat conservation areas.~~

- ▶ 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.



- ▶ 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 following measures are a summary of those set forth in the California Endangered Species Act Management Authorization from CDFG for the WLSP.

- ▶ ~~Mitigation for the loss of suitable Swainson's hawk foraging habitat shall be provided at a ratio of 0.5 acre of dedicated habitat to 1 acre of foraging habitat to be lost.~~
- ▶ ~~Before project construction that would occur during the nesting season (March 1 through August 15), surveys shall be conducted for active Swainson's hawk nests in areas with suitable nest trees within 0.25 mile of the proposed construction area. Large trees throughout the project site provide suitable habitat. Surveys shall be conducted at the beginning of the nesting season (April 15 through April 30). A visible exclusion zone shall be established around the portion of the construction area that occurs within 0.25 mile of the nest tree, and no project construction activity shall commence in the exclusion zone between March 1 and August 15. Nests shall be revisited during the posthatching stage (June 1 through June 30) and during the fledging period (July 1 through July 31) to determine the number of juveniles that have fledged.~~
- ▶ ~~All active and historic (those used during the previous 5 years) Swainson's hawk nest trees in the project area shall be preserved during implementation of the proposed project. No construction shall occur within 100 feet of a historic nest tree. A visible 100-foot exclusion zone shall be established around any historic nest tree located within 150 feet of a designated construction area.~~

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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-f would avoid, minimize, and compensate for the loss of Swainson's hawk habitat and active nests. The loss of active nests will be avoided through the use of preconstruction surveys, seasonal restrictions on construction, construction setbacks, and preservation of active and historic nest trees. Therefore, implementation of this mitigation measure would reduce the potential impact to Swainson's hawk to a **less-than-significant** level, as identified in the 2003 SEIR.

### **Impact 4.14-g: Aleutian Canada Goose and Greater Sandhill Crane**

The 2003 SEIR described that the River Islands Project area includes suitable foraging habitat for Aleutian Canada goose and greater sandhill crane that would be disturbed by project implementation. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat than that disclosed in the 2003 SEIR, and suitable foraging habitat continues to be in abundance locally and regionally. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

Impact 4.14-g in the 2003 SEIR disclosed that the loss of approximately 2,155 acres suitable foraging habitat for Aleutian Canada goose and greater sandhill crane would result from the conversion of agricultural and fallow fields during development of the River Islands Project. The 2003 SEIR concluded that the other suitable foraging habitat is abundant in the project region, and therefore the loss of habitat from implementation of the project would be less than significant.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR. The potential foraging habitat Aleutian Canada goose and greater sandhill crane for within the project region remains abundant. Therefore, there is no new significant impact related to the loss of foraging habitat for these species and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on Aleutian Canada goose and greater sandhill crane, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-h: Burrowing Owl

The 2003 SEIR described that the River Islands Project area includes potentially suitable foraging and burrow habitat for burrowing owl that would be disturbed by project implementation. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat or burrow habitat than that disclosed in the 2003 SEIR; however, this loss of foraging habitat and the potential loss of active burrows would nonetheless occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, this would remain a **significant** impact to burrowing owl, as identified in the 2003 SEIR.

Impact 4.14-h in the 2003 SEIR discussed that within the River Islands Project area potential burrow habitat for burrowing owl is limited to agricultural field edges and levees along Old River and Paradise Cut. The 2003 SEIR also disclosed that project development could result in disturbance of burrows and loss of approximately 2,155 acres of suitable foraging habitat for burrowing owl. The 2003 SEIR determined that the disturbance of burrows could result in mortality of eggs and young and the project would result in a substantial loss of foraging habitat, which would be a significant impact.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional disturbance of suitable foraging or burrow habitat beyond that evaluated in the 2003 SEIR. Implementation of the proposed Phase 2 modifications would continue to have the potential to result in disturbance of burrows, but the potential would not be beyond what was evaluated in the 2003 EIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Due to the loss of foraging habitat and the potential loss of burrows, this would remain a **significant** impact to burrowing owl, as identified in the 2003 SEIR.

### Mitigation Measures

#### Modified Mitigation Measure 4.14-h: Burrowing Owl

*The text of this Mitigation Measure has been modified to reflect an update to the SJMSCP avoidance and minimization measures for burrowing owl adopted in 2013. Text deletions are shown in ~~strike through~~ and additional text is shown in underline.*

The following is a summary and clarification of SJMSCP 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.

- ~~If burrowing owls are known to occupy the project site, during the breeding season p~~Preconstruction surveys for burrowing owls shall be conducted within 75 meters of areas of project activity ~~in locations with potential burrow habitat, including field edges, roadsides, levees, and fallow fields following the Staff Report on Burrowing Owls (CDFW 2012). Actively farmed agricultural fields and regularly disked or graded fields do not provide suitable burrow sites and need not be surveyed.~~ The survey shall be conducted ~~within 1 week 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 CDFW's Staff Report on Burrowing Owls (CDFW 1995-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. ~~the fledglings are capable of independent survival. After~~ 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 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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-h would avoid, and minimize the loss of burrowing owl habitat and active burrows. The loss of active burrows will be avoided through the use of preconstruction surveys, seasonal restrictions on construction, and construction setbacks. The impacts to habitat would be minimized by compensation through SJMSCP. Therefore, implementation of this mitigation measure would reduce the potential impact to burrowing owl to a **less-than-significant** level, as identified in the 2003 SEIR.

#### **Impact 4.14-i: Colonial Nesting Birds**

The 2003 SEIR described that the River Islands Project area includes suitable foraging habitat for tricolored blackbird, black-crowned night-heron, and great blue heron that would be disturbed by project implementation, but that none of these species are likely to nest in the project area. The proposed Phase 2 modifications would not result in a greater acreage of impact to suitable foraging habitat than that disclosed in the 2003 SEIR, and suitable foraging habitat continues to be in abundance locally and regionally. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

Impact 4.14-i in the 2003 SEIR disclosed that within the River Islands Project area approximately 2,155 acres of foraging habitat for tricolored blackbird, black-crowned night-heron, and great blue heron would be lost to development. The 2003 SEIR also discussed that the existing agricultural habitats in the River Islands Project area are not likely suitable nesting habitat for these species, and that foraging habitat for these species is regionally abundant. Therefore, the 2003 SEIR concluded that the impacts on colonial nesting birds would be less than significant.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional

housing, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR and therefore there would be no change in the potential loss of foraging habitat for these species. The overall availability of foraging habitat within the region has not changed substantially since the 2003 SEIR was certified. Therefore, there is no new significant impact to colonial nesting birds and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on colonial nesting birds, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-j: Ground-Nesting or Streamside/Lakeside-Nesting Birds

The 2003 SEIR disclosed that the River Islands Project may result in loss of northern harrier nests. The updated CNDDDB query conducted for this SEIR yielded two additional special-status bird species (short-eared owl and yellow-headed blackbird) that could potentially occur in Paradise Cut and around the pond in the Phase 2 area. While the Phase 2 modifications would not disturb any lands/habitats not already considered in the 2003 SEIR, active nests of northern harrier, short-eared owl, and yellow-headed blackbird may still be lost due to direct or indirect disturbance. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain a **potentially significant** impact, as identified in the 2003 SEIR.

Impact 4.14-j in the 2003 SEIR disclosed that River Islands Project activities within Paradise Cut may result in loss of northern harrier nests should nests occur, which would be a potentially significant effect.

The updated CNDDDB search conducted for this SEIR (CNDDDB 2020) revealed that the nests of two additional special-status bird species, short-eared owl and yellow-headed blackbird may also be disturbed by project activities in Paradise Cut, resulting in the potential loss of eggs and chicks. Suitable nesting habitat for yellow-headed blackbird is also found surrounding the pond within the RID Area. Although the Phase 2 modifications would not result in fill of the pond or removal of suitable nesting habitat at this location, development adjacent to the pond may disturb yellow-headed blackbird nests and result in loss of eggs and chicks. The proposed Phase 2 modifications would not disturb any additional lands within Paradise Cut beyond what was assumed to occur in the 2003 SEIR. However, active nests of northern harrier, as well as those of short-eared owl and yellow-headed blackbird may still be lost due to direct removal or disturbance. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, the potential disturbance of the nests of these species would remain a **potentially significant** impact, as identified in the 2003 SEIR.

### Mitigation Measures

#### Modified Mitigation Measure 4.14-j: Ground-Nesting or Streamside/Lakeside-Nesting Birds

*The text of this Mitigation Measure has been modified compared to what is shown in the 2003 to address short-eared owl and yellow-headed blackbird. Text deletions are shown in ~~strikethrough~~ and additional text is shown in underline.*

The project applicant will implement ~~following is a summary and clarification of SJMSCP~~ 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 ~~northern harrier~~ 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 ~~the bench in the PCIP Area~~ 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 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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-j would avoid and minimize the loss of northern harrier, short-eared owl, and yellow-headed blackbird nests. The loss of nests will be avoided through the use of preconstruction surveys, seasonal restrictions on construction, and construction setbacks. Therefore, implementation of this mitigation measure would reduce the potential impact to these species to a **less-than-significant** level, as identified in the 2003 SEIR.

#### **Impact 4.14-k: Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat**

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The 2003 SEIR evaluated the potential for impacts on special-status birds nesting in isolated trees or shrubs outside of riparian habitat. The 2003 SEIR concluded that the River Islands Project was not likely to adversely affect yellow warbler, but that the project could result loss of loggerhead shrike nests should they occur in the project area. The proposed Phase 2 modifications would not result in a greater loss of suitable nesting habitat, but the loss of loggerhead shrike nests could still occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant**, as identified in the 2003 SEIR.

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Impact 4.14-k in the 2003 SEIR described that small patches of riparian habitat outside of riparian corridors provide marginal quality habitat for yellow warbler and breeding habitat is likely limited to willows near the Paradise weir. Therefore, it was determined that the River Islands Project was not likely to adversely affect this species. The 2003 SEIR also described that loggerhead shrikes were observed foraging throughout the project area and nesting habitat is available in small trees and shrubs within the project area. Because loggerhead shrikes were not known to nest within the project area, but the species was present and suitable nesting habitat was available, loss of nests was determined in the 2003 SEIR to be potentially significant.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR. However, there is still the potential for loss of loggerhead shrike nests. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant**, as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.14-k: Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat

The project applicant will implement the following is a summary and clarification of SJMSCP incidental take avoidance and minimization measures for loggerhead shrike in the SJMSCP. The following is a summary and clarification of those measures:

- ▶ 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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-k would avoid and minimize the loss of loggerhead shrike nests. The loss of nests would be avoided through implementation of preconstruction surveys, seasonal restrictions on construction, and construction setbacks. Therefore, implementation of this mitigation measure would reduce the potential impact to loggerhead shrike to a **less-than-significant** level, as identified in the 2003 SEIR.

### Impact 4.14-l: Birds Nesting along Riparian Corridors

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The 2003 SEIR evaluated the potential for impacts to special-status birds nesting along riparian corridors. The 2003 SEIR concluded that there would not likely be an adverse effect on yellow-breasted chat, but that the River Islands Project had the potential to remove or disturb the nests of Cooper's hawk and white-tailed kite. The proposed Phase 2 modifications would not result in additional nest disturbance or loss beyond what was considered in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of nests would be a **potentially significant** impact, as identified in the 2003 SEIR.

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Impact 4.14-l in the 2003 SEIR described that the small amount of riparian shrub habitat within Paradise Cut is marginal habitat for yellow-breasted chat, and this habitat would not likely be disturbed by implementation of the project and therefore adverse impacts to yellow-breasted chat would also be unlikely. The 2003 SEIR also described the potential for nesting trees and nests of Cooper's hawk and white-tailed kite to be lost or disturbed by project activities, and concluded that the loss or disturbance of the nests of these species, should they occur within the project area, would be a potentially significant impact.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional land disturbance beyond that evaluated in the 2003 SEIR. However, there is still the potential for loss of for Cooper's hawk and white-tailed kite nests, as described in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant**, as identified in the 2003 SEIR.

## Mitigation Measures

### 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:

- ▶ 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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-l would avoid and minimize the loss of white-tailed kite and Cooper's hawk nests. The loss of nests would be avoided through the implementation of preconstruction surveys, seasonal restrictions on construction, and construction setbacks. Therefore, implementation of this mitigation measure would reduce the potential impact to white-tailed kite and Cooper's hawk to a **less-than-significant** level, as identified in the 2003 SEIR.

### Impact 4.14-m: Snowy Egret, American White Pelican, Double-Crested Cormorant and White-Faced Ibis

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The 2003 SEIR evaluated the potential loss of foraging habitat for white-faced ibis, snowy egret, American white pelican, and double-crested cormorant, which are not likely to nest in the River Islands Project area. The proposed Phase 2 modifications would not convert any additional foraging habitat beyond what was analyzed in the 2003 SEIR and the availability of foraging habitat regionally and locally has not substantially changed. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.14-m in the 2003 SEIR disclosed that within the River Islands Project area there was approximately 2,155 acres foraging habitat for white-faced ibis and aquatic habitat in all three project component areas could be used by the ibis, snowy egret, American white pelican, and double-crested cormorant. The 2003 SEIR also discussed that the existing habitats in the River Islands Project area are not likely suitable nesting habitat for these species, and that foraging habitat for these species is regionally abundant. Therefore, the 2003 SEIR concluded that the impacts on colonial nesting birds would be less than significant.

The proposed Phase 2 modifications would increase the number and density of dwelling units and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing and additional retail and commercial development would not result in additional foraging habitat beyond that evaluated in the 2003 SEIR. The abundance of foraging habitat within the region has not changed substantially since the 2003 SEIR and the loss of foraging habitat for white-faced ibis, snowy egret, American white pelican, and double-crested cormorant under the Phase 2 modifications would not be beyond the acreage described in the 2003 SEIR. Therefore, there is no new significant impact to white-faced ibis, snowy egret, American white pelican, and double-crested cormorant and the

impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on white-faced ibis, snowy egret, American white pelican, and double-crested cormorant, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-n: Ferruginous Hawk

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The 2003 SEIR evaluated the potential conversion of ferruginous hawk foraging habitat to development and noted the abundance of foraging habitat available to ferruginous hawks in the region and locally. The proposed Phase 2 modifications would not result in the disturbance of ferruginous hawk foraging habitat beyond what was considered in the 2003 SEIR and there has not been a substantial change in the abundance of foraging habitat for the species. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.14-n in the 2003 SEIR described that ferruginous hawk, mountain plover, merlin, and long-billed curlew, which winter in the project region could forage in agricultural and fallow fields within the River Islands Project area. The 2003 SEIR also disclosed that approximately 2,155 acres foraging habitat would be lost within the project area; however, foraging habitat for these species is regionally abundant. Therefore, the 2003 SEIR concluded that the impacts on these species would be less than significant.

The proposed Phase 2 modifications would increase the number of dwelling units and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing and additional retail and commercial development within the original development footprint would not result in additional loss of foraging habitat beyond that evaluated in the 2003 SEIR. The abundance of foraging habitat within the region has not changed substantially since the 2003 SEIR and the loss of foraging habitat for ferruginous hawk, mountain plover, merlin, and long-billed curlew under the Phase 2 modification would not be beyond the acreage described in the 2003 SEIR. Therefore, there is no new significant impact to ferruginous hawk, mountain plover, merlin, and long-billed curlew and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on ferruginous hawk, mountain plover, merlin, and long-billed curlew, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-o: Common Tree-Nesting Raptors

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The 2003 SEIR evaluated the potential impacts on common tree-nesting raptors from implementation of the River Islands Project. The 2003 SEIR disclosed that red-tailed hawk, red-shouldered hawk, and great-homed owl are known to nest in the project area, and that active nests of these species may be lost during construction. The proposed Phase 2 modifications would not result in impacts to more suitable nesting habitat than the habitat that was analyzed in the 2003 SEIR; however, loss of common tree-nesting raptor nests may still occur. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The loss of active nests would be a **significant** impact, as identified in the 2003 SEIR.

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Impact 4.14-o in the 2003 SEIR disclosed that red-tailed hawk, red-shouldered hawk, and great-homed owl are known to nest in the project area. The document further disclosed that active nests of these species may be lost during construction. These species are not special-status species, but destruction of nests is prohibited by Section 3503.5 of the California Fish and Game Code. The 2003 SEIR determined that loss of common raptor nests would be a significant impact.



The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional land disturbance or loss of common tree-nesting raptor nests beyond that evaluated in the 2003 SEIR. However, the loss of common tree-nesting raptor nests is anticipated to occur with the Phase 2 modifications. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. However, the loss of common tree-nesting raptor nests would remain a **significant** impact, as identified in the 2003 SEIR.

## Mitigation Measures

### 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 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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-o would avoid and minimize the loss of tree-nesting raptor nests. The loss of nests will be avoided through the implementation of preconstruction surveys, seasonal restrictions on construction, and construction setbacks. Therefore, implementation of this mitigation measure would reduce the potential impact to tree-nesting raptors to a **less-than-significant** level, as identified in the 2003 SEIR.

### Impact 4.14-p: Special-Status Bats

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The 2003 SEIR identified that no large roosts or maternity roosting sites for greater western mastiff bat, red bat, Yuma myotis, and Townsend's big-eared bat would be adversely affected by the River Islands Project. The proposed Phase 2 modifications would not disturb additional potentially suitable habitat or potential roost sites of western mastiff bat, red bat, Yuma myotis, Townsend's big-eared bat, and pallid bat beyond what was analyzed in the 2003 SEIR. Therefore, there is no new impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.14-p in the 2003 SEIR described that while greater western mastiff bat, red bat, Yuma myotis, and Townsend's big-eared bat could forage within the project area, bat foraging habitat is abundant in the project region. The 2003 SEIR also disclosed that special-status bat roosting habitat occurs adjacent to the project site, but that roosting habitat within the project area is limited and no large roosts or maternity roosts are known to be on the site. The document concluded that because no important roosting sites would be affected, impacts would be less than significant.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Town Center within the original boundaries of the Phase 2 area. The additional housing, increased density of housing, and additional retail and commercial development would not result in additional habitat disturbance or impacts to special-status bats beyond that evaluated in the 2003 SEIR. The updated

CNDDDB search for the Phase 2 modifications [CNDDDB 2020] revealed that pallid bat may also occur within the project area. However, habitat used by pallid bat does not differ from the sum of habitat types evaluated for the four bat species originally addressed in the 2003 SEIR. Therefore, the addition of pallid bat in the impact evaluation does not alter analysis or impact conclusions. The abundance of foraging habitat within the region has not changed substantially since the 2003 SEIR, and impacts on bat species would not increase with the proposed Phase 2 modifications. Therefore, there is no new significant impact to special-status bats and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on special-status bats, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-q: Riparian Brush Rabbit

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The 2003 SEIR evaluated the potential conversion of riparian brush rabbit habitat on the species and concluded that activities within Paradise Cut would result in habitat removal and potential loss of individuals. The construction of the Golden Valley Parkway bridge in Paradise Cut is proposed to occur under the Phase 2 modifications and these activities would result in loss of habitat and the potential loss of individuals, which would be a **significant** impact.

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In Impact 4.14-q the 2003 SEIR described that riparian brush rabbit is known to occur within Paradise Cut and that approximately 40 acres of occupied habitat would be temporarily removed to excavate the bench near Paradise Weir. In addition, the construction of Golden Valley Parkway bridge over Paradise Cut would result in habitat removal and indirect impacts on riparian brush rabbit. While the project design includes measures to reduce potential mortality of riparian brush rabbit such as construction of a fence to keep people and domestic pets out of suitable habitat, the 2003 SEIR concluded that the direct and indirect impacts would be significant.

The habitat impact from the lowering of the bench has been addressed as part of Phase 1 project activities. The proposed Phase 2 modifications include construction of the Golden Valley Parkway bridge over Paradise Cut. However, there is no substantial changes to this activity from what was analyzed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact on riparian brush rabbit from the proposed Phase 2 modifications would remain **significant**, as identified in the 2003 SEIR.

### Mitigation Measures

#### Modified Mitigation Measure 4.14-q: Riparian Brush Rabbit

The project applicant will implement the incidental take and avoidance measures in the SJMSCP 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) would be conducted, and an Incidental Take Permit would be required. Specific mitigation measures avoidance and 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 is expected to 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.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.14-q would avoid and minimize the impacts to riparian brush rabbit. Impacts would be avoided through measures developed through consultation with USFWS and CDFW during the incidental take permit process and may include preconstruction surveys, daily surveys of construction areas, exclusion fencing, minimization of vegetation removal, and supporting the existing USFWS captive breeding program to establish new populations in appropriate habitat. Therefore, implementation of this mitigation measure would reduce the potential impact to riparian habitat to a **less-than-significant** level, as identified in the 2003 SEIR.

#### **Impact 4.14-r: Jurisdictional Waters of the United States and Riparian Habitat**

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The 2003 SEIR disclosed that project implementation would result in fill of waters of the United States from fill of the agricultural ditch, fill of the pond, and construction of bridges across the San Joaquin River and Paradise Cut. The proposed Phase 2 modifications may result in dredge or fill of waters of the United States and removal of riparian habitat within Paradise Cut, but would not result in an increase in dredge, fill, or riparian disturbance from that considered in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This dredge and fill of waters of the United States and riparian habitat removal would be a **significant** impact, as identified in the 2003 SEIR.

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In Impact 4.14-r the 2003 SEIR disclosed that project implementation, as envisioned at that time, would result in fill of waters of the United States from fill of the central drainage ditch, fill of the RID Area pond, and construction of bridges across the San Joaquin River and Paradise Cut. The 2003 SEIR also disclosed that approximately 40 acres of riparian scrub would be temporarily removed to lower a portion of Paradise Cut. The 2003 SEIR concluded that the impacts from these activities on waters of the United States and riparian habitat would be significant.

Since publication of the 2003 SEIR, various project modifications have been evaluated and adopted through CEQA Addenda that avoid and minimize effects on waters of the United States including avoiding and protecting the RID Area pond and the central drainage ditch. The proposed Phase 2 modifications do not alter these avoidance actions and would not result in an increase in dredge, fill, or riparian disturbance from that considered in the 2003 SEIR. The riparian habitat impact from the lowering of the bench has been addressed as part of Phase 1 project activities; however, the construction of bridges across the San Joaquin River and Paradise Cut continue to be included as part of the modified Phase 2 Project activities and impacts to waters of the United States and riparian habitat would occur from these activities consistent with the Phase 2 activities evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The dredge or fill of waters of the United States, or loss of riparian as part of the Phase 2 modifications would remain a **significant** impact.

#### **Mitigation Measures**

##### **Modified Mitigation Measure 4.14-r: Jurisdictional Waters of the United States and Riparian Habitat**

*The following text is a reproduction of Mitigation Measure 4.14-r in the 2003 SEIR. Some elements of the original mitigation measure are retained, such as filling of the "agricultural ditch and pond," even though they are not part of the modified Phase 2 Project. Text deletions are shown in ~~strike through~~ and additional text is shown in underline.*

The following measures are designed to minimize and mitigate impacts on jurisdictional waters of the United States and riparian habitat:

- ▶ Before ~~project 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. ~~This is expected to be completed through re-verification of the existing wetland delineation.~~
- ▶ ~~Authorization for The fill or discharge of dredged material into of the agricultural ditch and pond or other alteration of waters of the United States, and disturbance of riparian habitat will be subject to a shall be secured from USACE via the Section 404 permitting process 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 within existing levees 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.

#### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.14-r would avoid and minimize impacts due to the discharge of dredged and fill materials in waters of the United States and waters of the State. and temporary loss of riparian habitat. Impacts would be avoided and minimized with the implementation of preservation, creation, and restoration, as well as measures to reduce erosion and runoff, and compensation through the permitting process. Therefore, implementation of this mitigation measure would reduce the potential impact to waters of the United States and riparian habitat to a **less-than-significant** level, as identified in the 2003 SEIR.

#### **Impact 4.14-s: Wildlife Corridors**

The 2003 SEIR evaluated the potential impacts from development within the San Joaquin River Wildlife Corridor and potential conflicts with the SJMSCP. The proposed Phase 2 modifications would not include development that would conflict with the San Joaquin River Wildlife Corridor; therefore, there would be no conflict with the SJMSCP regarding this corridor. Therefore, there is no new significant impact on wildlife corridors and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would be **less than significant** for the modified Phase 2 Project.

The 2003 SEIR discussed the impacts to wildlife corridors in Impact 4.14-s. That analysis indicated that the development of the proposed Lathrop Landing back bay along the San Joaquin River would occur within the San Joaquin River Wildlife Corridor identified in the SJMSCP. The 2003 SEIR concluded that while the proposed development within the San Joaquin River Wildlife Corridor would not be biologically significant, development would conflict with the SJMSCP and, therefore, this would be a significant impact under CEQA.

The proposed Phase 2 modifications do not include the development along the banks of the San Joaquin River identified in the 2003 SEIR that could conflict with the San Joaquin River Corridor. Although construction of the Golden Parkway Bridge would occur within this corridor, construction of the bridge would not interfere with wildlife movement within the San Joaquin River Corridor because it would span the banks of the river allowing movement to occur under the bridge unimpeded. Therefore, there would be no restriction of wildlife movement along the San

Joaquin River Corridor and no conflict with the SJMSCP. Therefore, there is no new significant impact to wildlife corridors and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on wildlife corridors.

### Mitigation Measures

No mitigation is required.

### Impact 4.14-t: Biological Resources Associated with Offsite Facilities

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The 2003 SEIR concluded that impacts to biological resources could occur with the development of offsite facilities and that these impacts would be consistent with the impacts to biological resources that were evaluated throughout the 2003 SEIR. The impacts from offsite facilities proposed for the Phase 2 modifications would also be consistent with the impacts discussed for specific biological resources within this section. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant**, as identified in the 2003 SEIR.

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Impact 4.14-t in the 2003 SEIR discussed the potential impacts to biological resources associated with offsite facilities. The offsite facilities considered in the 2003 SEIR included electrical transmission line, pipelines, extension of Golden Valley Parkway to I-205, interchange improvements. The 2003 SEIR concluded that the impacts to biological resources from offsite facilities could occur, that these impacts could be significant depending on the nature and extent of adverse effects, and that any impacts would be consistent with those discussed in other impacts to biological resources discussed in that document.

The offsite facilities in the proposed Phase 2 modifications are a subset of those considered in the 2003 SEIR—the widening of Golden Valley Parkway and Paradise Road. Offsite utility improvements have already been completed as part of Phase 1. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts to biological resources from these offsite facilities would remain **potentially significant** depending on the nature and extent of the adverse effects, and any impacts would be consistent with those discussed in the impact discussion above.

### Mitigation Measures

#### 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.

#### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.14-t would avoid and minimize the potential impacts to biological resources from offsite facilities. The temporary loss of habitat would be avoided through the implementation of measures described for specific biological resources in this SEIR. Therefore, implementation of this mitigation measure

would reduce the potential impact to biological resources from offsite facilities to a **less-than-significant** level, as identified in the 2003 SEIR.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes on Paradise Road that such volumes will trigger widening of the road. To accommodate these increased traffic volumes Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

As described in Section 3.5.3, "Offsite Elements," in Chapter 3, "Description of the Proposed Project," the widened Paradise Road is assumed to be a four-lane Rural Arterial/Expressway with a 184-foot-wide disturbance corridor between Paradise Cut and the future connection with Golden Valley Parkway (at approximately the existing Paradise Road/Canal Blvd. intersection). Between the connection to Golden Valley Parkway and I-205, six-lanes would be constructed with a disturbance corridor of 250 feet. It is assumed that generally the centerline of each disturbance corridor would align with the centerline of the existing Paradise Road; however, it is further assumed that the road would shift off the centerline to avoid residences, structures, and sensitive environmental resources. Because the exact route of the widened road is not yet known, and much of the potential road footprint is on private land, a full biological resources survey could not be performed and the level of analysis contained in this analysis is commensurate with the level of detail available regarding future widening of Paradise Road. A windshield-level survey was conducted by an Ascent biologist on June 16, 2020. The June 2020 survey identified that there are known Swainson's hawk nests and a potential Loggerhead shrike nest in the trees along Paradise Road; that sloughs, irrigation, and drainage ditches will need to be delineated consistent with USACE methodology; and that special-status plants are unlikely because of the high intensity of agricultural use in the area. A majority of the potential expanded roadway footprint is agricultural land similar to what is found in the Stewart Tract portion of the River Islands Project site.

The Paradise Road expansion has the same potential as the modified Phase 2 Project to adversely affect biological resources associated with offsite facilities as evaluated in Impact 4.14-t in the 2003 SEIR and in this SEIR. Therefore, once the roadway expansion footprint is established, biological resources surveys and a wetland delineation would be required, as described for the modified Phase 2 Project to verify that the impacts are covered in this SEIR. While it is possible that all mitigation measures identified above for the modified Phase 2 Project would be required, the survey and wetland data, combined with resource identification surveys completed by the SJCOG as part of the SJMSCP, would be used to confirm the applicable mitigation measures for the Paradise Road expansion so as to verify that the impacts are mitigated to a less-than-significant level.

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening to support implementation of the road widening would be required to implement all applicable mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Modified Mitigation Measure 4.14-b, Special-Status Plants; Modified Mitigation Measure 4.14-c, Valley Elderberry Longhorn Beetle; Modified Mitigation Measure 4.14-d, Giant Garter Snake; Modified Mitigation Measure 4.14-e, Western Pond Turtle; Modified Mitigation Measure 4.14-f, Swainson's Hawk; Modified Mitigation Measure 4.14-h, Burrowing Owl; Modified Mitigation Measure 4.14-j, Ground-Nesting or Streamside/Lakeside-Nesting Birds; Modified Mitigation Measure 4.14-k, Birds Nesting in Isolated Trees or Shrubs Outside of Riparian Habitat; Modified Mitigation Measure 4.14-l, Birds Nesting along Riparian Corridors; Modified Mitigation Measure 4.14-o, Common Tree-Nesting Raptors; Modified Mitigation Measure 4.14-q,

Riparian Brush Rabbit; Modified Mitigation Measure 4.14-r, Jurisdictional Waters of the United States and Riparian Habitat; and Adopted Mitigation Measure 4.14-t, Biological Resources Associated with Offsite Facilities.

These mitigation measures would be equally effective at reducing any significant biological impacts to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.

## 4.15 FISHERIES

This section describes existing fisheries resources within the project area and addresses the modified Phase 2 Project's potential impacts on these resources.

Section 4.15, "Fisheries," in the 2003 SEIR evaluated the potential effects of the River Islands Project related to fishery resources in the City of Lathrop. The 2003 SEIR conducted a project-level analysis of Phase 2 because there was sufficient information available. The 2003 SEIR concluded that there would be less-than-significant or beneficial impacts related to RID area construction sediment (Impact 4.15-a), pier and dock construction (Impact 4.15-e), structural habitat features (Impact 4.15-f), entrainment in project pumps (Impact 4.14-g), water discharges in the Delta (Impact 4.15-h), altered hydrology from water discharges (Impact 4.15-i), habitat modifications in Paradise Cut (Impact 4.15-k), diversion of chinook salmon smelts (Impact 4.15-l), creation of new fish habitat in the RID area (Impact 4.15-m), introduction of exotic fish into the Delta (Impact 4.15-n), and increased water consumption (Impact 4.15-p). The 2003 SEIR concluded that there would be significant or potentially significant impacts related to levee breaching (Impact 4.15-b), bridge and utility crossings (Impact 4.15-c), Paradise Cut bridge (Impact 4.15-d), and maintenance dredging of back bays (Impact 4.15-j). To reduce these significant and potentially significant impacts to a less-than-significant level, the 2003 SEIR included mitigation measures requiring preparation of stormwater pollution prevention plans and seasonal restrictions on dredging and other in water work.

### 4.15.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

##### **Federal Endangered Species Act**

Pursuant to the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have authority over projects that may result in take of a species federally listed as Threatened or Endangered. Under the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS and NMFS have also interpreted the definition of harm to include significant habitat modification that could result in take. If a project has a likelihood that it would result in take of a federally listed species, either an incidental take permit, under Section 10(a) of the ESA, or a federal interagency consultation, under Section 7 of the ESA, is required. Several fish species in the project vicinity are covered under the federal ESA as identified below in Section 4.15.2, "Environmental Setting."

##### **Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act requires federal agencies to consult with USFWS, NMFS, and the California Department of Fish and Wildlife (CDFW) before they undertake or approve projects that control or modify surface waters. The consultation is intended to prevent the loss of, or damage to, fish and wildlife in connection with water projects and to develop and improve these resources. Compliance with the Fish and Wildlife Coordination Act is incorporated into a project's NEPA process and therefore is relevant to the proposed project only after National Environmental Policy Act (NEPA) compliance has been triggered.

##### **Magnuson-Stevens Fishing Conservation and Management Act**

The Magnuson-Stevens Act is primarily concerned with sport and commercial harvest of major fisheries. In addition to the effects from fishing activities, the act recognizes the adverse effects of habitat alterations and dam and hatchery operations as major contributors to the decline of chinook salmon in the region. The act mandates a consultation process for federal agencies whose activities may adversely affect Essential Fish Habitat (EFH). This consultation process is intended to provide those agencies with technical assistance in making their activities consistent with conservation of EFH. The purpose of identifying adverse effects and companion conservation



measures is to provide general guidance for consultations and to make this information available ahead of time to federal and non-federal entities so that they may proactively include habitat conservation in their planning. NMFS is the primary agency responsible for administering the Magnuson-Stevens Act and EFH requirements.

## STATE

### California Endangered Species Act

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the California Fish and Game Code, a permit from CDFW is required for projects that could result in the take of a state-listed Threatened or Endangered species. Under the CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species but does not include "harm" or "harass" as the federal act does. As a result, the threshold for a take under the CESA is higher than that under the ESA. Several fish species in the project vicinity are covered under CESA.

### Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act (NCCPA) authorizes and encourages conservation planning on a regional scale in California through preparation of Natural Community Conservation Plans (NCCPs). NCCPs address the conservation of natural communities as well as individual species. The NCCPA's focus on regional conservation rather than individual project mitigation is appropriate for complex and extensive programs. However, no NCCPs currently cover the project area.

### Central Valley Regional Water Quality Control Board

Each of the nine regional water quality control boards (RWQCBs) in California prepares Basin Plans providing goals, policies, and standards for the protection of surface water and groundwater in the plan area. The Central Valley Regional Water Quality Control Board (CVRWQCB) Basin Plan for the region encompassing the proposed project designates the following fisheries-related beneficial uses of basin surface waters: warm and cold freshwater fisheries habitat, migration of warmwater and coldwater fish species, and spawning of warmwater fish species. The RWQCB provides protection to fisheries resources primarily through its regulatory authority for protecting water quality.

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Resource Management Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

#### Vegetation, Fish and Wildlife Policies

1. The objective of habitat retention calls for:
  - ▶ The integration of waterway habitat areas as part of the area wide system of open space
  - ▶ The preservation of all stands of vegetation along waterways which provide habitat, and achieving a standard of "no net loss of "wetland acreage".
  - ▶ The protection of fisheries by preventing discharge of contaminated surface waters to waterways.
2. The objective of enhancement calls for:
  - ▶ The improvement of natural habitat along waterways.
  - ▶ The creation of new Habitat within multi-purpose open space area designated for reuse of treated wastewater for wildlife management and recreation.

4. Developments proposed in sensitive biological areas shall be required to provide a site-specific analysis of the impacts of the project on fish and wildlife habitat. Because of the large-scale character of development proposed in the vicinity of biologically sensitive environments, including the conversion of several thousand acres of agricultural land to urban use, project proposals should be made to address ways in which new or enhanced habitat may be created as a trade-off to the general environmental impacts on biological resources associated with development under the General Plan.
5. Land use within areas of riparian habitat shall be restricted to nature-oriented passive recreation, which may include an arboretum, zoological gardens, hiking and nature study, essential linear infrastructure, and other uses compatible with existing or enhanced riparian habitats. Structures, which would reduce the amount of area available for water detention, should be prohibited within the Paradise Cut flood plain unless they are accompanied by concurrent expansion of such detention areas in or adjacent to Paradise Cut.
7. The visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments but the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams, or similar features, which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites. The multi-purposes use of water bodies for surface water drainage, flood control, wastewater reclamation, wildlife management, recreation and visual amenity is encouraged.

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

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) was developed to minimize and mitigate impacts on plant and wildlife habitat resulting from conversion of open space to non-open space projected to occur in San Joaquin County (SJCOG 2000). The SJMSCP is focused almost exclusively on terrestrial animals and plants and therefore has little applicability to fishery resources. A description of the SJMSCP, its function, and its implementation methods is presented in Section 4.14, "Terrestrial Biology."

## **4.15.2 Environmental Setting**

The environmental setting section on pages 4.15-4 through 4.15-26 in the 2003 SEIR described the fish habitats, fish populations, invertebrate populations, and factors affecting abundance and distribution of fish species in the waterbodies adjacent to and within the entire River Islands Development Area (RID Area) including the Phase 2 area. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting within and adjacent to the project area of the Phase 2 modifications rather than the larger RID area.

### **FISH HABITATS**

The San Joaquin River in the vicinity of the proposed project is characterized by a wide (100–150 feet), deep (more than 15 feet) channel with little canopy or overhead vegetation and minimal bank cover. Despite the lack of vegetative cover, the deep water likely provides protection from predators for some fish species.

Old River in the vicinity of the proposed project is characterized by a wide (100–150 feet) fairly deep (more than 5 feet) channel with no canopy and little bank or overhead vegetation. Portions of the Old River bank in this area are ripped. The channel is very homogeneous with little habitat complexity and generally low fish habitat value.

Paradise Cut is a flood control bypass that was created in the 1950s as part of the U.S. Army Corps of Engineers (USACE) Lower San Joaquin River Federal Project levee system. The channels in Paradise Cut range from 30 to 90 feet wide, vary in depth, and have abundant aquatic vegetation dispersed throughout. The Paradise Cut channel system functions as a dead-end slough fed by Old River, except when flood flows on the San Joaquin River reach approximately 18,000 cubic feet per second and spill over the Paradise Weir into Paradise Cut. Several channels in Paradise Cut contain open water year-round; others are dry during summer and fall. In summer, water levels in portions of Paradise Cut are influenced by the amount of water that is pumped into and out of the channels for agricultural irrigation.

All of the water bodies described above are subject to tidal influences.

Of special importance to many Delta species is the presence of shaded riverine aquatic (SRA) habitat. SRA habitat is defined as the nearshore aquatic habitat occurring at the interface between a river and adjacent woody riparian habitat. The principal attributes of this cover type are (1) that the adjacent bank is composed of natural, eroding substrates supporting riparian vegetation that either overhang or protrude into the water and (2) that the water contains variable amounts of woody debris, such as leaves, logs, branches, and roots and has variable depths, velocities, and currents. Often, much of the instream vegetation consists of dead woody debris that has fallen from the overhanging riparian vegetation. These attributes provide high-value feeding areas and escape cover for numerous fish species, particularly anadromous salmonids. Such habitat generally is rare in the local waterways adjacent to and near the project site, especially in the San Joaquin River and Old River. Small amounts of SRA habitat occur in Paradise Cut.

Shallow-water habitat is also favored by numerous species, including most protected fish species potentially occurring in the project area. Because of the steep banks of the levees along the San Joaquin River and Old River, there is limited shallow-water habitat available in these water bodies in the project area. Some shallow-water habitat is available in the canals of Paradise Cut.

An existing 2.5-acre pond in the Phase 2 portion of the RID Area likely contains a small freshwater fishery. However, this pond is isolated from the surrounding Delta waterways and does not support potential habitat for any of the sensitive fish species mentioned later in this section.

## FISH POPULATIONS

Pages 4.15-4 through 4.15-20 in the 2003 SEIR described in detail the monitoring surveys that are conducted by CDFW, DWR, and USFWS in the lower San Joaquin River and Delta; the species composition of the fisheries as a whole; and the special-status fishes that may be found in or adjacent to the project area.

### Species Composition

The Sacramento-San Joaquin River system and estuary support approximately 120 species of anadromous, freshwater, estuarine, and marine fish. Table 4.15-1 lists the species expected to occur in the vicinity of the proposed project. Chinook salmon is the most common native fish species encountered in beach seine surveys, followed by Sacramento splittail, Sacramento sucker, Sacramento blackfish, and Sacramento squawfish. Other native species, including hitch, prickly sculpin, and tule perch, were found in samples at low frequencies.

**Table 4.15-1 Native Fish Species Potentially Occurring in the San Joaquin River and the Delta, and their Status under ESA and CESA**

Common Name	Scientific Name	Special-status Designation <sup>1</sup>		Presence	
		State	Federal	San Joaquin R.	Delta
<b>Family Acipenseridae (Sturgeon)</b>					
Green Sturgeon	<i>Acipenser medirostros</i>	SSC	FT	X	X
White Sturgeon	<i>A. transmontanus</i>	--	--	X	X
<b>Family Catostomidae (Suckers)</b>					
Sacramento Sucker	<i>Catostomus occidentalis</i>	--	--	X	X
<b>Family Cottidae (Sculpins)</b>					
Prickly Sculpin	<i>C. asper</i>	--	--	X	X
<b>Family Cyprinidae (Minnows)</b>					
Hardhead	<i>Mylopharodon conocephalus</i>	SSC	--	X	X
Sacramento Pikeminnow	<i>Ptychocheilus grandis</i>	--	--	X	X

Common Name	Scientific Name	Special-status Designation <sup>1</sup>		Presence	
		State	Federal	San Joaquin R.	Delta
Hitch	<i>Lavinia exilicauda</i>	--	--	X	X
California Roach	<i>Hesperoleucus symmetricus</i>	--	--	X	X
Sacramento Splittail	<i>Pogonichthys macrolepidotus</i>	SSC	--	X	X
Sacramento Blackfish	<i>Orthodon microlepidotus</i>	--	--	X	X
<b>Family Embiotocidae (Surfperches)</b>					
Tule Perch	<i>Hysterocarpus traskii</i>	--	--	X	X
<b>Family Gasterosteidae (Sticklebacks)</b>					
Threespine Stickleback	<i>Gasterosteus aculeatus</i>	--	--	X	X
<b>Family Osmeridae (Smelts)</b>					
Delta Smelt	<i>Hypomesus transpacificus</i>	SE	FT	X	X
Longfin Smelt	<i>Spirinchus thaleichthys</i>	ST	FC	X	X
<b>Family Petromyzontidae (Lampreys)</b>					
Pacific Lamprey	<i>Lampetra tridentata</i>	--	SC	X	X
River Lamprey	<i>L. ayresi</i>	SSC	--	X	X
<b>Family Salmonidae (Salmon and Trout)</b>					
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>				
Winter-run		SE	FE		X
Spring-run		ST	FT	X	X
Fall-run		SSC	SC	X	X
Late-fall run		SSC	SC		X
Steelhead	<i>O. mykiss</i>	--	FT	X	X
Rainbow Trout (resident)	<i>O. mykiss</i>	--	--	--	--

<sup>1</sup>Status Codes:

- FC = Federally listed as endangered
- FE = Federally listed as endangered
- FT = Federally listed as threatened
- SE = Listed as endangered by the State of California
- ST = Listed as threatened by the State of California
- SSC = California Species of Special Concern
- SC = Federal Species of Concern

Sources: Moyle 2002; Moyle et al. 2015

### **Anadromous and Estuarine Species**

Anadromous species that occur in the Delta (i.e., species that spawn in fresh water after migrating as adults from marine habitat) include chinook salmon, steelhead, white sturgeon, green sturgeon, American shad, and striped bass. Most of these anadromous fish species are native to the Sacramento-San Joaquin River system, with the exception of American shad and striped bass, which were introduced from the Atlantic coast in the late 1800s. All these anadromous species spawn in the rivers of the Central Valley. Although American shad and striped bass represent important recreational fisheries, especially striped bass, they are not considered further in this analysis because they are not protected species, they are nonnatives, and impact mechanisms from the proposed project generally affect striped bass and American shad in a manner similar to the way they affect protected species evaluated in detail (i.e., chinook salmon, Sacramento splittail, and delta smelt). Therefore, impacts and mitigation measures described for protected species also would address striped bass and American shad.

Estuarine species that could be considered anadromous because they spawn in fresh water and tolerate or require low to moderate salinity during juvenile and adult life stages include delta smelt, longfin smelt, and Sacramento splittail.

A more detailed discussion of chinook salmon, steelhead, delta smelt, Sacramento splittail, longfin smelt, and green sturgeon is included under "Special-Status Fish Species," below.

**Introduced Freshwater Species**

Introduced freshwater species far outnumber native species in the Delta. White catfish (*Ictalurus catus*), American shad (*Alosa sapidissima*), striped bass (*Morone saxatilis*), largemouth bass (*Micropterus salmoides*), and smallmouth bass (*Micropterus dolomieu*) have spread to most freshwater Delta habitats since their introduction from the eastern United States and support important sport fisheries. Smallmouth and largemouth bass, as well as introduced sunfish, are also abundant in reservoirs and Central Valley rivers and streams.

**Special-Status Fish Species**

Special-status fish species addressed in this section include species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. These include species that are state and/or federally listed as Threatened or Endangered or that are proposed for listing; those considered as candidates for listing as Threatened or Endangered; and species identified by CDFW, USFWS, or NMFS as Species of Concern. In some cases, it is an Evolutionarily Significant Unit (ESU) of a fish species, rather than the entire population, that is listed. Under the ESA, an ESU is considered a population (or group of populations) that is reproductively isolated from other populations of the same species and that contributes substantially to the ecological/ genetic diversity of the species (Waples 1991). Different runs of the same salmon species (fall run, spring run) often are considered separate ESUs because the populations are reproductively isolated due to different spawning times.

Special-status fish species potentially occurring in the vicinity of the proposed project include Central Valley fall-/late-fall-run chinook salmon, Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon, steelhead, delta smelt, Sacramento splittail, longfin smelt, hardhead, Pacific lamprey, river lamprey, and green sturgeon. Most of these species migrate through the project area. Only splittail may be a resident in the vicinity of the proposed project.

Table 4.15-2 shows the seasonal timing of significant life history stages for these special-status species. The content of this exhibit does not reflect the relative magnitude of populations in the South Delta or San Joaquin River. Numerous life stages identified in Table 4.15-2 are rarely present in the study area but still could occasionally be present in a particular month.

**Table 4.15-2 Temporal Occurrences of Special-Status Fish Species in the Lower Reach of the San Joaquin River**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>ADULT<sup>1</sup></b>												
Green Sturgeon												
White Sturgeon												
Steelhead												
Spring-run Chinook Salmon												
Fall-run Chinook Salmon												
Delta Smelt												
River Lamprey												
Pacific Lamprey												
Sacramento Splittail												
Hardhead												

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>JUVENILE<sup>2</sup></b>												
Green Sturgeon												
White Sturgeon												
Steelhead												
Spring-run Chinook Salmon												
Winter-run Chinook Salmon												
Fall-run Chinook Salmon												
Delta Smelt												
River Lamprey												
Pacific Lamprey												
Sacramento Splittail												
Hardhead												

<sup>1</sup> There are no records of adult winter-run Chinook Salmon or adult late fall-run Chinook Salmon within the San Joaquin River basin. As such, adult winter-run and late fall-run Chinook Salmon would not be present at any time of the year in the lower reach of the San Joaquin River. There are also no records of adult Longfin Smelt in the lower reach of the San Joaquin River.

<sup>2</sup> Juvenile represents post emergent fry, fry, juveniles and smolts. There are no records of juvenile Longfin Smelt in the lower reach of the San Joaquin River.

**Peak Abundance**  
**Potentially Present**

Sources: Moyle 2002; Hanni et al. 2006; NMFS 2014; NMFS 2010; CDFW 2019; Stuart, pers. comm., 2020; USFWS 2019; Damon et al. 2016; Kimmerer 2008; Nobriga et al. 2008

**Chinook Salmon**

There are four runs of chinook salmon (*Oncorhynchus tshawytscha*) in the Sacramento and San Joaquin River systems: fall, late fall, winter, and spring. These runs have the following special-status designations:

- ▶ Central Valley fall-run and late-fall-run chinook salmon - California species of special concern,
- ▶ Sacramento River winter-run chinook salmon - federally listed and state-listed endangered species, and
- ▶ Central Valley spring-run chinook salmon - federally and state listed as threatened.

Chinook salmon require cold, freshwater streams with suitable gravel for reproduction. Females deposit their eggs in nests, or “redds,” which they excavate in the gravel bottom in areas of relatively swift water. Eggs generally hatch in approximately 3–6 months, and newly emerged larvae remain in the gravel for another 2–3 weeks until the yolk is absorbed (Moyle et al. 1995). For maximum survival of incubating eggs and larvae, water temperatures must be between 39°F and 57°F. After emerging, chinook salmon fry seek shallow, nearshore habitat with slow water velocities and move to progressively deeper, faster water as they grow. Freshwater rearing habitat extends from upstream spawning reaches to the Delta and Suisun Bay. Although the proportion of annual juveniles moving downstream to rear in lower river reaches and in the Delta is unknown, available information indicates substantial numbers of fry rear in the Delta, especially during wetter years (USFWS 1997). Juveniles typically rear in fresh water for up to 5 months before migrating to sea, although spring-run juveniles frequently reside in freshwater habitat for 12-16 months. Chinook salmon spend 2–4 years maturing in the ocean before returning to their natal streams to spawn. All adult chinook salmon die after spawning.

**Central Valley Fall-/Late-Fall-Run Chinook Salmon**

The Central Valley fall-run and late fall-run Chinook ESU includes all naturally spawned fall-run Chinook salmon in the San Joaquin and Sacramento Basins, east of the Carquinez Strait. Fall-run chinook salmon is the most widely distributed run occurring in the Sacramento and San Joaquin rivers and their tributaries. Spawning habitat for fall-run chinook

salmon in the San Joaquin River system exists in three tributary streams: Stanislaus River, Tuolumne River, and Merced River. Annual production of fall-run chinook salmon from these streams over the period 1967–1991 averaged approximately 40,000 fish (11,000 in the Tuolumne, 19,000 in the Stanislaus, and 10,000 in the Merced). Approximately 10 percent of the Merced River production is from hatcheries; the remainder is from natural production. Production estimates include adult fish returning to spawn and those harvested in both ocean and instream fisheries. Production of fall-run chinook salmon in the San Joaquin River system over the 1967–1991 period accounted for approximately 7 percent of the total Central Valley fall-run chinook production and approximately 10 percent of the Central Valley fall-run chinook natural production (Anadromous Fish Restoration Program Core Group 1995).

Adult fall-run chinook salmon migrate from the ocean to upstream spawning areas in the late summer and fall. In the San Joaquin River system, adults migrate somewhat later than those in the Sacramento River system, generally reaching spawning areas between September and December. Eggs incubate until March. Fall-run fry generally emerge from the streambed from December through March and rear in the river for a short period. Some fry may rear as far downstream as the Delta, particularly in wet years. Fall-run juveniles emigrate as smolts from April through June. A small percentage of fall-run juveniles (approximately 5 percent) may not emigrate until the fall or winter following hatching.

Fall-run chinook salmon would be expected to occur in the vicinity of the project area only during the fall and early winter, when adults are migrating between the ocean and spawning habitat in the three tributary streams (Stanislaus River, Tuolumne River, and Merced River) and during the late winter and early spring, when fry may be rearing in the vicinity. Kodiak trawl samples in the project vicinity indicate the peak abundance of fall-run chinook salmon at Mossdale during the period between February and June, with individuals present in smaller numbers as early as December and as late as July in some years (USFWS 2011).

NMFS has determined that the abundance of fall-run chinook salmon in the San Joaquin River system is low relative to historic levels because of severe habitat degradation. NMFS attributes habitat degradation to various agricultural and municipal water use activities in the Central Valley, which result in point-source and non-point-source pollution, elevated water temperatures, diminished flows, altered flow directions in some cases, and smolt and adult entrainment into poorly screened or unscreened diversions. High harvest rates in the ocean fisheries also may contribute to reduced abundance.

### **Sacramento River Winter-Run Chinook Salmon**

In July 2014, NMFS published the Recovery Plan for Sacramento River winter-run ESU Chinook salmon (NMFS 2014). The Sacramento River winter-run ESU includes all naturally spawned populations of winter-run ESU Chinook salmon in the Sacramento River and its tributaries, as well as Chinook salmon that are part of the conservation hatchery at the Livingston Stone National Fish Hatchery (LSNFH) located at the foot of the Shasta Dam. Although Sacramento River winter-run chinook salmon are not known to migrate up the San Joaquin River to spawn and the project site is not in the range of this chinook salmon ESU, juvenile winter-run chinook have been reported in real-time monitoring surveys at Mossdale based on the length of the juveniles at the time of capture. Winter-run juveniles may be present in the vicinity of the project area from February–May, with peak occurrence in March and April during their seaward emigration. Small amounts of overhead vegetation, minimal bank cover, and relatively steep banks provide low value habitat for juvenile winter-run ESU Chinook that occur in the area. The greatest threat to the population is that the ESU is comprised of a single population with limited spawning and rearing habitats (NMFS 2014). With no other population to buffer the remaining stock from natural fluctuations, the nearly singular age at maturity, low fecundity rates and little contribution by older-year classes a single catastrophe could result in extinction of the ESU (NMFS 2014).

### **Central Valley Spring-Run Chinook Salmon**

Central Valley spring-run chinook salmon are listed as threatened under the ESA and CESA. Spawning has recently been documented in the San Joaquin River as part of a reintroduction effort (NOAA 2019). Due to this reintroduction effort it is estimated that adults may return in January or early February through September. After initial spawning from the reintroduction program (estimated 2016) juvenile presence in the Action Area may shift, with fish occurring from October–June. The San Joaquin River, Old River, and Paradise Cut in the Action Area do not provide suitable habitat for spawning, egg incubation, or larval development and would thus serve exclusively as a migration corridor for adult fish during their spawning immigrations and for juvenile spring-run Chinook salmon during their seaward emigrations.

### Steelhead

Steelhead (Central Valley distinct population segment [DPS]) is federally listed as threatened. Steelhead have been captured in the vicinity of Mossdale only in the real-time monitoring surveys. There is very limited information available concerning the historical or present abundance and distribution of steelhead in the San Joaquin River and its tributaries. McEwan and Jackson (1996) indicate that a small, remnant run persists in the Stanislaus River, that steelhead were observed in the Tuolumne River in 1983, and that a few large rainbow trout that appear to be steelhead enter the Merced River Hatchery annually. Steelhead in the San Joaquin River drainage are included by NMFS in the Central Valley DPS, and the project site is located in USFWS-designated critical habitat for this DPS.

Adult steelhead migrate upstream to spawning habitat in the upper tributaries during fall, winter, and early spring. Spawning behavior is similar to that of salmon, but spawning occurs in smaller gravels, and steelhead adults do not necessarily die after spawning. Juvenile steelhead can run several years in their natal streams and then migrate downstream in spring. The San Joaquin River in the vicinity of the proposed project would be used by steelhead primarily as a migration corridor between the ocean and coldwater habitat in upstream tributaries.

Habitat degradation has been the main cause for declines in this steelhead population. Major factors are blockage of adult passage to suitable spawning and rearing areas, as well as lethal water temperatures during egg incubation and early rearing. Other factors that continue to adversely affect steelhead trout and that may impede recovery to former levels of abundance include entrainment loss to diversions, in-river sport fishing, increased predation, the presence of toxic mine waste, and diversion off the primary juvenile migration path through the Delta (SWRCB and USACE 1995).

### Delta Smelt

Delta smelt is listed as threatened under the ESA and endangered under the CESA. Delta smelt are small (usually less than 3.5 inches long) plankton-feeding fish that usually live for only 1 year. They also feed on small aquatic insect larvae when available. They are endemic to the upper Sacramento-San Joaquin River estuary and occur primarily in open surface waters of Suisun Bay, in the Sacramento River upstream to Isleton, and in the San Joaquin River downstream of the Mossdale sampling station (59 Federal Register [FR] 852, January 6, 1994).

The delta smelt population generally is concentrated in the estuary west of the confluence of the Sacramento and San Joaquin rivers in high-outflow years and in the Delta in low-outflow years (Sweetnam 1997). The proportion of the delta smelt population found in Suisun Bay during summer and fall is correlated with Delta outflow volume. Delta outflow determines the location of the salinity gradient and may strongly influence delta smelt distribution. USFWS data indicate that delta smelt are found in the Bay-Delta estuary where salinity is generally less than 2 parts per thousand (ppt). Smelt are rarely found in estuarine waters with salinity of more than 10-12 ppt. Except when spawning in fresh water, delta smelt are most frequently caught in, or slightly upstream of, the entrapment zone, where salinity is between 0.5 ppt and 5.2 ppt (SWRCB and USACE 1995). The entrapment zone is the area of the estuary where riverine freshwater flow mixes with seawater. Since the early 1980s, delta smelt have been most abundant in the northwestern Delta in the channel of the Sacramento River (59 FR 852, January 6, 1994) Delta smelt spawn at 1 year of age, and most adults die after spawning. A female delta smelt deposits approximately 1,200-2,600 demersal (sinking) adhesive eggs on substrates such as rock, gravel, tree roots, and submerged vegetation. After the eggs hatch (in approximately 12-14 days), larvae float to the surface and are carried by the currents. Under natural flow conditions, the larvae are carried downstream to near the entrapment zone (SWRCB and USACE 1995, cited in City of Lathrop 2003).

Delta smelt disperse widely into fresh water in late fall and winter as the spawning period approaches, moving as far upstream as Mossdale on the San Joaquin River and the confluence with the American River on the Sacramento River (SWRCB and USACE 1995, cited in City of Lathrop 2003). However, in most years, delta smelt spawn primarily in the upper end of Suisun Bay, in Montezuma Slough, and in the lower and central Delta. In the Delta, delta smelt spawn primarily in the Sacramento River channel and adjacent sloughs (59 FR 852, January 6, 1994) Spawning occurs between February and June and appears to occur in dead-end sloughs and shallow edge-waters of the channels in the upper Delta and in the Sacramento River above Rio Vista (59 FR 852, January 6, 1994) Ideal spawning areas are those with moderate to fast flows (including tidal action) and thriving aquatic vegetation (SWRCB and USACE 1995, cited in City of Lathrop 2003).



The distribution of delta smelt spawning in the estuary may depend on Delta outflow. Delta smelt spawn primarily in fresh water, and the downstream distribution of fresh water is determined by the amount of flow in the Sacramento and San Joaquin rivers. Fresh water in high-outflow years in the upper Suisun Bay may encourage spawning in Suisun Bay. In low-outflow years, adult smelt must migrate into the Delta to reach fresh water (Wang and Brown 1993, cited in City of Lathrop 2003). When outflow is low and exports at the Central Valley Project (CVP) and State Water Project (SWP) pumps are high, the net flow in the lower San Joaquin River may be toward the pumps rather than downstream. The reverse flow condition, which draws relatively fresh water from the Sacramento River, may encourage upstream migration of delta smelt adults in the south Delta, where they and their larvae are vulnerable to entrainment and other sources of mortality. Positive outflow from the central Delta may aid movement of larvae to downstream habitat.

The proposed project is near the upper limit of known distribution of delta smelt in the San Joaquin River. Real time monitoring surveys at Mossdale have observed delta smelt post-larval-, juvenile- and adult sized fish in the spring and early summer months in many years. This suggests that adult delta smelt successfully spawned in the vicinity of the project area. Therefore, all life stages of delta smelt may occur in the project area (Ascent Environmental and Robertson-Bryan 2016).

Delta smelt populations have fluctuated greatly in the past. Their short lives and relatively low fecundity make populations susceptible to depression following periods when conditions are unfavorable, such as during droughts. The delta smelt population fell to very low levels in the early 1980s. The declines have been attributed to reductions in Delta outflow in some years, excessively high outflow in other years, entrainment losses to water diversions, changes in food organisms, toxic substances, loss of genetic integrity, and habitat destruction (particularly loss of shallow-water habitat) (Moyle et al. 1989).

### **Sacramento Splittail**

Sacramento splittail is a California Species of Special Concern. Splittail are large (more than 12 inches long) cyprinids (minnow family) and are endemic to the lakes and rivers of the Central Valley. They are a freshwater fish capable of tolerating moderate levels of salinity (10–18 ppt). Their lifespan is approximately 5 years.

Splittail are abundant in Suisun Bay, Grizzly Bay, and the western and northern part of the Delta. In recent years, splittail distribution appears to have shifted to the lower Sacramento River and south Delta (SWRCB and USACE 1995, cited in City of Lathrop 2003). Since 1985, splittail have been rare in San Pablo Bay, indicating that their range may be continuing a historic decline (Moyle et al. 1995). Overall, the species' distribution has been reduced to less than one-third of its original range.

Fish surveys in the Sacramento-San Joaquin River estuary indicate that splittail abundance has declined by more than 50 percent from 1980 through 1994, most likely in response to dry years from 1986 to 1992. In 1995, abundance reached a record high, relative to historical conditions. Strong year classes typically follow high-flow years (e.g., 1995) when bypasses are flooded (Baxter, pers. comm., 1994, cited in City of Lathrop 2003). Preliminary surveys in 1998 indicated high larvae and juvenile abundance during this very wet year (EDAW 1998, cited in City of Lathrop 2003). In the project area, beach seine surveys conducted by USFWS indicate that splittail abundance was comparable at the Mossdale site and at the Wetherbee site (Table 4.15-2). Splittail comprised approximately 1 percent of the total catch at both locations. Catch of splittail at Big Beach, approximately 5 miles upstream of the project site, exceeded catch at both Mossdale and Wetherbee but was dominated by large catches on a few dates during 1995 and 1998, including a catch of more than 3,900 on a single sample date in June 1998. This large catch may represent an unusual concentration of splittail or may be representative of natural variation in local abundance of the species during the reproductive period. In either case, it appears to be transient.

Splittail typically spawn in dead-end sloughs and slow reaches of large rivers over submerged vegetation. Male and female splittail become sexually mature by their second winter. Female splittail are capable of producing more than 100,000 eggs per year. Incidental information indicates that adult spawning migration occurs during winter and spring. The onset of spawning appears to be associated with flooding, increasing water temperatures, and increasing day length. Splittail spawn in late April and May in Suisun Marsh and between early March and May in the upper Delta and lower reaches of the Sacramento and San Joaquin rivers (SWRCB and USACE 1995, cited in City of Lathrop

2003). Spawning in the tidal freshwater habitats of the Sacramento-San Joaquin River estuary has been observed as early as January and as late as July. Spawning occurs primarily in the lower reaches and flood bypasses of the Sacramento and San Joaquin rivers, upstream of Sacramento and Mossdale, respectively. Shallow, weedy areas inundated during seasonal flooding provide ideal habitat for adult spawning and foraging and subsequent egg development and larval and early juvenile rearing. Paradise Cut does provide suitable, although marginal habitat for Sacramento splittail. Regular dredging and vegetation removal in many of the channels and poor water quality during certain conditions minimize the value of the habitat.

As ephemeral flooded habitat disappears, splittail larvae and juveniles are forced to use habitat along the margins of the main river and Delta channels. Although splittail use deeper, open water as they grow, much of the population continues to use shallow (<10 feet deep) edge habitat as adults. This habitat is very limited along the San Joaquin River and Old River in the project vicinity because of the steep levee banks typical of the area. Juvenile splittail are commonly found in Delta sloughs in late winter and spring and are particularly abundant in the vicinity of Montezuma Slough (Meng and Moyle 1995). As summer progresses, juvenile splittail occupy the deeper, open-water habitats of Suisun and San Pablo bays. In upstream areas, juveniles are found in shallow, flooded areas where higher water temperatures and low water velocities persist.

Splittail abundance has been shown to be strongly associated with high Delta outflows during primary spawning months (March through May). High Delta outflows during late winter and spring correlate with increased total surface area of shallow-water habitats containing submerged vegetation suitable for splittail spawning, both in and, especially, upstream of the Delta. During years of severely reduced Delta outflow, such as the 1986-1992 drought, spawning success may have been greatly reduced, contributing to reduced abundance (Meng and Moyle 1995).

Habitat modification is probably the largest single factor contributing to the long-term decline of Sacramento splittail. Land reclamation, flood control facilities, and agricultural development have eliminated and drastically altered much of the splittail habitat in lowland areas. Dams have restricted access to upstream spawning and rearing habitats. Levee construction, bank stabilization practices (e.g., bank revetment), river channelization, dredging, and diking and filling of historical floodbasins have drastically reduced ephemeral shallow-water habitats available to spawning adults. An estimated 96 percent of historical wetland habitats are either unavailable to splittail or have been eliminated.

### Longfin Smelt

Longfin smelt is a candidate for listing under the ESA and listed as threatened under the CESA. This species is a 3- to 6-inch-long silvery fish that lives for 1-2 years. Longfin smelt are euryhaline (i.e., adapted to a wide salinity range) and anadromous. They were the most abundant smelt species in the Bay-Delta estuary before 1984; however, populations have declined significantly since this peak. Longfin abundance was very low from 1987 to 1992, with 1992 having the lowest index on record. Abundance increased somewhat during 1993. Although abundance indices have been highly variable since this time, they have generally trended towards a population decline.

Distribution of longfin smelt is centered in the west Delta, Suisun Bay, and San Pablo Bay. In wet years, longfin smelt are distributed more toward San Pablo Bay and in dry years more toward the west Delta. Peak spawning occurs between February and April in upper Suisun Bay and the lower and middle Delta (Moyle et al. 1995). Spawning rarely occurs upstream of Medford Island in the San Joaquin River and Rio Vista on the Sacramento River. The project area is outside the primary distribution area of longfin smelt in the Sacramento-San Joaquin River Delta.

Longfin smelt spawn in fresh water and usually die after spawning. Spawning occurs primarily from January through April in upper Suisun Bay and in the Delta. The eggs are adhesive and are deposited on rocks or aquatic plants. They hatch in 37-47 days at 45°F. Larval abundance in the Bay-Delta estuary peaks from February to April. Larvae and juveniles generally move downstream and rear in Suisun and San Pablo bays (Moyle et al. 1995).

Larval longfin smelt generally are collected below Medford Island in the San Joaquin River and below Rio Vista on the Sacramento River, indicating that spawning rarely occurs above these locations (Moyle et al. 1995). The project area is located well upstream of Medford Island, and longfin smelt adults, eggs, and larvae are not expected to occur in the vicinity of the proposed project. In addition, longfin smelt have not been collected during sampling in the project vicinity. Therefore, this species is not expected to occur in the project area and is not evaluated further in this SEIR.

### **Hardhead**

Hardhead, a California species of special concern, are large warmwater cyprinids (i.e., minnows) that occur primarily in large, undisturbed low to mid-elevation rivers and streams, including the upper tributaries of the San Joaquin River. Hardhead mature in their third year and spawn primarily in April and May, although some data suggests that spawning may extend into August (Moyle 2002). Hardhead in large rivers, such as the San Joaquin River, typically migrate into smaller tributary streams to spawn, where habitat conditions are more suitable for spawning. Although the early life history of juvenile hardhead is poorly understood, juvenile hardhead are known to move into deeper habitats as they grow (Moyle 2002). Adult and juvenile Hardhead have the potential to occur throughout the year in the lower San Joaquin River in the vicinity of the project (Table 4.15-2).

### **Green Sturgeon**

Green sturgeon that may occur in the project vicinity are part of the southern DPS encompassing fish that occur in the Sacramento and San Joaquin Rivers and Delta. The green sturgeon southern DPS is listed as threatened under the ESA and is a CDFW Species of Concern. Green sturgeon is a minor component of the total sturgeon population in the Central Valley, with white sturgeon being much more common. Green sturgeon primarily spawn in the Sacramento River with some spawning activity documented in the Feather and Yuba Rivers, though they may spawn in other areas of the Central Valley (Ascent Environmental and Robertson-Bryan 2016). Green sturgeon have not been sampled near the project vicinity, although based on angler reporting via the Sturgeon Report Card, green sturgeon are present in the San Joaquin River upstream of Stockton (Dubois et al. 2014; Dubois and Harris 2015, 2016; Dubois and Danos 2017, 2018). In addition, a single adult was observed near Knight's Ferry on the Stanislaus River in 2017 (USFWS 2018). Juvenile green sturgeon may be present in the San Joaquin River all year, and adults may be present from March through July (Table 4.15-2).

### **Pacific Lamprey**

The Pacific lamprey is a federal species of concern; however, no state designation has been made. Pacific Lamprey are still present throughout much of their historical range. However, some populations have been reduced or extirpated from streams that have been highly degraded or modified by humans. The Pacific Lamprey range includes Pacific coast drainages extending from Hokkaido Island, Japan to Alaska and south to Rio Santo Domingo, California and includes rivers and creeks of the Central Valley, California. Pacific Lamprey are anadromous and highly predaceous (Moyle 2002). The predatory adult stage is spent in the ocean, although some scattered landlocked populations occur in some freshwater reservoirs.

The adults begin their upstream spawning migrations to freshwater rivers as early as January, with peak immigration occurring from early March through late June (Moyle 2002). Spawning occurs shortly after the adult lamprey reach suitable spawning areas, primarily during the spring and summer months. Following hatching, the ammocoetes reside in upstream waters for a period of five to seven years, where they burrow into the sediments and filter organic matter, before undergoing metamorphosis to the predatory and saltwater-tolerant adult phase and subsequent emigration from freshwater to the ocean. Emigration occurs under high flows during the winter and spring, possibly coincident with the upstream migration of the adults (Moyle 2002). Based on the available information, adult Pacific Lamprey may be present in the lower San Joaquin River in the vicinity of the project during their spawning migrations as early as January, but primarily between March and May, potentially as late as June. Juvenile Pacific Lamprey may occur between October and July (Hanni et al. 2006; Table 4.15-2).

### **River Lamprey**

The river lamprey is a California Species of Special Concern. The River Lamprey is relatively small (averaging 17 centimeters) and highly predaceous. They are anadromous and will attack fish in both fresh and salt water. The River Lamprey is distributed in streams and rivers along the eastern Pacific Ocean from Juneau, Alaska, to San Francisco Bay. Primary abundance in California is in the lower Sacramento River and San Joaquin River watersheds, especially the Stanislaus and Tuolumne Rivers. Adults enter freshwater to spawn in sand or gravel riffles. After hatching, ammocoetes remain in spawning areas for years before completing metamorphosis, congregating just upstream of saltwater and then out to the ocean (Moyle 2002). Adult river lamprey may occur in the project vicinity from February through May, and juveniles may occur between late November and January (Hanni et al. 2006; Table 4.15-2).

## INVERTEBRATE POPULATIONS

The 2003 SEIR described the existing conditions of invertebrate populations in the project area and it is not anticipated that these conditions have changed substantially since that time. Although invertebrate populations are a critical component in the aquatic ecosystem, they are given only cursory consideration in the remainder of this SEIR. The proposed project would have only very localized impacts on invertebrate populations and habitats, and project-related impacts would be mostly temporary, during construction. In addition, potential impact mechanisms affecting invertebrate populations and habitats are the same as those for special-status fish species. Therefore, impacts and mitigation described for these fish species also would address aquatic invertebrates.

## FACTORS AFFECTING ABUNDANCE AND DISTRIBUTION OF FISH SPECIES

The factors affecting abundance and distribution of fish species in the project area are described on page 4.15–21 through 4.15–26 of the 2003 SEIR. These factors have not changed substantially in the project area.

### 4.15.3 Environmental Impacts and Mitigation Measures

#### METHODOLOGY

Information obtained from previous environmental compliance documents, biological studies conducted in the Delta, fish monitoring surveys, and California Natural Diversity Data Base records were used to assess impacts on fisheries resources from the proposed project (see the References chapter of this SEIR for more details on the information sources used).

The River Islands Project as a whole represents a substantial change in the RID Area, transforming the area from agricultural production to mixed-use residential/commercial development. The impacts on the existing fisheries, however, are confined to the changes to the waterways surrounding Stewart Tract (San Joaquin River, Old River, and Paradise Cut). Project-related fisheries impacts generally fall into six primary impact mechanisms:

- ▶ changes to sedimentation/water quality from in-river construction,
- ▶ project-induced changes to physical habitat in the surrounding waterways,
- ▶ changes in water diversions (magnitude and timing) onto the island,
- ▶ changes in water discharges (magnitude and timing) from the island,
- ▶ changes in water quality of water discharges from the island, and
- ▶ changes to flood flows into Paradise Cut from the San Joaquin River.

The analysis methodology is generally based on evaluating hydrologic and water quality model output developed for the proposed project (see Section 4.8, “Hydrology and Water Quality,” in the 2003 SEIR and updated information in subsequent Addenda) and determining whether the changes result in significant impacts on key fisheries resources. The 2003 hydrologic and water quality modeling is supplemented by further engineering and design evaluation of the internal lake system, quarterly water quality monitoring conducted at constructed Phase 1 lakes starting in April 2015, and quarterly water quality monitoring in the central drainage ditch starting in January 2019 (PACE 2020; ENGEO 2020). Delta or CVP- and SWP-wide operations modeling were unnecessary because the proposed project is very localized, does not affect CVP or SWP operations, and does not affect available water supplies.

Potential impacts associated with management of the internal lakes (water intakes from the Delta, discharges to the Delta) were evaluated under full project buildout to provide an analysis of the “worst-case condition.” When full buildout of the project is complete, there would be the greatest shift in conditions between agricultural operations and a developed condition, and there would be the greatest volume of intake and discharge of water to operate the lake system.

A large number of fish species can occur in the project area. Many of these species have the same or similar ecological requirements; therefore, a representative sample of key species was selected for evaluation that would adequately reflect potential impacts for all species. Species were selected if they have been identified by state or federal agencies as special-status species and/or have experienced substantial population declines/changes in recent years. Impacts on the following key and representative species were considered when evaluating project effects:

- ▶ Central Valley fall-/late-fall-run chinook salmon, Central Valley winter-run chinook salmon, and Central Valley spring-run chinook salmon;
- ▶ steelhead trout;
- ▶ delta smelt;
- ▶ Sacramento splittail;
- ▶ longfin smelt;
- ▶ hardhead;
- ▶ pacific lamprey;
- ▶ river lamprey; and
- ▶ green sturgeon.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~striketrough~~ and additional text shown in underline.

The modified Phase 2 Project would result in significant impact on fisheries resources if it would:

- ▶ have a substantial ~~direct~~ adverse ~~impact~~ effect, either directly or through habitat modifications, on any species identified as a Threatened, Endangered, candidate, sensitive, or special-status species by CDFW, USFWS, or NMFS, or in local or regional plans;
- ▶ substantially reduce the habitat of a fish species;
- ▶ cause a fish population to drop below self-sustaining levels;
- ▶ threaten to eliminate a fisheries/aquatic community;
- ▶ substantially reduce the number or restrict the range of an aquatic species;
- ▶ substantially alter the abundance, diversity, or fish species composition such that it reduces the viability of a special-status, native, or sport fish species; ~~or~~
- ▶ substantially interfere with the movement of any resident or migratory special-status, native, or sport fish population, or impede the use of a native fishery nursery site;
- ▶ Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## ISSUES NOT DISCUSSED FURTHER

There are no identified fish spawning sites in the project vicinity and waterways in the vicinity do not provide habitat conditions conducive to spawning. The ability of fish species to migrate past the project site to reach spawning/nursery sites in other regions is addressed as appropriate in the impact analyses below. The potential for the project to impede the use of a native fishery nursery site is not discussed further.

City policies related to fishery resources apply to waterways and riparian habitats. As identified in the 2003 SEIR, subsequent Addenda, and in the impact discussions below, the River Islands Project as a whole, and the modified Phase 2 Project, through both project design and implementation of mitigation measures where needed, are protective of these resources. The 2003 SEIR identified no conflicts with policies or ordinances related to fishery resources and the proposed alteration in Phase 2 development evaluated here does not change that condition. Therefore, consistency with local ordinances or policies protective of fishery resources is not discussed further.

As described further in Section 4.14, "Terrestrial Biology," the River Islands Project has been utilizing the SJMSCP for ESA and CESA compliance during development of Phase 1 and would continue to do so for Phase 2 development. The SJMSCP is the only habitat conservation plan active in the project area. Implementation of the River Islands Project is being conducted consistent with the requirements of the SJMSCP and does not conflict with provisions of the plan. Therefore, this issue is not discussed further.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.15-a: RID Area Construction Sediment

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The 2003 SEIR concluded that the impact from construction sediment would be less than significant with the implementation of a storm water pollution prevention plan (SWPPP) and best management practices (BMPs). The Phase 2 modifications would not result in a larger area of construction than the project analyzed in the 2003 SEIR and a SWPPP and BMPs would also be in place. Therefore, there is no new significant impact from construction sediment on fisheries as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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The 2003 SEIR disclosed in Impact 4.15-a that construction activities within the RID area, if they led to sediment releases in nearby waterways, could lead to temporary impacts on the fishery including, reduced visibility and subsequent impairment of feeding success, gill abrasion, respiratory distress, habitat modification through the introduction of fines, and smothering of benthic organisms. The 2003 SEIR further concluded that any special-status species in the area during the construction activities could be adversely affected, including chinook salmon, delta smelt, and Sacramento splittail. However, due to the implementation of BMPs and a SWPPP this impact would be less than significant. Development and implementation of a SWPPP would both be required by law, and is a requirement of Mitigation Measure 4.8-a identified in the Hydrology and Water Quality Section of the 2003 SEIR.

The Phase 2 modifications would increase the number of residential units and the density of residential development and add a mixed-use town center within the boundaries of the Phase 2 area. The Phase 2 modifications would not result in additional soil disturbance that could lead to sediment runoff beyond that assumed in the 2003 SEIR. A SWPPP and BMPs would be applied to construction under the Phase 2 modifications. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact from construction sediment on fisheries, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

## Impact 4.15-b: Levee Breaching

The 2003 SEIR concluded that the breaching of levees along the San Joaquin River, Old River, and Paradise Cut would result in sediment entering and being suspended in the water, which would result in a significant impact to special-status fish. The River Islands Project no longer includes levee breaching activities along the Old River or San Joaquin River as back bays were removed from the proposed project as identified and evaluated in the adopted Third Addendum to the Phase 2003 SEIR. Levee breaches in Paradise Cut are still proposed, and although regularly described as part of Phase 1, the timing of the breaches would likely occur after Phase 1 development is complete and when Phase 2 is underway or complete (as evaluated in the Sixth Addendum to the 2003 SEIR). Implementation of these levee breaches could release sediment into Paradise Cut that could have a significant adverse effect on fish that may be present. There is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

Impact 4.15-b of the 2003 SEIR disclosed the impacts of levee breaching on fisheries. The 2003 SEIR described how the breaching of levees along the San Joaquin River, Old River, and Paradise Cut would result in sediment entering and being suspended in the water. This sediment would have the same effects as discussed for Construction Sediment in Impact 4.15-a, result in temporary inhibition of spawning for Sacramento splittail, and impede or delay chinook salmon migrations. The 2003 SEIR concluded that because of the impacts to special-status fish species, the impact from levee breaching would be significant.

The River Islands Project no longer includes levee breaching activities along the Old River or San Joaquin River as back bays were removed from the proposed project as identified and evaluated in the adopted Third Addendum to the Phase 2003 SEIR. Levee breaches in Paradise Cut are still proposed, and although regularly described as part of Phase 1, the timing of the breaches would likely occur after Phase 1 development is complete and when Phase 2 is underway or complete (as described and evaluated in the Sixth Addendum to the 2003 SEIR). Therefore, this impact analysis evaluates the Paradise Cut levee breaches as if they were a Phase 2 project activity. Implementation of these levee breaches could release sediment into Paradise Cut that could have the same adverse effect as described for Phase 1 in the 2003 SEIR on special-status fish involving sediment releases and resulting degradation of water quality. Although the extent of the impact is less than that described in the 2003 SEIR because there would be no levee breaching along Old River or the San Joaquin River, a significant adverse effect in Paradise Cut could still occur as described in the 2003 SEIR, only the impact would happen later. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### Modified Mitigation Measure 4.15-b: Levee Breaching

*Mitigation Measure 4.15-b shown below includes the original language from the measure as it was adopted, with revisions to reflect changed conditions since certification of the 2003 SEIR mitigation (including references to items that are no longer included in the River Islands Project, such as levee breaching along Old River and the San Joaquin River), with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

The City shall ensure that a SWPPP is prepared and implemented during construction activities and that all 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 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 ~~Old River and~~ 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 ~~Old River and~~ 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.

~~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.

#### **Significance after Mitigation**

Implementation of Modified Mitigation Measure 4.15-b would avoid and minimize the impacts on fisheries from levee breaching activities in Paradise Cut. These impacts would be avoided and minimized through the use of a SWPPP and BMPs to reduce erosion and runoff, as well as restrictions on the timing of in-water construction activities.

Implementation of this mitigation measure would reduce the potential impact to fisheries from levee breaching in Paradise Cut to a **less-than-significant** level, as identified in the 2003 SEIR.

#### **Impact 4.15-c: Bridge and Utility Crossings**

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The 2003 SEIR disclosed that the construction of bridges and the utility crossing on the San Joaquin River would be a significant impact, because these activities could result in stream bed and riverbank disturbance, sediment input, and contaminant input, all of which could substantially adversely affect fish species in the immediate area. The construction of the Golden Valley Parkway Bridge and the second two lanes of the Bradshaw's Crossing Bridge are proposed for construction in Phase 2 and would have substantial adverse effects on multiple special-status fish species. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.15-c of the 2003 SEIR disclosed the impacts of the construction of the Bradshaw's Crossing Bridge, the Golden Valley Parkway Bridge, and the boring of a 4-inch natural gas pipeline under the San Joaquin River on fisheries. The 2003 SEIR described how the potential sedimentation, contaminant release, and in-water construction could have adverse effects on respiration, feeding and migration of multiple special-status species. The 2003 SEIR, therefore, concluded that the impacts from construction of bridge and utility crossings was significant.

The Phase 2 modifications would not include the boring of the pipeline, or the construction of the first two lanes of the Bradshaw's Crossing Bridge (first half of a total of four planned traffic lanes), which was constructed in Phase 1. The Golden Valley Parkway Bridge and the second half of the Bradshaw's Crossing Bridge (i.e., second parallel bridge with two vehicle travel lanes) are proposed for construction by the City of Lathrop and not by the project applicant during Phase 2 development and would have the same adverse effects as described in the 2003 SEIR on special-status fish. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.



## Mitigation Measures

### Modified Mitigation Measure 4.15-c: Bridge and Utility Crossings

*The following mitigation measure combines relevant elements of adopted Mitigation Measures 4.15-b and 4.15-c from the 2003 SEIR. Mitigation Measure 4.15-b applies to levee breaching, which now may only occur in Paradise Cut (see discussion of Impact 4.15-b above). However, Mitigation Measure 4.15-c in the 2003 SEIR references and incorporates portions of Mitigation Measure 4.15-b. The relevant portions of Mitigation Measure 4.15-b are included here. In addition, portions of Mitigation Measure 4.15-c related to direction drilling under the San Joaquin River that were included in the 2003 SEIR, but no longer apply to the project, have been removed. Text deletions are shown in ~~strikethrough~~ and additional text is shown in underline.*

The City shall ensure that a SWPPP is prepared and implemented during construction activities and that all 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 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 Old River and 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 Old River and 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.~~

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.

~~The City and the project applicant shall implement all measures identified for 4.15-b. Implementation of the items included in Mitigation Measure 4.15-b also would address potential construction impacts associated with bridge crossings over the San Joaquin River. In addition, the SWPPP used for the directional boring of the 4-inch natural gas pipeline under the San Joaquin River shall include specific measures to avoid, minimize, and, if necessary, clean up bentonite/drilling slurry releases into the river. Measures could include monitoring drilling slurry pressures and halting drilling if pressures drop significantly; monitoring the river for bentonite plumes; avoiding drilling at night; and having containment booms, vacuum trucks, and other containment and cleanup equipment onsite during drilling. Also see Mitigation Measure 4.8-e in Section 4.8, "Hydrology and Water Quality."~~

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented, as modified, during Phase 2.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.15-c would avoid and minimize the impacts from construction of the Golden Valley Parkway Bridge and the second half of the Bradshaw's Crossing Bridge on fisheries. These impacts would be avoided and minimized through the use of a SWPPP and BMPs to reduce erosion and runoff, as well as restrictions on the timing of in-water construction activities. These mitigation measures proved to be effective during the construction of the first half of the Bradshaw's Crossing Bridge. Therefore, implementation of this mitigation

measure would reduce the potential impact to fisheries from construction of these bridges to a **less-than-significant** level, as identified in the 2003 SEIR.

### Impact 4.15-d: Paradise Cut Bridge

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The 2003 SEIR concluded that the construction of the Golden Valley Parkway Bridge within Paradise Cut would result in significant impacts due to adverse effects of sediment and contaminant runoff. The construction of Golden Valley Parkway Bridge within Paradise Cut is proposed to occur as part of the Phase 2 modifications and would have the same adverse effects as described in the 2003 SEIR on special-status fishes. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, the impact of construction of the Golden Valley Parkway Bridge would result in a **significant** impact on fisheries as identified in the 2003 SEIR.

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Impact 4.15-d of the 2003 SEIR disclosed the impacts of bridge construction within Paradise Cut on fisheries. The document describes that juvenile chinook salmon and Sacramento splittail may occur in Paradise Cut at high flows. In-water construction and soil disturbance adjacent to Paradise Cut could result in runoff of sediments and other contaminants that would have adverse effects on fish such as, toxicity, impairment of feeding success, gill abrasion, respiratory distress, habitat modification through the introduction of fines, and smothering of benthic organisms. Sacramento splittail spawning within Paradise Cut could also be disrupted by runoff from construction activities. Due to the potential for substantial adverse effects on fall-run chinook salmon and Sacramento splittail the 2003 SEIR concluded that the impact from bridge construction in Paradise Cut would be significant.

The construction of Golden Valley Parkway Bridge within Paradise Cut is proposed to occur as part of the Phase 2 modifications with the City of Lathrop as the lead agency and would have the same adverse effects as described in the 2003 SEIR on special-status fishes. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, the impact of construction of the Golden Valley Parkway Bridge would result in a **significant** impact on fisheries as identified in the 2003 SEIR.

### Mitigation Measures

#### 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.

This mitigation measure has been implemented successfully during applicable Phase 1 activities and would continue to be implemented during Phase 2.

#### Significance after Mitigation

The implementation of Adopted Mitigation Measure 4.15-d would avoid and minimize the impacts from bridge construction within Paradise Cut on fisheries. These impacts would be avoided and minimized through the use of a SWPPP and BMPS to reduce erosion and runoff, as well as restrictions on the timing of construction activities. Therefore, implementation of this mitigation measure would reduce the potential impact to fisheries from construction of bridges in Paradise Cut to a **less-than-significant** level as identified in the 2003 SEIR.

### Impact 4.15-e: Dock Construction

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The 2003 SEIR disclosed that dock construction along the San Joaquin River, Old River, and Paradise Cut would result in temporary sediment loading, which due to its limited scope and the implementation of BMPs would be a less-than-significant impact on fisheries. The Phase 2 modifications do not include the construction of docks on the San Joaquin River, Old River, or Paradise Cut; therefore, there would be **no impact** on fisheries from this activity.

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Impact 4.15-e of the 2003 SEIR disclosed the impacts of dock construction on fisheries. The 2003 SEIR concluded that the construction of docks along the San Joaquin River, Old River, and Paradise Cut would result in temporary sediment loading, which due to its limited scope and the implementation of BMPs would be less than significant.

The Phase 2 modifications do not include the construction of docks on the San Joaquin River, Old River, or Paradise Cut. Because dock construction is not proposed for the Phase 2 modifications, there would be **no impact** on fisheries from this activity.

### Mitigation Measures

No mitigation is required.

### Impact 4.15-f: Structural Habitat Features

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The 2003 SEIR disclosed that the construction of docks, back bays, bridge pilings, and habitat enhancements would result in additional fisheries habitat that would be beneficial to fisheries in the project area. Since publication of the 2003 SEIR docks and back bays along the exterior waterways have been removed as project features; therefore, the Phase 2 modifications would not include the construction of docks or back bays. However, the construction of bridge pilings and habitat enhancements are included. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. These structural habitat features that would increase fish habitat and result in a **beneficial** impact to fisheries as identified in the 2003 SEIR.

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Impact 4.15-f of the 2003 SEIR described the impacts of structural habitat features in the form of docks, back bays, bridge pilings, and habitat enhancements on fisheries. The 2003 SEIR disclosed that these structures would not result in increased predation risk on juvenile chinook salmon or any other species. The 2003 SEIR also disclosed that the creation of back bays and riparian habitat enhancement would provide additional habitat features that would be beneficial to fisheries.

Since publication of the 2003 SEIR docks and back bays along the exterior waterways (i.e., San Joaquin River, Old River, and Paradise Cut) have been removed as project features (see the Third Addendum to the 2003 SEIR); therefore, the Phase 2 modifications do not include the construction of docks, or back bays. However, bridge construction and habitat enhancements are proposed for Phase 2 consistent with those described in the 2003 SEIR (other than a shift to implementing habitat enhancements to Phase 2 of project implementation as identified and evaluated in the Sixth Addendum to the 2003 SEIR). Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, the impact on fisheries from structural habitat features would continue to be **beneficial** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.15-g: Entrainment in Project Pumps

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The 2003 SEIR disclosed that less water would be pumped to maintain the River Islands internal lake system than was pumped for existing agricultural operations, pumps in Paradise Cut would be removed, screens would be added to the pumps that remain in operation, and the seasonality of pumping would occur in more "fish-friendly" months. The Phase 2 modifications would not alter these project elements and would maintain the removal of pumps, screening, and seasonality of pumping that would decrease the likelihood of fish entrainment. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The Phase 2 modifications would result in an impact that would be **beneficial** to fisheries, as identified in the 2003 SEIR.

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Impact 4.15-g of the 2003 SEIR disclosed the impacts associated with fish entrainment in project pumps. The 2003 SEIR described the reduction in the possibility of entrainment that would occur because less water would be pumped

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to maintain the River Islands interior lake levels than was pumped during existing agricultural operations, screens would be installed on existing pumps that would continue to be used, pumps in Paradise Cut would be removed, and pumping would occur when it is more “fish-friendly.” Therefore, the impact I identified as beneficial in the 2003 SEIR.

The Phase 2 modifications consist of changes in development patterns that would not alter any of the conditions and project characteristics identified in the discussion of Impact 4.15-g. Less water would be pumped into the RID Area to maintain lake levels than for agricultural operations, fish screens would be installed on existing unscreened pumps, pumps in Paradise Cut would be removed over time as development proceeds, and the timing of pumping would be modified in the same way. The River Islands interior lakes are an integrated system with all lakes to be connected by underground pipes. The first Phase 1 lakes were constructed with these connections and subsequent lakes, as they have been added, have been connected to the overall system. Pumping into, and out of the Phase 1 lakes have shown the changes in volumes and timing compared to agricultural operations identified in 2003 SEIR. Analysis of the addition of the planned Phase 2 lakes to the overall system shows operation of the lake system to continue with pumping and discharge regimes consistent with those currently occurring for the Phase 1 lakes (PACE 2020). Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. For these reasons, the impact to fisheries due to changes in entrainment in project pumps would continue to be **beneficial**, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.15-h: Water Discharges to the Delta

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The 2003 SEIR disclosed that water discharges from the project would pass through a system of swales and paseos into the River Islands internal lake system before being discharged into the Delta only at high flows. The 2003 SEIR concluded that this system would result in beneficial impacts when compared to the discharge from the existing agricultural production in the project area. The Phase 2 modifications include the same stormwater treatment system of swales, paseos, and lake discussed in the 2003 SEIR with modifications evaluated in subsequent Addenda (i.e., a shift from one large central lake to several smaller interconnected lakes). Operation of the existing interconnected Phase 1 lake system have shown the differences in discharges compared to agricultural operations identified in 2003 SEIR are occurring. Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue with performance similar to the current Phase 1 system (ENGEO 2020; PACE 2020). Therefore, the allowance of additional housing potential, increased density of housing, and additional retail and commercial development proposed in Phase 2 would not result in appreciably different land disturbance or water discharges beyond that assumed in the 2003 SEIR. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, the impact of water discharges to the Delta from the Phase 2 modifications would be **beneficial** to fisheries, as identified in the 2003 SEIR.

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Impact 4.15-h of the 2003 SEIR discussed the water discharges from the project in comparison to the existing water discharges from agricultural activities. The document described that under existing agricultural operations at the time, irrigation runoff from agricultural fields flows into the central drainage ditch and then on to Paradise Cut. With the development of the RID Area, drainage patterns would be changed to allow drainage from the project area to enter the artificial lake system after passing through paseos and swales where it would be filtered through vegetation. This process would reduce the total dissolved solids discharged into the Delta when compared to pre-project conditions. In addition, the 2003 SEIR described that discharges from the lake system into the Paradise cut would occur in the winter and spring when the greatest dilution would occur and impacts to the fishery from increased temperature of discharged water would be reduced. The 2003 SEIR concluded that for these reasons, the changes in discharge under the project implementation would result in beneficial impacts to fisheries. Subsequent Addenda evaluated a change from a single large central lake to several smaller interconnected lakes. The Addenda identified that this change would not alter the analysis or conclusions of Impact 4.15-h as provided in the 2003 SEIR.

The creation of paseos, swales, and artificial wetlands, the lake system, and the flow and treatment of water prior to discharge to the Delta is not altered by the Phase 2 modifications. The Phase 2 modifications would increase the number and density of residential development and add a mixed-use village center and transit oriented development area within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development would not result in appreciably different land disturbance or water discharges beyond that assumed in the 2003 SEIR and considered in subsequent Addenda. The River Islands interior lakes are an integrated system with all lakes to be connected by underground pipes. The first Phase 1 lakes were constructed with these connections and subsequent lakes, as they have been added, have been connected to the overall system. Pumping into, and out of the Phase 1 lakes have shown the changes in volumes and timing compared to agricultural operations identified in 2003 SEIR are occurring and water quality monitoring has shown reductions in total dissolved solids from the lake system meeting or exceeding those identified in the 2003 SEIR (ENGE0 2020). Analysis of the addition of the planned modified Phase 2 lakes to the overall system shows operation of the lake system to continue with performance similar to the current Phase 1 lake system (PACE 2020). Therefore, the water quality performance and discharge regimes currently found in the Phase 1 lakes is expected to continue as the lake system continues to be built out. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, impact of water discharges to the Delta from the Phase 2 modifications would remain **beneficial** to fisheries, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.15-i: Altered Hydrology from Water Discharges

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The 2003 SEIR concluded that changes to hydrology that would occur from discharges to Paradise Cut would have a less than significant impact on fisheries. The Phase 2 modifications would not substantially change the discharge from the artificial lake system or the deepening or widening of in Paradise Cut proposed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.15-i of the 2003 SEIR disclosed that the amount of water discharged into Paradise Cut in the summer after project implementation would be reduced from that discharged by the agricultural operations existing at that time. However, more water would be discharged in the winter after project implementation than under existing conditions. The 2003 SEIR described that although the project would result in cleaner discharges than under existing conditions in the winter and spring, reduced discharges in the summer could result in adverse effects on water quality. The document concluded that these adverse effects on summer water quality would be minimized by the proposed widening and deepening of Paradise Cut by the project, which would increase tidal flows and increase the volume of water in Paradise Cut and result in a less-than-significant impact to fisheries.

The Phase 2 modifications would not substantially change the timing or amount of discharges from the artificial lake system to Paradise Cut. The overall project lake system with the addition of the modified Phase 2 lakes would continue to operate as planned and would not result in any new significant impacts or in a substantially more severe impact compared to the approved Phase 2 Project (PACE 2020). In addition, the widening and deepening of the Paradise Cut would also be unchanged by the modifications to Phase 2. Therefore, there is no new significant impact on fisheries resulting from altered hydrology caused by changed water discharges and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on fisheries resulting from altered hydrology caused by changed water discharges, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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### Impact 4.15-j: Maintenance Dredging of Back Bays

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The 2003 SEIR disclosed that the dredging of back bays constructed along the San Joaquin River and Old River would result in temporary sediment loading, which due to its potential effects on special-status fishes would be a significant impact. Back bays have since been removed as a project element. The Phase 2 modifications do not include the construction or dredging of back bays; therefore, there would be **no impact** on fisheries from this activity.

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Impact 4.15-b of the 2003 SEIR disclosed the impacts of maintenance dredging of back bays on the San Joaquin River and Old River on fisheries. The 2003 SEIR concluded that the dredging of the back bays would cause substantial sedimentation that would result in adverse effects on fish such as, reduced visibility for fish and subsequent impairment of feeding success, gill abrasion, respiratory distress, habitat modification through the introduction of fines, and smothering of benthic organisms. Sacramento splittail in particular could be affected because it may occupy the shallower water of the back bays and use it for spawning, rearing, and foraging habitat, especially during the spawning season (January through July). While these effects would be greatest in the back bays, the effects of sedimentation could extend to the San Joaquin River and Old River themselves. The 2003 SIER concluded that the impacts of maintenance dredging of back bays would be significant. Since publication of the 2003 SEIR, back bays have been removed as a project element.

The Phase 2 modifications do not include the construction or maintenance dredging of back bays on the San Joaquin River or Old River. Because back bay maintenance dredging is not proposed for the Phase 2 modifications, there would be **no impact** on fisheries from this activity.

#### Mitigation Measures

No mitigation is required.

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### Impact 4.15-k: Habitat Modifications in Paradise Cut

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The 2003 SEIR concluded that the proposed habitat modifications in Paradise Cut would be beneficial to fisheries. The habitat modifications in Paradise Cut are proposed to continue with the Phase 2 modifications. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts to fisheries due to habitat modifications in Paradise Cut from the Phase 2 modifications would remain **beneficial** as identified in the 2003 SEIR.

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Impact 4.15-k of the 2003 SEIR disclosed that proposed habitat modifications in Paradise Cut would be beneficial to fisheries including Sacramento splittail and juvenile fall-run chinook salmon. The volume of water flowing through Paradise Cut would approximately double under the proposed project when flood-level waters flow over the Paradise Weir. This additional water coupled with the expanded Paradise Cut channel would create a type of floodplain, shallow-water habitat that is beneficial to juvenile chinook salmon and Sacramento splittail. Even during non-flood events, Sacramento splittail may find the expanded aquatic habitat as well as additional riparian habitat to be conducive for spawning and rearing.

Habitat modifications in Paradise Cut are proposed to continue with the Phase 2 modifications as described in the 2003 SEIR, albeit with altered phasing as described and evaluated in the adopted Sixth Addendum to the 2003 SEIR. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Impacts to fisheries due to habitat modifications in Paradise Cut from the Phase 2 modifications would remain be **beneficial** as identified in the 2003 SEIR.

#### Mitigation Measures

No mitigation is required.

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## Impact 4.15-l: Diversion of Chinook Salmon Smolts

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The 2003 SEIR disclosed that the changes to Paradise Cut flood capacity would change the magnitude of flows from the San Joaquin River into Paradise Cut, but that the changes in magnitude would not have a substantial effect on the number of chinook salmon smolts that are diverted into Paradise Cut. Furthermore, there would be no change to the timing, frequency, or duration of flows. Therefore, the 2003 SEIR concluded that there would be a less than significant impact. The Phase 2 modifications would not involve any changes to Paradise Weir or modifications to Paradise Cut beyond those analyzed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact to the diversion of chinook salmon smolts would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.25-l of the 2003 SEIR disclosed that the potential impact associated with the diversion of chinook salmon smolts into Paradise Cut and on into Old River where entrainment and mortality is high is dependent on the timing, frequency, magnitude, and duration of flows with Paradise Cut from the San Joaquin River. The 2003 SEIR concluded that although changes in the flood capacity of Paradise Cut are proposed that would change the magnitude of flows, the elevation of the Paradise Weir would not be changed and therefore the timing, duration, and frequency of flood flows would also not change. The document further concluded that although the magnitude of flows into Paradise Cut would change, the change would not result in a substantial increase in the number of chinook salmon smolts that enter Paradise Cut. Therefore, the impact would be less than significant.

The Phase 2 modifications would not involve any changes to Paradise Weir or modifications to Paradise Cut beyond those analyzed in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on the diversion of chinook salmon smolts, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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## Impact 4.15-m: Creation of New Fish Habitat in the RID Area

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The 2003 SEIR concluded that the construction of artificial lake habitat in the existing agricultural uplands would result in an increase in fish habitat that would have a beneficial impact on fisheries. The Phase 2 modifications would continue to create lake habitat within the project area. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would therefore result in a **beneficial** impact to fisheries, as identified in the 2003 SEIR.

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Impact 4.25-m of the 2003 SEIR described that the internal lake system that would be created within the project area would provide new fish habitat that would be stocked with warmwater game fish and would likely support Delta species over time. The 2003 SEIR concluded that the creation of the lake and fish habitat in uplands would be a beneficial impact to fisheries. Subsequent Addenda that evaluated the transition from a single central lake to several smaller interconnected lakes identified that this change would not alter the analysis or conclusions of Impact 4.15-m as provided in the 2003 SEIR.

The creation of a series of interconnected lakes are proposed to continue with the Phase 2 modifications and would result in new fish habitat as described in the 2003 SEIR. Therefore, there is no new significant impact as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Thus, the creation of new fish habitat in the RID Area from the Phase 2 modifications would be **beneficial** to fisheries, as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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### Impact 4.15-n: Introduction of Exotic Fish into the Delta

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The 2003 SEIR disclosed that exotic fishes could be introduced into the Delta from the constructed internal lake system; however, only fish species that currently exist in the Delta would be stocked into the internal lakes. Therefore, the introduction of exotic fish into the Delta as a result of the project would be a less-than-significant impact. The creation of a series of artificial lakes are proposed to continue with the Phase 2 modifications and stocking of these lakes would occur as described in the 2003 SEIR. Therefore, there is no new significant impact related to the introduction of exotic fish into the delta as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.15-n disclosed that any fish or invertebrate species that are located within the projects internal lake system could be introduced into the Delta either by purposeful introduction or when water is discharged into Paradise Cut. However, only species currently in the Delta would be stocked in the internal lake system, and as described in the 2003 SEIR, the Delta is inhabited primarily by exotic fish and invertebrate species. Therefore the 2003 SEIR concluded that the introduction of exotic fish into the Delta that could result from the project would have a less-than-significant impact on fisheries.

The creation of a series of artificial lakes are proposed to continue with the Phase 2 modifications and stocking of these lakes would occur as described in the 2003 SEIR. Therefore, there is no new significant impact related to the introduction of exotic fish into the delta as a result of the Phase 2 modifications and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on fisheries, as described in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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### Impact 4.15-o: Increased Water Consumption

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The 2003 SEIR disclosed that the water for the project would be provided by the City of Lathrop in part from surface water supplies. The document concluded that the amount of surface water consumption by the project is minimal when compared to the total surface water use in the state and would therefore be a less-than-significant impact on fisheries. The Phase 2 modifications would result in a minor decrease in water consumption from what was estimated in the 2003 SEIR (Woodard & Curran 2020). This change would not be substantial and would also be minimal when compared to the total surface water use in the state. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.15-o in the 2003 SEIR described that the domestic water for the project would be provided by the City of Lathrop, and that estimated future demands for water by the City in 2025 would be 16,891 acre-feet per year (afy), with 11,791 afy coming from surface water sources. Water demand for buildout of the River Islands Project was estimated to be 5,114 afy. Surface water would be provided from the South San Joaquin Irrigation District, South County Surface Water Supply Project. The 2003 SEIR concluded that the proposed project would use surface water for domestic consumption, which would have an indirect impact on fisheries in the Delta; however, this impact is extremely minor relative to total surface water use in the state and would be less than significant.

The Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use village center and transit oriented development area within the boundaries of the Phase 2 area. Even with the additional housing potential, increased density of housing, and additional retail and commercial development, potable water demand would decrease the use of surface water by several hundred acre-feet per year (Woodard & Curran 2020). This decrease is due in large part to water efficiency measures included in the building code since 2003. Because there is not a substantial increase in water consumption from that assumed in the 2003 SEIR, there is no new significant impact related to increased water consumption and the impact is not substantially



more severe than the impact identified in the 2003 SEIR. The modified Phase 2 Project would have a **less-than-significant** impact on fisheries, as identified in the 2003 SEIR.

## Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of the roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The Paradise Road expansion is a road widening project that would not include: levee breaching (Impact 4.15-b), the construction of docks on the San Joaquin River, Old River, or Paradise Cut (Impact 4.15-e), pumping water from River Island Lake or pumps in Paradise Cut (Impact 4.15-g), water discharges to the Delta (Impact 4.15-h), the construction or maintenance dredging of back bays (Impact 4.15-j), or the creation of artificial lakes resulting in new fish habitat or the introduction of exotic fish into the Delta (Impacts 4.15-m and 4.15-n). Further, it would not require the consumption of water (Impact 4.15-o) and is not located within or involve any modifications to Paradise Cut (Impacts 4.15-d, 4.15-i, 4.15-k, 4.15-l). Therefore, no impacts related to these issues would occur.

Although it is not known whether fish inhabit the irrigation ditches and drainages along Paradise Road, the Paradise Road widening and improvement would include construction activities, including that of bridges or culverts across irrigation ditches and drainages, that could result in stream bed disturbance, sediment input, and contaminant input, all of which could substantially adversely affect fish species in the immediate area (Impacts 4.15-a and 4.15-c). A bridge would be required across Tom Paine Slough, which does support fish populations. Therefore, the implementation of a SWPPP and BMPs would be required, similar to the modified Phase 2 Project. The Paradise Road expansion does not include the construction of docks or back bays; however, construction of a bridge across Tom Paine Slough could result in additional fisheries habitat that would be beneficial to fisheries in the project area if in-water piers are included in the bridge design (Impact 4.15-f).

Modified Mitigation Measure 4.15-c, Bridge and Utility Crossings, identified above for the modified Phase 2 Project would be required for the Paradise Road expansion of the entity implementing the road expansion uses this SEIR for CEQA compliance. This mitigation measure would be equally effective at reducing any significant fisheries impacts to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.

## 4.16 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section evaluates the potential impacts of the modified Phase 2 Project on known and unknown cultural resources. Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-historic resources, historic-era resources, and “tribal cultural resources” (the latter as defined by Assembly Bill [AB] 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074).

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or architectural) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. Tribal cultural resources (TCRs) were added as a resource subject to review under CEQA, effective January 1, 2015 under AB 52 and includes site features, places, cultural landscapes, sacred places or objects, which are of cultural value to a tribe and meet other criteria identified in PRC 21074.

Section 4.16, “Cultural Resources,” of the 2003 SEIR, evaluated the potential effects of the River Islands Project related to cultural resources in the City of Lathrop. The 2003 SEIR conducted a project-level analysis of Phase 2 for cultural resources because there was sufficient information available. The 2003 SEIR concluded that there would be potentially significant or significant impacts related to listed archaeological sites (Impact 4.16-a), recorded archaeological sites (Impact 4.16-b), historic properties (Impact 4.16-c), undiscovered/unrecorded archaeological sites (Impact 4.16-d), undiscovered/unrecorded human remains (Impact 4.16-e), and offsite resources (Impact 4.16-f). The 2003 SEIR concluded that these impacts would be reduced to less-than-significant levels with implementation of Mitigation Measures 4.16-a through 4.16-f. These measures require the City to retain an architectural historian to record a railroad drawbridge, conduct Phase II testing at a prehistoric site in the Phase 1 area, and record two historic properties; require the applicant to conduct pre-construction training for construction personnel, suspend construction in the event of a discovery, and implement necessary mitigation before resuming construction; and require the City to retain a professional archaeological consultant to review the results of existing records searches and conduct field surveys, as needed, for proposed offsite facilities.

Because AB 52 was added in 2015, after certification of the 2003 SEIR, tribal cultural resources in the Phase 2 area are considered for the first time in this analysis.

### 4.16.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

##### Section 106 of the National Historic Preservation Act

Federal protection of resources is legislated by (a) the National Historic Preservation Act (NHPA) of 1966 as amended by 16 U.S. Code 470, (b) the Archaeological Resource Protection Act of 1979, and (c) the Advisory Council on Historical Preservation. These laws and organizations maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP).

Section 106 of the NHPA and accompanying regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the main federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed in, or may be eligible for listing in the NRHP. The NRHP is the nation’s master inventory of known historic resources. It is administered by the National Park Service and includes listings of

buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, and cultural districts that are considered significant at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:
  - Criterion A Association with events that have made a significant contribution to the broad patterns of history (events).
  - Criterion B Association with the lives of persons significant in the past (persons).
  - Criterion C Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).
  - Criterion D Has yielded, or may be likely to yield, information important to prehistory or history (information potential).

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP or eligible for listing must be evaluated under CEQA.

Various National Register Bulletins also provide guidance in the evaluation of archaeological site significance. If a heritage property cannot be placed within a particular theme or time period, and thereby lacks "focus," it is considered not eligible for the NRHP. In further expanding upon the generalized National Register criteria, evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, flumes, etc.) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length; (2) presence of distinctive engineering features and associated properties; (3) structural integrity; and (4) setting. The highest probability for National Register eligibility exists within the intact, longer segments, where multiple criteria coincide.

## STATE

### California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are eligible for the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant within the context of California's history. The CRHR is a statewide program of similar scope and with similar criteria for inclusion as those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are similar to the NRHP criteria and are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

1. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. Is associated with the lives of persons important to local, California, or national history.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity. The CRHR applies the same seven aspects of integrity as the NRHP.

## **California Environmental Quality Act**

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

### **Historical Resources**

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections 15064.5[a] and [b]).

Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1).
2. A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1).
4. The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

### **Unique Archaeological Resources**

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2, subdivision (g), states that unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

### **Tribal Cultural Resources**

CEQA also requires lead agencies to consider whether projects will affect tribal cultural resources. PRC Section 21074 states the following:

- a) "Tribal cultural resources" are either of the following:
  - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
  - 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

### **California Native American Historical, Cultural, and Sacred Sites Act**

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and the County coroner be notified. If the remains are of a Native American, the coroner must notify the Native American Heritage Commission (NAHC), which notifies and has the authority to designate the most likely descendant of the deceased. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

### **Health and Safety Code Section 7050.5**

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC.

### **Public Resources Code Section 5097**

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. PRC Section 5097.5 states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

### **Public Resources Code Section 21080.3**

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "tribal cultural resources," defined in PRC Section 21074. Pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation

before the release of an environmental impact report, negative declaration, or mitigated negative declaration. However, in order to be eligible to request consultation, the California Native American Tribe must provide a request “to the lead agency in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and cultural affiliated with the tribe.” (PRC 21080.3.1 (b)(1)).

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Resource Management Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

#### Archaeological and Cultural Resource Policies

1. Existing known archaeological and cultural resources are to be protected, beginning with the filing of an application for development in the immediate vicinity of such resources. The City shall follow the procedures set forth in Appendix K of CEQA Guidelines. Confidentiality shall be maintained between the City and developer to avoid vandalism or desecration of such resources. Alternatives for development design intended to protect cultural resources shall be reviewed by a Native American having competence in understanding and interpreting the importance of the resources and of the most desirable methods to assure their preservation.
2. The potential loss of as yet unknown archaeological and cultural resources shall be avoided by close monitoring of the development process. The close proximity of properties intended for development to natural watercourses or to known archaeological or cultural resources shall be taken as a signal by the City and developer of a potential for unearthing unknown resources. In such cases, the City shall instruct the developers, construction foremen and City inspectors of the potential for damage to artifacts and sites, and provide written instructions requiring a halt to all excavation work in the event of any find until the significance of the find can be evaluated by competent archaeological and Native American specialists. The costs of such protection work shall be the responsibility of the developer.

## 4.16.2 Environmental Setting

The environmental setting provided on pages 4.16-3 through 4.16-12 of the 2003 SEIR is relevant to understanding the potential cultural and tribal cultural resource impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

## RECORDS SEARCHES AND CONSULTATION

### Previous

The following summary incorporates findings and recommendations of the *Cultural Resources Assessment for the River Islands at Lathrop Project* (Gross 2002, cited in City of Lathrop 2002) and the *Historical Architecture Assessment for the River Islands at Lathrop Project* (Dolan 2002, cited in City of Lathrop 2002).

The records search and pedestrian survey conducted for the 2003 SEIR (Phases 1/1a/2) revealed one prehistoric artifact scatter (Site RI-1) located in the Phase 1 area of the River Islands Project site and two prehistoric isolates. Isolates are defined as one or two artifacts occurring by themselves and not associated with an archaeological site. Because they have no historical context, isolates are generally not eligible for listing in CRHR or NRHP and, therefore, were not evaluated for significance and not discussed further.

The previous records search and pedestrian survey also revealed 28 historic-era buildings and structures: eight historic dwellings (or complexes), three historic barns/sheds, two silo complexes, two portions of railroads, and 13 canals. CRHR criteria were used to evaluate the significance of the historic-era buildings and structures. The CRHR criteria are discussed in more detail above in Section 4.16.1, “Regulatory Setting.” Three historic-era buildings and

structures, located in the Phase 1 area, appeared eligible for listing. For their association with the early dairy farming of the area, the two sets of brick silos (Site RI-10H and Site RI-12H) appear eligible for listing on the CRHR. A railroad section and drawbridge that crosses the San Joaquin River (Site RI-13H) appears eligible for listing on the CRHR. A plaque near the bridge notes the drawbridge location as Historic Landmark 780-7. A second plaque identifies the first landing spot of the Comet, the first sailing vessel to navigate the upper San Joaquin River (Historic Landmark 437).

## Updated

On March 24, 2020, an updated records search of the project site was conducted at the Central California Information Center, at California State University, Stanislaus. The following information was reviewed as part of the records search:

- ▶ NRHP and CRHR,
- ▶ California Office of Historic Preservation Historic Property Directory,
- ▶ California Inventory of Historic Resources,
- ▶ California State Historic Landmarks,
- ▶ California Points of Historical Interest, and
- ▶ Historic properties reference map.

The updated records search, as of March 2020, revealed two archaeological features that were not identified in the 2003 SEIR—percussion flakes—originally recorded in 1993 as P-39-000009 and P-39-000010. These isolated artifacts may indicate the presence of Native Americans in the vicinity at some point in the past. However, as described previously, by definition, isolates are found in isolation with no context. Therefore, manufacture of the artifact cannot be pinpointed to a specific date, technological tradition, or cultural source. Other than the recognition of Native American presence in the area, isolates such as these are generally not eligible for listing in CRHR or NRHP and, therefore, were not evaluated for significance and are not discussed further.

## Tribal Cultural Resources

### Native American Consultation

On July 9, 2020, a letter was sent to the NAHC requesting a search of the Sacred Lands File database for the project area. The response from the NAHC received on July 13, 2020 did not indicate the presence of sacred lands or other Native American traditional cultural properties on the project site or its immediate vicinity. As part of the coordination and communications described below, Katherine Perez of Nototomne Cultural Preservation, representing the Northern Valley Yokuts, indicated that she had registered a known site in the Phase 1 area with the NAHC and begun the process of registering the site with the California Historical Resources Information System (CHRIS). However, this site was not identified in the various records searches conducted and, as stated previously, no sites within the Phase 2 area have been identified.

On March 25, 2020, the City of Lathrop sent letters to the two Native American Tribes that had previously requested, in writing, to be informed by the City of proposed projects per 21080.3.1 (b)(1). These letters notified the Tribes that the project was being addressed under CEQA, as required by PRC 21080.3.1. The specific details of the consultations are confidential pursuant to California law; however, a summary of events related to communication between the tribes and the City is provided in Table 4.16-1.

**Table 4.16-1 Summary of AB 52 Consultation**

Native American Tribe and Contact	Date of Initial Contact	Follow-up Response(s)	Comment
Buena Vista Rancheria Me-Wuk Indians Mike Despian, Environmental Resources Director	March 25, 2020	April 16, 2020	Richard Hawkins, Tribal Historic Preservation Offices Coordinator, stated that no known resources were present in the Phase 2 area, but requested notification of any resources encountered during construction.

Native American Tribe and Contact	Date of Initial Contact	Follow-up Response(s)	Comment
Northern Valley Yokuts Tribe Katherine Erolinda Perez, Chairperson	March 25, 2020	April 8, 2020	The Tribe requested consultation and asks for copies of reports and the records searches. The Tribe also provided potential language for mitigation measures.
		May 21, 2020	A consultation meeting was completed between Katherine Perez and the City of Lathrop.
		September 9, 2020	Representatives of the project applicant met separately with Katherine Perez, outside the AB 52 process, to discuss the project and mitigation approaches.
		September 23, 2020	City of Lathrop receives a letter from Katherine Perez of Nototomne Cultural Preservation, representing the Northern Valley Yokuts, suggesting various mitigation and study options for the project.
		November 10, 2020	A second consultation meeting was completed between Katherine Perez and the City of Lathrop.
		November 24, 2020	A third consultation meeting was completed between Katherine Perez and the City of Lathrop.
		November 25, 2020	The City of Lathrop sends an e-mail to Katherine Perez with suggested language for SEIR mitigation measure 4.16-d.
		Draft SEIR Publication	Consultation is ongoing.

Source: Data compiled by Ascent Environmental in 2020

In response to the SEIR Notice of Preparation (NOP) distributed on March 6, 2020, the California Valley Miwok Tribe provided a letter, which was received on May 18, 2020, with input on the SEIR scope and content and with a request for “consultation” with the City. At the time the NOP was distributed, the California Valley Miwok Tribe had not submitted a written request to the City of Lathrop to be informed by the City, through formal notification, of proposed projects per PRC 21080.3.1 (b)(1). More than four months after the NOP was released, such a letter had not been provided in accordance with AB 52. However, the City of Lathrop is continuing communications with the California Valley Miwok Tribe with respect to tribal interest in the project and the EIR in accordance with other applicable requirements. These communications have included a meeting held on July 23 and multiple e-mail and letter correspondence.

Consultation and coordination with Native American Tribes for the proposed project has not resulted in the identification of any TCRs on the project site. However, the project’s potential impacts to TCRs are evaluated below under Impact 4.16-g.

### 4.16.3 Environmental Impacts and Mitigation Measures

#### METHODOLOGY

The impact analysis for archaeological and historical resources is based on the findings and recommendations of the *Cultural Resources Assessment for the River Islands at Lathrop Project* (Gross 2002, cited in City of Lathrop 2002), the *Historical Architecture Assessment for the River Islands at Lathrop Project* (Dolan 2002, cited in City of Lathrop 2002), the 2003 SEIR for the River Islands Project, and the updated records search, as well as consultation under AB 52 (tribal cultural resources). In determining the level of significance, the analysis assumes that the project would comply with relevant laws, ordinances, and regulations that apply to cultural resources.



Section 21083.2 of the State CEQA Guidelines defines “unique archaeological resource” as an archeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following CRHR-related criteria: (1) that it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) that it as a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) that it is directly associated with a scientifically recognized important prehistoric or historic event or person. An impact on a “nonunique resource” is not a significant environmental impact under CEQA (State CEQA Guidelines Section 15064.5[c][4]). If an archaeological resource qualifies as a resource under CRHR criteria, then the resource is treated as a unique archaeological resource for the purposes of CEQA.

PRC Section 21074 defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are listed or determined eligible for CRHR listing, listed in a local register of historical resources, or otherwise determined by the lead agency to be a tribal cultural resource and supported by substantial evidence.

## THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are edits to some thresholds and additional thresholds that may apply to the project because the CEQA Guidelines have been amended since the 2003 SEIR. The thresholds shown below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds or clarifications to current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would cause a significant impact related to cultural and tribal cultural resources if it would:

- ▶ cause a substantial adverse change in the significance of a unique archaeological resource or a historical resource ~~as defined in §21083.2 of CEQA and § pursuant to Section 15064.5 of the State CEQA Guidelines, respectively;~~
- ▶ cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe; or
- ▶ disturb any human burials, including those interred outside of ~~formal~~-dedicated cemeteries.

## ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussion below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.16-a: Cause a Substantial Adverse Change in the Significance of a Listed Archaeological Site

The 2003 SEIR evaluated the potential for construction of the River Islands Project to alter the surrounding visual context of cultural resources listed as California historic landmarks. Because the project footprint has not expanded, implementation of the modified Phase 2 Project would not adversely affect any additional archaeological sites that were not identified and evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

Impact 4.16-a of the 2003 SEIR evaluated whether construction of the Golden Valley Parkway bridge over the San Joaquin River during Phase 2 and houses on the high-ground corridor north of the bridge during Phase 1 would alter the visual character of the railroad drawbridge (Site RI-13H) crossing the San Joaquin River and the landing place of the sail launch Comet. This impact was determined to be significant, but implementation of Mitigation Measure 4.16-a

would reduce the impact to a less-than-significant level. Mitigation Measure 4.16-a requires the City to retain an architectural historian to record the railroad drawbridge.

The recordation element of Mitigation Measure 4.16-a has been implemented for the Phase 1 Project and other components of the mitigation measure would continue to be implemented, as needed, for the modified Phase 2 Project. The updated records search did not reveal any cultural resources listed on or eligible for listing on the CRHR. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of altering the surrounding visual context. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

#### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.16-a would reduce impacts associated with listed archaeological sites to a **less-than-significant** level, as identified in the 2003 SEIR, because it would require the performance of professionally accepted and legally compliant procedures for the recordation of archaeological resources.

### Impact 4.16-b: Cause a Substantial Adverse Change in the Significance of a Recorded Archaeological Site

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The 2003 SEIR evaluated the potential for construction of the River Islands Project to affect one prehistoric archaeological site (RI-1), which could represent a unique archaeological resource. However, archaeological site RI-1 is not located within the Phase 2 area and the updated records search results revealed no sites that could represent unique archaeological resources. Therefore, there would be **no impact**.

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Impact 4.16-b of the 2003 SEIR evaluated whether construction of the River Islands Project would affect one prehistoric archaeological site (RI-1), which could represent a unique archaeological resource. This impact was determined to be potentially significant, but implementation of Mitigation Measure 4.16-b would reduce the impact to a less-than-significant level. Mitigation Measure 4.16-b requires a professional archaeological consultant to conduct Phase II testing at prehistoric site RI-1.

Mitigation Measure 4.16-b has been implemented for the Phase 1 Project but does not apply to the modified Phase 2 Project because Site RI-1 is not located within the Phase 2 area boundaries. The updated records search did not reveal any additional archaeological sites that could represent unique archaeological resources or potentially be eligible for listing on the CRHR. Therefore, there would be **no impact**.

## Mitigation Measures

No mitigation is required.

### Impact 4.16-c: Cause a Substantial Adverse Change in the Significance of Historic Properties

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The 2003 SEIR evaluated the potential for construction of the River Islands Project to affect historic properties, including two sets of silos (Site RI-10H and Site RI-12H). These sites are not located within the Phase 2 area and the updated records search results revealed no historic properties. Therefore, there would be **no impact**.

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Impact 4.16-c of the 2003 SEIR evaluated whether construction of the River Islands Project would affect historic properties (Site RI-10H and Site RI-12H). This impact was determined to be significant, but implementation of Mitigation Measure 4.16-c would reduce the impact to a less-than-significant level. Mitigation Measure 4.16-c requires the City of Lathrop to retain an architectural historian to completely record sites RI-10H and RI-12H (historic grain silos).

Mitigation Measure 4.16-c has been implemented for the Phase 1 Project but does not apply to the modified Phase 2 Project because Sites RI-10H and RI-12H are not located within the Phase 2 area boundaries. The updated records search did not reveal any additional historic properties. Therefore, there would be **no impact**.

#### Mitigation Measures

No mitigation is required.

### Impact 4.16-d: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources

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The 2003 SEIR evaluated the potential for discovery or damage of yet undiscovered archaeological resources. No archaeological sites have been identified within the Phase 2 area. Nonetheless, project-related ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in State CEQA Guidelines Section 15064.5. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of encountering previously undiscovered archaeological resources. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.16-d of the 2003 SEIR evaluated whether construction of the River Islands Project may affect as yet undiscovered or unrecorded archaeological sites. This impact was determined to be potentially significant, but implementation of Mitigation Measure 4.16-d would reduce the impact to a less-than-significant level. Mitigation Measure 4.16-d requires sensitivity training for construction personnel, construction activities to stop if archaeological artifacts are discovered during construction, and would require a qualified archaeologist to conduct a field survey to recommend mitigation deemed necessary for the protection or recovery of any cultural resources.

Mitigation Measure 4.16-d is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. However, as part of AB 52 consultation with the Northern Valley Yokuts Tribe, some clarifications and refinements to text of Mitigation Measure 4.16-d are reflected below and will be applied during Phase 2 implementation. No archaeological sites have been identified within the Phase 2 area. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of encountering previously undiscovered archaeological resources. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would therefore remain **potentially significant** as identified in the 2003 SEIR.

#### Mitigation Measures

##### Modified Mitigation Measure 4.16-d: Undiscovered/Unrecorded Archaeological Sites

*Mitigation Measure 4.16-d shown below includes the original language from the measure as it was adopted, with clarifications and refinements to reflect the AB 52 consultation conducted, to date, as part of this SEIR CEQA process, with text deletions shown in ~~strikethrough~~ and additional text shown in underline.*

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 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.

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.

### Significance after Mitigation

Implementation of Modified Mitigation Measure 4.16-d would reduce impacts associated with archaeological resources to a **less-than-significant** level, as identified in the 2003 SEIR, because it would require the performance of professionally accepted and legally compliant procedures for the discovery and protection of previously undocumented significant archaeological resources.

### **Impact 4.16-e: Disturb Human Remains**

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The 2003 SEIR evaluated the potential for discovery or damage of previously unknown human remains. Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the project site. However, ground-disturbing construction activities could uncover previously unknown human remains. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of encountering previously unknown human remains. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.16-e of the 2003 SEIR evaluated whether construction of the River Islands Project may affect previously unknown human remains. This impact was determined to be potentially significant, but implementation of Mitigation Measure 4.16-c would reduce the impact to a less-than-significant level. Mitigation Measure 4.16-e requires the halting

of ground-disturbing activities and compliance with California Health and Safety Code Sections 7050.5 and 7052, and PRC Section 5097.

Mitigation Measure 4.16-e is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and the same chance of encountering previously unknown human remains. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within or in the immediate vicinity of the project site. However, the location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites. Therefore, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the project site and could be uncovered by project-related construction activities. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

## Mitigation Measures

### 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.

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.16-e would reduce impacts associated with human remains to a **less-than-significant** level, as identified in the 2003 SEIR, because it would require compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097, which requires avoidance or minimization of disturbance of human remains, and appropriate treatment of any remains that are discovered.

### Impact 4.16-f: Cause a Substantial Adverse Change in Offsite Resources

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The 2003 SEIR evaluated the potential for construction of the River Islands Project to affect offsite resources in areas where specific construction corridors/footprints had not been defined (e.g., electrical transmission lines, Golden Valley Parkway route to I-205, I-205/Chrisman Road interchange, I-5/Louise Avenue interchange improvements). As identified in the 2003 SEIR, construction-related activities during installation of these facilities could affect as yet undiscovered or unrecorded archaeological sites or human remains in these areas. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

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Impact 4.16-f of the 2003 SEIR evaluated whether construction of the River Islands Project would affect offsite cultural resources in areas where specific construction corridors/footprints had not been defined (e.g., electrical transmission lines, Golden Valley Parkway route to I-205, I-205/Chrisman Road interchange, I-5/Louise Avenue interchange improvements). This impact was determined to be significant, but implementation of Mitigation Measure 4.16-f would reduce the impact to a less-than-significant level.

Mitigation Measure 4.16-f is being implemented for the Phase 1 Project, such as for offsite utility improvements to serve the project, and would continue to be implemented for offsite facilities associated with the modified Phase 2 Project. Construction-related activities during installation of these offsite facilities could affect as yet undiscovered or unrecorded archaeological sites or human remains in these areas. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **significant** as identified in the 2003 SEIR.

Mitigation Measure 4.16-f requires a professional archaeological consultant to review the results of existing records searches and conduct field surveys, as needed, once the disturbance areas for offsite project elements are sufficiently defined. Mitigation Measure 4.16-f also requires implementation of Mitigation Measures 4.16-a through 4.16-e. However, Mitigation Measures 4.16-b and 4.16-c do not apply to the modified Phase 2 Project, including offsite facilities, because the resources referenced in these mitigation measures are located within the Phase 1 area boundaries.

## Mitigation Measures

### 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.

This mitigation measure has been implemented successfully during Phase 1 where offsite activities have been implemented and would continue to be implemented during Phase 2.

#### Significance after Mitigation

Implementation of Mitigation Measure 4.16-f would reduce impacts associated with offsite resources to a **less-than-significant** level, as identified in the 2003 SEIR, because it would require the performance of professionally accepted and legally compliant procedures for the discovery and protection of previously undocumented significant archaeological resources.

### Impact 4.16-g: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

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The City of Lathrop sent notification for consultation under PRC 21080.3.1 to two tribes on March 25, 2020 who had previously requested notifications per PRC 21080.3.1 (b)(1). Only the Northern Valley Yokuts Tribe requested consultation. Consultation did not result in the identification of any tribal cultural resources (TCRs). There is no evidence that a resource that would qualify as a TCR is present in the Phase 2 area. However, consultation under AB 52 has resulted in the indication that the area is sensitive for undiscovered TCRs. Therefore, impacts to resources that could qualify as TCRs would be **potentially significant**.

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As part of the 2013/2014 legislative session, AB 52 established a new class of resources under CEQA—TCRs—and requires that CEQA lead agencies, upon written request of a California Native American Tribe per PRC 21080.3.1 (b)(1), notify those requesting Tribes of projects once the lead agency determines that the application for the project is complete or a decision to undertake the project is made by the lead agency per PRC 21080.3.1. Once notified, Tribes may request consultation with the lead agency. Because the 2003 SEIR was certified prior to this legislation being enacted, impacts to TCRs were not analyzed in that document.

As detailed above, the City of Lathrop sent letters to the two Native American Tribes on March 25, 2020 who had requested notifications consistent with PRC 21080.3.1 (b)(1). The City received two responses, one from Richard Hawkins, Tribal Historic Preservation Offices Coordinator for the Buena Vista Rancheria Me-Wuk Indian Tribe; and one from Katherine Erolinda Perez, Chairwoman for the Northern Valley Yokuts Tribe. Mr. Hawkins stated that no known resources were present in the Phase 2 area, and although consultation was not requested, he asked that the

Tribe be notified of any resources encountered during construction. The Northern Valley Yokuts did not identify any resources they would consider eligible to be TCRs in the Phase 2 Area and requested consultation with the City of Lathrop. Consultation is ongoing with the Northern Valley Yokuts Tribe. No other Tribe has identified a particular site, location, object, or other item in the Phase 2 area as a resource eligible to be considered as a TCR.

In addition to having no resources located within the Phase 2 area that Tribes consider to be a TCR, the NAHC Sacred Lands File database search was negative, and no archaeological remains have been identified in the Phase 2 area. For these reasons, no part of the project site meets any of the PRC 5024.1(c) criteria listed above. Nevertheless, consultation with the Northern Valley Yokuts Tribe has indicated that the area is sensitive for undiscovered TCRs. This impact would therefore be **potentially significant**.

## Mitigation Measures

### New Mitigation Measure 4.16-g: Undiscovered/Unrecorded Tribal Cultural Resources

Implement Modified Mitigation Measure 4.16-d.

#### Significance after Mitigation

Implementation of New Mitigation Measure 4.16-g would reduce impacts associated with TCRs to a **less-than-significant** level because the measure requires the performance of professionally accepted and legally compliant procedures for the discovery and protection of previously undocumented subsurface resources, including subsurface resources that could qualify as a TCR once discovered and evaluated.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

Impacts 4.16-a through 4.16-c discuss cultural resources at a project level of analysis. The analysis under these impacts do not apply to the Paradise Road expansion because these analyses are related to specific archaeological and historic resources that were identified during record searches and pedestrian surveys. For the Paradise Road expansion, record searches and pedestrian surveys for cultural resources would be required once specific construction corridors/footprints have been defined, as discussed under Impact 4.16-f for the modified Phase 2 Project.

The Paradise Road widening and improvement has the same potential as the modified Phase 2 Project to discover or damage as yet undiscovered historic or archaeological resources as defined in State CEQA Guidelines Section 15064.5 (Impact 4.16-d). Project construction could encounter previously undiscovered or unrecorded historic or archaeological sites and materials during project-related preconstruction or construction-related ground disturbing activities, such as removing existing vegetation from the project site or grading to establish the roadbed. These activities could damage or destroy previously undiscovered historic or archaeological resources; therefore, worker awareness training and the retention of a qualified archaeologist in the event of a subsurface discovery would be required, similar to the modified Phase 2 Project. The Paradise Road expansion also has the same potential for ground-disturbing construction activities to uncover previously unknown human remains (Impact 4.16-e); therefore,

compliance with California Health and Safety Code Section 7050.5 and PRC Section 5097 would be required, similar to the modified Phase 2 Project.

The Paradise Road expansion would have the same potential to encounter TCRs as the Phase 2 Project (Impact 4.16-g) because the area was identified in the "River Islands Phase 2 Offsite Elements" map that was included in the AB 52 notification sent to interested tribes. Therefore, preservation options and proper care of significant artifacts if they are recovered would be required, similar to the modified Phase 2 Project.

Mitigation Measures 4.16-a through 4.16-c would not apply to the Paradise Road expansion because the resources referenced in the mitigation measures are located within and adjacent to the River Islands Project boundaries. Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening improvement to support implementation of the road expansion would be required to implement the remaining mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Modified Mitigation Measure 4.16-d, Undiscovered/Unrecorded Archaeological Sites; Adopted Mitigation Measure 4.16-e, Undiscovered/Unrecorded Human Remains; Adopted Mitigation Measure 4.16-f, Offsite Resources; and New Mitigation Measure 4.16-g: Undiscovered/Unrecorded Tribal Cultural Resources. These mitigation measures would be equally effective at reducing any significant cultural resource impacts to a less-than-significant level for both the Paradise Road widening and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road widening would have no new significant impact and the impacts would not be substantially more severe.



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## 4.17 AESTHETICS

This section describes existing visual conditions, meaning the physical features that make up the visible landscape, near the Phase 2 area and evaluates the potential changes to those conditions that would occur from project implementation. The effects of the project on the visual environment are generally defined in terms of the project's physical characteristics and potential visibility, the extent to which the project's presence would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where the project would alter existing views.

Section 4.17, "Aesthetics Resources," of the 2003 SEIR evaluated the potential effects of the River Islands Project on visual and scenic resources. The 2003 SEIR conducted a project-level analysis of Phase 2 because certain impacts, such as light and glare, would be greatest only at full project buildout. A separate visual analysis of each individual phase of the project would fail to consider the quality and consistency of the River Island Project as a whole. The 2003 SEIR concluded that there would be less-than-significant impacts on visual and scenic resources related to views of the site from surrounding lands (Impact 4.17-a), views from Interstate 5 (I-5) and the I-5/Interstate 205 (I-205)/State Route (SR) 120 merge segment (Impact 4.17-b), views for recreational boaters (Impact 4.17-c), nighttime views (Impact 4.17-d), and views of the grain silos and railroad bridge (Impact 4.17-e).

The 2003 SEIR concluded that there would be a potentially significant impact on visual and scenic resources related to the design and function of walls and fences consistent with the West Lathrop Specific Plan (WLSP) (Impact 4.17-f). Potential impacts would be reduced by implementation of Mitigation Measure 4.17-f, which requires approval under an architectural and design review of fences and walls that are proposed adjacent to an existing or planned future arterial road. Mitigation Measure 4.17-f would reduce this impact to a less-than-significant level.

### 4.17.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics, light, and glare are applicable to the modified Phase 2 Project.

#### STATE

##### Nighttime Sky - Title 24 Outdoor Lighting Standards

The Nighttime Sky - Title 24 Outdoor Lighting Standards were created in 2005 by the California Energy Commission to regulate energy efficiency of all outdoor lighting for residential and nonresidential development. The standards reduce the adverse effects of outdoor lighting and improve overall quality by providing guidance for lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off.

#### LOCAL

##### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Growth Assumptions and Opportunities; Goals Major Policies and Major Proposals of the General Plan section of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

### **Residential Areas**

1. Architectural design review shall be required of all Planned Developments (PD's), and of all multifamily, office, commercial, institutional and industrial uses.
3. Multi-family projects shall include landscaped open space in addition to yard areas required by the zoning ordinance, to be developed for the common recreation use of tenants. Minimum facilities may be required for common recreation areas. Examples include tot lots for pre-school children, and passive recreation areas for lounging, sun bathing, barbecuing, quiet conversation and reading, including area to be shaded by trees and shade structures.
4. Where multi-story housing units are proposed adjacent to existing or planned Low Density areas, building elevations and the location of windows, balconies and air conditioning units above the first story shall be reviewed by the City to assure visual compatibility and residential privacy.
5. Multi-family site development and maintenance shall be in accordance with a comprehensive landscape development plan, including automatic irrigation.

### **Commercial and Industrial Areas**

2. The visual interface between commercial/industrial areas and residential areas shall be designed and developed so as to avoid obtrusive visual impacts of commercial or industrial activities on nearby residential areas.
3. All outdoor storage areas shall be visually screened with ornamental fencing or walls, and landscaping.

### **Fish & Wildlife Habitat**

6. The visual amenities of water and its potential as wildlife habitat are to be reflected where feasible in all developments by the inclusion of bodies of water as components of urban form. Such bodies of water may be in the form of lakes, ponds, lagoons, simulated streams or similar features which can be integrated by design within recreation open space corridors, parks, commercial and residential areas and public sites. The multi-purposes use of water bodies for surface water drainage, flood control, wastewater reclamation, wildlife management, recreation and visual amenity is encouraged.

### **Interstate and State Route Freeways**

2. Land use designations along freeway sections should take into consideration the existing visual and noise impacts associated with existing and future traffic levels on these major traffic carrying facilities.

### **Achieving Visual and Functional Quality in New Development**

Several related polices are necessary to assure quality in the functional and aesthetic characteristics of new development, as follows:

- ▶ Architectural design review should be required of all Planned Developments (PD's), and of all multi-family, office, commercial, institutional and industrial uses.
- ▶ Eligibility for density bonuses under Planned Development applications should be based on objective criteria to be included in the zoning ordinance.
- ▶ Except for density bonuses mandated by State law or by voluntary proposals for households of very low, low and moderate income, density bonuses for Planned Developments within Low Density residential areas should be prohibited. Voluntary proposals which do not meet State standards for a mandated bonus would still be given consideration for the granting of a bonus equal to 10% of the total number of housing units proposed.
- ▶ Features of the urban open space system are to include neighborhood and community recreation parks, pedestrian corridors along arterial streets and boulevards, recreation corridors along natural and man-made drainages and waterways, recreation corridors which connect with major components of the school and park system, a municipal golf course and a municipal marina. Neighborhood parks should be adjacent to and integrated with elementary school sites as well as being freestanding. Community parks should be adjacent to and integrated with high school sites, as well as being freestanding.

- ▶ Major components of the regional open space system are to include a park and recreation corridor along the San Joaquin River, natural waterways and riparian vegetation, a pedestrian and bike trail linking all three Sub-Plan areas, and private marinas open to the public along the San Joaquin River. Access to trails should be designed so as to prevent use by motor vehicles, including motorcycles, motorbikes and similar off-road vehicles.
- ▶ An important component of the open space system will be landscaped corridors on either side of expressways and some arterial streets as a means to buffer residential areas from traffic noise and glare. These corridors may vary in width and design to accommodate such recreation pursuits as walking, biking, golf, and nature study. A corridor for eventually combining bike and pedestrian circulation is proposed separate from the Arterial street system.

#### **Development Standards for Commercial Areas**

The following development standards apply within commercial areas:

- ▶ The visual interface between commercial and residential areas shall be designed and developed so as to avoid obtrusive visual impacts of commercial activities on nearby residential areas.
- ▶ All outdoor storage areas shall be visually screened with ornamental fencing or walls, and landscaping.
- ▶ Shade trees shall be provided within off-street parking areas as determined under site plan review. Generally, the standard shall be a ratio of one tree per five lineal parking spaces, placed along the line between parking bays and with trees at both ends of a line of parking spaces.
- ▶ Street trees and frontage landscaping, with automatic irrigation, shall be provided for all commercial sites outside of the CBD, and may be required by the City within the CBD.
- ▶ The use of drought tolerant plant materials is to be encouraged.

#### **City of Lathrop Municipal Code**

Chapter 17.61 currently contains design standards for residential and commercial development within the River Islands Project for the following zoning districts within the project site: (RL-RI) residential low, (RM-RI) residential medium, (RH-RI) residential high, (CR-RI) regional commercial, (MU-RI) mixed use town center, and (RCO-RI,) resource conservation. Design standards include maximum densities, lot coverage, building height, setbacks, and lot width and development as specified in the River Islands Development (RID) Standards and RID Urban Design Concept. The City is proposing design standards for the following new zoning districts associated with the Project: TOD-RI (transit oriented development) and OS/P-RI (open space and public uses). A text and zoning map amendment will be necessary to add these districts.

### **4.17.2 Environmental Setting**

The environmental setting provided on pages 4.17-3 through 4.17-6 of the 2003 SEIR is relevant to understanding the potential aesthetics impacts of the River Islands Project. The following information provides an update of information from the 2003 SEIR and reflects the current environmental setting.

The River Islands at Lathrop Project is a master planned community on approximately 4,905 acres on Stewart Tract and Paradise Cut. Much of the Phase 1 area has been constructed with residential dwelling units, a Town Center, a portion of a Business Park, lakes, parks, schools, and other open space. The Phase 2 area is currently mostly undeveloped and/or agricultural land. The project site also contains the Central Drainage Ditch, a long agricultural ditch that bisects Stewart Tract, along with a small pond located near Paradise Cut. Flood protection improvements consisting of levees surrounding both the Phase 1 and Phase 2 areas have been completed, consistent with plans and entitlements.

## VISUAL CHARACTER OF THE PROJECT SITE

Visual character is determined by the dominant land use and visual elements of the area. Visual quality is the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The Phase 2 area is located within the WLSP area in the city of Lathrop. The Phase 2 area includes approximately 3,100 acres of land and open space located on Stewart Tract (an inland island bounded by Paradise Cut, the San Joaquin River, and Old River).

Visual character of the Phase 2 area is defined by agricultural uses. The Phase 2 area consists of flat, mostly undeveloped land that provides sweeping views of the agricultural land uses. Several single-family residences and structures typically found in agricultural areas, including horse facilities, equipment storage facilities, sheds, and irrigation equipment, are scattered throughout the project site. The Phase 2 area contains the Central Drainage Ditch, a long agricultural ditch that bisects Stewart Tract. There is also a small pond located near Paradise Cut near the center of the Phase 2 area. Sparse grasses and vegetation surround the agricultural field boundaries, roadsides, banks, and levees along the Old River. Levees surrounding the Phase 2 area are characterized by low vegetative ground cover that transitions into grassy ground cover with a gravel access road along the top.

The Paradise Cut Conservation (PCC) area is entirely undeveloped to maintain its function as a flood bypass facility. The visual character of the PCC area is dominated by flat agriculture lands and several canals and sloughs that run throughout the PCC area. The PCC area is designated and zoned as RCO-RI.

## VISUAL CHARACTER OF THE SURROUNDING AREA

The project area is surrounded by approximately 17 miles of levees to protect the development area from the Old River, the San Joaquin River, and Paradise Cut. Beyond the levees is mainly agricultural land with scattered agriculture structure and single-family residences. The existing visual character of the surrounding area is described below.

- ▶ North: Old River transitions to the San Joaquin River to form the northern boundary of the site. Riparian habitats with trees and small shrubs are scattered among grassy coverings and dominate views of the rivers, although large segments of the Old River project levee contain only ruderal vegetation and rip rap.
- ▶ Northeast/East: Phase I project development including residential and commercial uses is mostly completed and visible from the Phase 2 area. The San Joaquin River borders the Phase 1 project development on the northern boundary, the areas beyond that are defined by agriculture lands that act as a physical and visual buffer between the Phase 1 development and the City of Lathrop.
- ▶ Southeast: This area is defined by industrial views of a sand and gravel extraction facility, the Union Pacific Railroad (UPRR) tracks, and I-5, which runs roughly parallel to the UPRR tracks along the southeast project area boundary. The towers of the existing UPRR bridge over the San Joaquin River act as a distinctive visual landmark that can be seen for several miles. Remnants of former agricultural operations include brick grain silos on the east side of the UPRR railroad berm, which are visible from east of I-5 and act as another distinct visual landmark. The remaining portion of Stewart Tract is dominated by agricultural lands uses.
- ▶ West/Southwest/South: Paradise Cut forms the southwest portion of the site. Beyond Paradise Cut to the west are mostly agricultural lands with associated homes and structures (City of Lathrop 2002a).

## VIEWS OF THE PROJECT SITE AND SURROUNDING AREA

Generally, views of the project site are mostly obscured by the overall flatness of the topography and by the elevated elements such as the levees, I-5, I-205, and the UPRR railroad berms. Small portions of the project site in relation to the overall size are visible from the levees, elevated freeways, surrounding rural roadways, and from the River Islands Phase 1 area. The northern and western portion of the project site are also visible to recreational boaters using the Old River and the San Joaquin River. Views of the project site are characterized by flat, undeveloped land primarily utilized for agriculture.

## LIGHT AND GLARE CONDITIONS

Existing sources of light and glare are uniformly present in the project vicinity in residential and commercial development to the northeast, east, and southeast. Natural and artificial light reflect off various surfaces and can create localized occurrences of daytime and nighttime glare. The project site is mostly undeveloped and supports mainly agricultural land uses. There are a few single-family residences, a horse ranch, and related agriculture-related buildings within the project site that produce minimal light and glare. Existing sources of light within the project vicinity include streetlights along roadways and freeways; lights in parking lots, along walkways, and on the exterior of buildings; and interior lights in buildings associated with the adjacent Phase 1 residential and commercial development to the northeast of the project site. Sources of daytime glare within the project vicinity include reflected sunlight from windows of residences and commercial development in the Phase 1 project area. There are no reported occurrences of excessive daytime or nighttime lighting or glare in the project vicinity.

## SHADOWS

The evaluation of shading and shadows in this SEIR is limited to daytime shadows cast by objects blocking sunlight. The angle of the sun, and hence the character of shadows, varies depending on the time of year and the time of day; however, in the Northern Hemisphere, the sun always arcs across the southern portion of the sky. During the winter, the sun is lower in the southern sky, casting longer shadows compared to other times of year. During the summer months, the sun is higher in the southern sky, resulting in shorter shadows. During the summer, the sun can be almost directly overhead at midday, resulting in almost no shadow being cast. During all seasons, as the sun rises in the east in the morning, shadows are cast to the west; at mid-day, the sun is at its highest point and shadows are their shortest, and cast to the north; and as the sun sets in the west in the afternoon/evening, shadows are cast to the east. Because of the climate in the area, midday and afternoon shade in summer can be beneficial. In the winter, however, access to sunlight can be beneficial. The project site is mostly undeveloped and supports mainly agricultural land uses. There are a few single-family residences, a horse ranch, and related agriculture-related buildings located on a few areas of the project site that cast shadows. Existing sources of shadows within the project vicinity include shade from the surrounding levees, high ground corridors, and the adjacent Phase 1 residential and commercial development. There are no reported occurrences of excessive shading in the project vicinity.

### 4.17.3 Impacts and Mitigation Measures

#### METHODOLOGY

The following reports and data sources document visual conditions at the project site and were reviewed for this analysis:

- ▶ 2003 SEIR for the River Islands Project;
- ▶ River Islands Urban Design Concept (UDC) (City of Lathrop 2002b) and proposed UDC for Phase 2;
- ▶ available literature, including documents published by federal, State, County, and City agencies; and
- ▶ applicable elements from the City of Lathrop General Plan.

Project construction and operation were evaluated utilizing visual resource information gathered from these sources to determine whether any impacts would occur.

#### THRESHOLDS OF SIGNIFICANCE

The 2003 SEIR used thresholds in effect at the time of document preparation. While some of the thresholds have remained relatively unchanged, there are additional thresholds that may apply to the project. The thresholds shown

below include the thresholds from the 2003 SEIR, with revisions to reflect the current thresholds, with text deletions shown in ~~strike through~~ and additional text shown in underline.

The modified Phase 2 Project would cause a significant impact related to aesthetics if it would:

- ▶ ~~cause~~ have a substantial adverse effect on a scenic vista;
- ▶ substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings ~~along~~ within a state scenic highway;
- ▶ in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality;
- ▶ cause a substantial inconsistency between River Islands UDC for modified Phase 2 and guidelines in the General Plan ~~or amended WLSP~~; or
- ▶ create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

## ISSUES NOT DISCUSSED FURTHER

All thresholds identified above are discussed in the impact analyses below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.17-a: Views of the Site from Surrounding Lands

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The 2003 SEIR evaluated the potential for significant impacts related to view of the project site from surrounding lands. Because of the flat terrain, views of the project would be largely obscured from public viewpoints by elevated levees and raised freeways. Views of the project site following buildout of River Islands would be consistent with surrounding views of residential and commercial development. The proposed Phase 2 modifications would increase the amount and density of residential development but would not change the development footprint and would not change maximum building height as compared with the approved River Islands Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.17-a of the 2003 SEIR evaluated whether project implementation would result in significant effects to views of the project site from surrounding lands. The analysis noted that small portions of project features would be visible to residents in dispersed farmsteads/homes in nearby agricultural lands and the Mossdale Landing project, which at the time of the 2003 SEIR had not yet been constructed. Views of the project were noted to be consistent with surrounding views of residential development and largely obscured by existing levees and elevated freeways outside the project site. The impact was determined to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would increase the number of units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The development footprint of the Phase 2 area would not change from the approved project. Maximum building height would not increase from the development evaluated in the 2003 SEIR. As adopted in 2003, the River Islands UDCs establish maximum building heights of 125 feet for Paradise Town Center and Employment Center/Transit Oriented Development 50 feet for East Village, West Village, and Woodlands; and 35 feet for Woodlands and Old River. The Phase 2 UDC would not change these maximum building heights. Subsequent Neighborhood Development Plans (NDPs) and Architectural Guidelines/Design Standards (AG/DS) for these districts will clarify and refine these requirements. All Phase 2 development is subject to the River Islands Phase 2 UDC, subsequent NDPs, and AG/DS documents, and would maintain a similar visual character throughout the development. Views of the Phase 2 area would be consistent with existing surrounding views of development in the Phase 1 area and Mossdale Landing. Therefore, there is no new

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significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.17-b: Views from I-5 and the I-5/I-205/SR 120 Merge Segment

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The 2003 SEIR evaluated whether project implementation would result in significant effects to views of the project site from I-5 and the I-5/I-205/SR 29 merge segment. The analysis noted that while development of the project site would be visible from these highway segments, none of the highways are identified as scenic highways and post-project views would be similar to those found elsewhere in the vicinity. The proposed Phase 2 modifications would increase the amount and density of residential development but would not change the development footprint and would not change maximum building height as evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.17-b of the 2003 SEIR evaluated whether project implementation would result in significant effects to views of the project site from I-5 and the I-5/I-205/SR 120 merge segment. The analysis noted that the portions of project that would be visible from these highway segments would include the cross levee, the top portions of buildings in the Employment Center and potentially the Paradise Cut Village Center, Golden Valley Parkway bridges of the San Joaquin River and Paradise Cut, overhead utility lines, and some houses on higher ground. Although development on the project site would be visible from highway segments, none of these segments are designated as scenic highways. Furthermore, views of the project site from the highways would be similar to views found elsewhere in the project vicinity. Because of the developed nature of the area and lack of designation as scenic highways, views of the project site from these highways was concluded to be less than significant and no mitigation was required.

The proposed Phase 2 modifications would increase the amount and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The development footprint of the Phase 2 area would not change from the approved project. Maximum building height would not increase from the development evaluated in the 2003 SEIR. As adopted in 2003, the River Islands UDCs establish maximum building heights of 125 feet for Paradise Cut Village Center and Employment Center/Transit Oriented Development; 50 feet for East Village, West Village, and Woodlands; and 35 feet for Woodlands and Old River. The Phase 2 UDC would not change these maximum building heights. All Phase 2 development is subject to the River Islands Phase 2 UDCs, subsequent NDPs, and AG/DS documents for these districts will clarify and refine these requirements. As a result, the modified Phase 2 Project would maintain a similar visual character throughout the development. Views of the Phase 2 area from highway segments would be consistent with existing surrounding views of development in the Phase 1 area and Mossdale Landing. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.17-c: Views for Recreational Boaters

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The 2003 SEIR evaluated the potential for impacts to views for recreational boaters and noted that development of the River Islands project would likely result in an improvement relative to existing views of the levee faces. The modified Phase 2 Project would not modify any part of the levee system or any of the water features as approved and modified by the six previous addenda. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.17-c of the 2003 SEIR evaluated whether implementation of the project would result in significant impacts to views for recreational boaters. The analysis noted that recreational boaters' viewshed consists of levee faces dominated by heavily managed vegetation or riprap. After project implementation, views for recreational boaters would include docks, homes, landscaping, entrances to back bays, and restored levee habitat. Given the diverse visual elements associated with development of the River Islands area and the low quality of existing visual conditions, the impact was concluded to be less than significant and no mitigation was required.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center within the original boundaries of the Phase 2 area. As discussed in Chapter 2, "Description of the Proposed Project," levees sufficient to provide 200-year flood protection currently surround the RID Area and the modified Phase 2 Project does not include any modifications to the improved levee system.

The approved River Islands Project originally included an internal waterway system that includes a number of man-made lakes in the RID Area and an external system that consists of various elements outside the Stewart Tract levee system: San Joaquin River, Old River, and Paradise Cut. Nearly 600 docks in the internal water system would accommodate up to 604 boats. Docks and other in-water features along the exterior water system identified in the original project design were largely removed as part of project modifications evaluated in the 2012 third Addendum. Interior water features authorized by current City of Lathrop approvals would not be altered by the modified Phase 2 Project. The modified Phase 2 Project would not modify elements of the development in the River Islands area that would alter views for recreational boaters beyond what was evaluated in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.17-d: Nighttime Views

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The 2003 SEIR evaluated whether project implementation would impact nighttime views due to light and glare. The 2003 SEIR concluded that project implementation would result in an incremental increase in the amount of light and glare but adherence to UDC lighting guidelines, consistent with the WLSP, would minimize potential light and glare impacts on nighttime views. The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and Transit Oriented Development within the original boundaries of the Phase 2 area, which could incrementally increase the amount of nighttime light in the project area because lighting associated with commercial and higher density residential development typically generated a higher level of foot-candles than low density residential. However, compliance with UDC lighting guidelines, the City of Lathrop municipal code, and other guidelines and requirements would minimize light and glare impacts to nighttime views. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.17-d of the 2003 SEIR evaluated whether project implementation would impact nighttime views due to light and glare. The 2003 SEIR determined that project implementation would result in an incremental increase in the amount of light and glare but adherence to UDC lighting guidelines, consistent with the WLSP, would minimize potential light and glare impacts on nighttime views to a less-than-significant level.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. An increase in the number of residences at an increased residential density, and additional commercial and residential structures under the Phase 2 modifications would incrementally increase the level of light and glare analyzed under the 2003 EIR, due both to the number of units and the higher foot-candle intensity of commercial and higher density development. Development of the Transit Oriented Development and the Valley Link commuter rail station, located in the Employment Center District, as well as the associated trains would add an additional source of lighting and glare from

the glass, metal, polished exterior surfaces, and additional daytime and nighttime light sources. Development on the project site would decrease the degree of darkness and quality of views of stars, constellations, and other features of the nighttime sky. However, UDC lighting guidelines, further defined by subsequent NDPs and architectural guidelines, would be incorporated as a part of the modified Phase 2 Project and would minimize light and glare impacts to nighttime views. The Phase 2 UDC guidelines require light fixtures with downward facing and mostly hidden light sources and prohibits fixtures that create light and glare, such as mercury vapor, low-pressure sodium, or fluorescent bulbs. Further, LED based lighting on both residences, non-residential development, street lighting, and commercial lot lighting now required by the City municipal code, UDC, and subsequent design level documents (e.g., NDP) would generate far less glare and direct light in a more focused way reducing overall glare. Other existing policies and requirements provide performance criteria such as preventing light spillover onto adjacent properties. The proposed Valley Link station, residential, and commercial development would incorporate UDC guidelines and be in compliance with the City municipal code for lighting and include materials that do not create excessive glare uncharacteristic with the surrounding area. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Project implementation would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area and impacts would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

### Impact 4.17-e: Views of the Grain Silos and Railroad Bridge

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The 2003 SEIR evaluated whether the visibility of project elements in the background of the brick grain silos and UPRR bridge would result in significant impacts related to visual resources. Development of the River Islands Project area would add new structures that would be visible in the background of these historic structures, but the historic structures would not be altered and would continue to be visible from highways and other locations. The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and Transit Oriented Development within the original boundaries of the Phase 2 area but would not interfere with views of the historic structures because the heights of these structures as allowed by the WLSP, UDC, and subsequent design level documents would be restricted. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

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Impact 4.17-e of the 2003 SEIR evaluated whether the visibility of project elements in the background of the brick grain silos and UPRR bridge would result in significant impacts related to visual resources. The brick grain silos located between I-5 and the UPRR tracks and the UPRR bridge over the San Joaquin River are considered historic structures (see Section 4.16, "Cultural Resources," of this Draft SEIR). The analysis noted that impacts related to views of these structures would be considered minor because the structures would not be altered, would still be visible from highways and other locations, and would still function as local landmarks. Impacts were concluded to be less than significant, and no mitigation was required.

The proposed Phase 2 modifications would increase the number of dwelling units and density of residential development and add a mixed-use Village Center and Transit Oriented Development within the original boundaries of the Phase 2 area. The development footprint of the Phase 2 area would not change from the approved project and maximum building heights would not increase from the development assumptions evaluated in the 2003 SEIR. The proposed Phase 2 modifications, therefore, would not interfere with views of the historic structures because the heights of these structures as allowed by the WLSP, UDC, and subsequent design level documents would be restricted. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **less than significant** as identified in the 2003 SEIR.

### Mitigation Measures

No mitigation is required.

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## Impact 4.17-f: Design and Function of Walls and Fences/Consistency with the WLSP

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The 2003 SEIR evaluated whether proposed openings in walls adjacent to arterial roads, as described in the River Islands UDC, could expose adjacent residential areas to intrusive levels of light and glare. The River Islands UDC suggests that walls between residential neighborhoods and arterial roads contain openings that either lack any fencing or that feature “see through” fences. Such fencing could contradict guidelines in the WLSP that require visual separation between roadways and neighborhoods to reduce light, glare, and aesthetic impacts. The proposed Phase 2 modifications would result in development of the same project site as evaluated in the 2003 SEIR and the same potential for gaps and openings along arterial roadways to intrude on residential areas. Many of the design aspects depicted in the 2003 UDC have been incorporated into the Phase 2 UDC to appear as a seamless transition of walls and fence structures from one phase to the other. Additionally, subsequent NDP and AG/DS required for each district of development will further detail requirements for wall and fences. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. This impact would remain **potentially significant** as identified in the 2003 SEIR.

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Impact 4.17-f of the 2003 SEIR evaluated whether proposed openings in walls adjacent to arterial roads, as described in the River Islands UDC, could expose adjacent residential areas to intrusive levels of light and glare. The River Islands UDC suggests that walls between residential neighborhoods and arterial roads contain openings that either lack any fencing or that feature “see through” fences. Such fencing could contradict guidelines in the WLSP that require visual separation between roadways and neighborhoods to reduce light, glare, and aesthetic impacts. Because of this potential conflict, the impact was determined to be significant, but implementation of Mitigation Measure 4.17-f would reduce the impact to a less-than-significant level. Mitigation Measure 4.17-f requires evaluation of any proposed gaps or openings in walls along arterial roads for the potential to permit light and glare from the roadway to enter the residential area.

Mitigation Measure 4.17-f is being implemented for the Phase 1 Project and would continue to be implemented for the modified Phase 2 Project. The proposed Phase 2 modifications would result in development of the same footprint as evaluated in the 2003 SEIR and have the same potential for intrusive light and glare through gaps and openings along arterial roadways. Many of the design aspects depicted in the 2003 UDC have been incorporated into the Phase 2 UDC to appear as a seamless transition of walls and fence structures from one phase to the other. Additionally, subsequent NDP and AG/DS required for each district of development will further detail requirements for wall and fences. Compared to the visual impacts described in the 2003 SEIR, there is no new significant impact and the impact is not substantially more severe. Therefore, this would be a **significant** impact as identified in the 2003 SEIR.

### Mitigation Measures

#### 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 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.

This mitigation measure has been implemented successfully during Phase 1 construction and would continue to be implemented during the modified Phase 2 Project.

#### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.17-f would require evaluation of any proposed gaps or openings in walls along arterial roadways to ensure that light and glare do not affect residents. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. After mitigation, the project would have a **less-than-significant** impact, consistent with the impact conclusion in the 2003 SEIR.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

Paradise Road is not within the boundaries of the WLSP or River Islands at Lathrop plan. Therefore, the River Islands UDC and WLSP do not apply (Impact 4.17-f). The potential road widening and improvement would not be visible in the background of, nor result in the construction of any structures that would be in view of recreational boaters (Impact 4.17-c) (Tom Pain Slough, which is crossed by Paradise Road, does not support recreational boating), or of the historic grain silos or UPRR bridge (Impact 4.17-e). Therefore, no impacts related to these issues would occur.

The Paradise Road expansion would widen the road from two lanes to four in the more agricultural areas north of Canal Boulevard, and from four lanes to six lanes in the more developed area between Canal Boulevard and I-205, and would be consistent with existing surrounding views; this would not substantially degrade the visual character or quality from the limited available public viewpoints (Impact 4.17-a), or result in significant effects to views of the road from I-5 and the I-5/I-205/SR 29 merge segment (Impact 4.17-b) and the impacts would remain less than significant. Besides an increase in the number of vehicle headlights visible on the roadway, the expansion of an existing roadway would not create a new source of substantial light or glare, such as reflective building materials, which would adversely affect day or nighttime views in the area; (Impact 4.17-d) and the impact would remain less than significant.

The only mitigation measure identified above for the modified Phase 2 Project—Adopted Mitigation Measure 4.17-f, Design and Function of Walls and Fences/Consistency with the WLSP—is not required for the Paradise Road expansion because the River Islands UDC and guidelines in the General Plan and WLSP does not apply. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impacts and the impacts would not be substantially more severe.

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## 4.18 ENERGY

Since certification of the 2003 SEIR, Appendix G of the State CEQA Guidelines has been amended to address energy consumption and compliance with applicable renewable energy or energy efficiency plans. At the time the 2003 SEIR was prepared and certified, energy efficiency related impacts were included as Appendix F to the State CEQA Guidelines. The 2003 SEIR did evaluate the River Islands Project's energy demand and the impacts related to it, but in the context of utilities and utility infrastructure.

Because the 2003 SEIR did not evaluate energy efficiency impacts, this section evaluates whether implementing the modified Phase 2 Project would result in an environmental impact related to the inefficient, wasteful, or unnecessary consumption of energy and evaluates the modified Phase 2 Project's consistency with applicable plans related to energy conservation or renewable energy. Applicable federal, state, and local policies related to energy demand and supply are summarized below and a description of energy infrastructure within the modified Phase 2 area is provided. The capacity of existing and proposed infrastructure to serve the modified Phase 2 Project is evaluated in Section 4.11, "Public Utilities."

### 4.18.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

Energy conservation is embodied in many federal, state, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the U.S. Environmental Protection Agency's [EPA's] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Code of Regulations (CCR) sets forth energy standards for buildings. Further, the state provides rebates and tax credits for installing renewable energy systems, and its Flex Your Power program promotes conservation in multiple areas. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and related to the use of renewable energy sources.

#### FEDERAL

##### Energy Policy and Conservation Act and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

##### Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. The EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants,

and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

### **Energy Independence and Security Act of 2007**

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly fivefold increase over current levels. It also reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century; however, in August of 2018, the NHTSA and EPA proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, which, if adopted, would decrease the stringency of CAFE standards. The Proposed Rule would maintain the existing standards until 2020 with a zero percent increase in fuel efficiency until 2026. Part One of the SAFE Rule, which became effective on November 26, 2019, revokes the federal Clean Air Act waiver that California obtains from EPA to set more stringent fuel economy standard. At the time of preparing this environmental document, the exact implications of the SAFE Rule on the energy efficiency of California’s vehicle fleet is unknown.

## **STATE**

### **Warren-Alquist Act**

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The creation of the act occurred as a response to the State legislature’s review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced State policy for siting power plants to reduce potential environmental impacts and sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings, which ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code). These standards are updated regularly and remain in effect today. The act additionally directed CEC to cooperate with the Governor’s Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all EIRs required on local projects.

### **State of California Energy Action Plan**

CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The current plan is the 2003 *Energy Action Plan* (2008 update), which calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assisting public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouraging urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

### **Assembly Bill 2076: Reducing Dependence on Petroleum**

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California’s Petroleum Dependence*. Included in this report are

recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). Further, in response to CEC's 2003 and 2005 Integrated Energy Policy Reports (IEPRs), the governor directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030.

### **Integrated Energy Policy Report**

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in preparation of the first IEPR.

CEC adopts an IEPR every 2 years and an update every other year. The 2019 IEPR, which is the most recent IEPR, was adopted January 31, 2020. The 2019 IEPR provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the state's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants (CEC 2020a).

### **Legislation Associated with Electricity Generation**

The state has passed multiple pieces of legislation requiring the increasing use of renewable energy to produce electricity for consumers. California's Renewable Portfolio Standard (RPS) Program was established in 2002 (SB 1078) with the initial requirement to generate 20 percent of their electricity from renewable by 2017, 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018). More detail about these regulations is provided in Section 4.19, "Greenhouse Gas Emissions and Climate Change."

### **Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015**

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

### **Assembly Bill 1007: State Alternative Fuels Plan**

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce greenhouse gas (GHG) emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

### **California Building Energy Efficiency Standards (Title 24, Part 6)**

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Energy Code. The code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years, typically including more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.



The 2019 California Energy Code was adopted by CEC on May 9, 2018, and will apply to projects constructed after January 1, 2020. CEC estimates that the combination of required energy-efficiency features and mandatory solar panels in the 2019 California Energy Code will result in new residential buildings that use 53 percent less energy than those designed to meet the 2016 California Energy Code. CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficacy lighting (CEC 2018a).

### California Green Building Standards (Title 24, Part 11)

The California Green Building Standards, also known as CALGreen, is a reach code (i.e., optional standards that exceed the requirements of mandatory codes) developed by CEC that provides green building standards for statewide residential and nonresidential construction. The current version is the 2019 CALGreen Code, which took effect on January 1, 2020. As compared to the 2016 CALGreen Code, the 2019 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and used as guidelines by state agencies for meeting the requirements of Executive Order B-18-12.

### Legislation Associated with Greenhouse Gas Reduction

The state has passed legislation that aims to reduce GHG emissions. The legislation often has an added benefit of reducing energy consumption. SB 32 requires a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. Executive Order S-3-05 sets a long-term target of reducing statewide GHG emissions by 80 percent below 1990 levels by 2050.

SB 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. The Advanced Clean Cars program, approved by CARB, combines the control of GHG emissions and criteria air pollutants and the increase in the number of zero-emission vehicles into a single package of standards. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025.

Implementation of the state's legislation associated with GHG reduction will have the co-benefit of reducing California's dependency on fossil fuel and making land use development and transportation systems more energy efficient.

More details about legislation associated with GHG reduction are provided in the regulatory setting of Section 4.19, "Greenhouse Gas Emissions and Climate Change."

## LOCAL

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Housing Element of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

- ▶ **Policy 4-1-3:** Promote energy conservation activities in all residential neighborhoods.
  - Program: Supply energy conservation awareness brochures in all public meeting places.

The City of Lathrop Housing Element, which was updated in 2019, contains the following policies that would apply to the modified Phase 2 Project (City of Lathrop 2019):

- ▶ **Policy 6-1:** Promote the use of energy conservation features in the design of new residential development.
- ▶ **Policy 6-2:** Ensure that development projects meet or exceed state standards, including the California Energy Code and CalGreen, regarding energy conservation.

- ▶ **Policy 6-3:** Promote energy conservation activities in all residential neighborhoods and encourage improved energy conservation in residential uses.

## 4.18.2 Environmental Setting

### ELECTRICITY AND NATURAL GAS USE

Electric services and natural gas are provided to the City from Pacific Gas and Electric (PG&E) for planning areas east of the San Joaquin River. While PG&E is the natural gas provider for River Islands, the primary electric provider is Lathrop Irrigation District (LID). See Section 4.11, "Public Utilities," for more detailed information on electrical and natural gas infrastructure specifically serving the modified Phase 2 area.

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. In 2018, approximately 34 percent of natural gas consumed in the state was used to generate electricity. Large hydroelectric powered approximately 11 percent of electricity and renewable energy from solar, wind, small hydroelectric, geothermal, and biomass combustion totaled 31 percent (CEC 2019). In 2017, PG&E provided its customers with 33 percent eligible renewable energy (i.e., biomass combustion, geothermal, small scale hydroelectric, solar, and wind) and 18 percent and 20 percent from large scale hydroelectric and natural gas, respectively (CEC 2018b). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors. PG&E is the primary electricity and natural gas service provider in the Bay Area, North Coast, and Central Valley of the state.

The proportion of PG&E-delivered electricity generated from eligible renewable energy sources is anticipated to increase over the next three decades to comply with the SB 100 goals described in Section 4.18.1. LID is expected to meet SB 100 goals as well, as described below.

LID started operation as a retail provider in 2013 and because all housing stock in River Islands is new, the use of solar on single-family homes is widespread. A number of builders offered solar from the beginning of sales in 2014 and many homeowners applied for and installed systems on homes that did not initially have them. Now that the use of solar on all new homes is mandatory by State law for all builders going forward, solar is ubiquitous. These systems are currently assisting LID in meeting its RPS goals. LID may entertain larger solar, wind, or other renewable systems in the future (dedicated systems not associated with residential development) and will continue to look at such opportunities when they become economically feasible (Batista, pers. comm., 2020).

Where LID is not generating renewable energy on its own, it buys renewable energy credits (RECs), which are generated from private renewable energy resources throughout the state. LID will continue to buy RECs as necessary to meet the RPS requirements as necessary (Batista, pers. comm., 2020).

### ENERGY USE FOR TRANSPORTATION

In 2017, the transportation sector comprised the largest end-use sector of energy in the state totaling 40.3 percent, followed by the industrial sector totaling 23.1 percent, the commercial sectors at 18.7 percent, and the residential sector of 18.0 percent (EIA 2018). On-road vehicles use about 90 percent of the petroleum consumed in California. The CEC reported retail sales of 453 million gallons of gasoline and diesel in San Joaquin County in 2018 (the most recent data available) (CEC 2020b). The California Department of Transportation (Caltrans) projects that 575 million gallons of gasoline and diesel will be consumed in San Joaquin County in 2025 (Caltrans 2008).

## ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced substantial evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth's temperature (IPCC 2014 and OPR, CEC, and CNRA 2018). For an analysis of greenhouse gas production and the modified Phase 2 Project's contribution to climate change, see Section 4.19, "Greenhouse Gas Emissions and Climate Change."

### 4.18.3 Impacts and Mitigation Measures

#### METHODOLOGY

The 2003 SEIR was prepared prior to the addition of energy to Appendix G of the State CEQA Guidelines; therefore, while energy would have been consumed from construction and operation of approved Phases 1 and 2 of the River Islands Project, this energy was not estimated or evaluated for significance. The analysis below determines if the modified Phase 2 Project would result in significant energy impacts. Also, to assess whether the modified Phase 2 Project would result in a substantially new severe impact related to energy, construction and operational energy the approved River Islands Project land uses in the Phase 2 area (herein referred to as the approved Phase 2 Project) were estimated to provide a comparative analysis of the projected construction and operational energy consumption associated with the modified Phase 2 Project (evaluated in this Draft SEIR).

Energy consumed by the modified Phase 2 Project during construction would include gasoline and diesel fuel, measured in gallons. Gasoline, and some diesel fuel, would be consumed from worker commute trips to and from the modified Phase 2 area. Diesel would primarily be consumed to operate heavy-duty equipment such as dozers, tractors, and pavers and to support haul truck trips. Emissions factors from CARB's EmissionFactor 2017 program were used to calculate the average fuel economy for vehicles operating within San Joaquin County by year (2021–2040).

Energy consumed during operation would include electricity and direct natural gas consumption, measured in megawatt-hours per year. Natural gas would also be indirectly combusted from electricity demand; however, compliance with California's various renewable energy standards would decrease natural gas combustion in the energy sector over time.

Energy consumption estimates were calculated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 computer software (CAPCOA 2017). Where project-specific information was unknown, CalEEMod default values based on the modified Phase 2 area were used. CalEEMod default electricity consumption rates were adjusted to account for energy-efficiency improvements from the 2019 California Energy Code, which would result in a 53 and 30-percent reduction in energy consumption in residential and nonresidential buildings, respectively, compared with the 2016 California Energy Code included in CalEEMod (CEC 2018a).

Operational fuel use estimates were calculated using the mobile-source emissions module of CalEEMod and the estimated level of VMT associated with the modified Phase 2 Project as described in Section 4.4, "Traffic and Transportation."

Refer to Appendix H for detailed assumptions and modeling results.

#### THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are based on Appendix G of the State CEQA Guidelines. The modified Phase 2 Project would cause a significant impact related to energy if it would:

- ▶ result in a potentially significant environmental impact related to wasteful, inefficient, or unnecessary consumption of energy during project construction or operation; or
- ▶ conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

As noted previously, the 2003 SEIR did not estimate or evaluate energy impacts associated with the River Islands Project. To ascertain whether implementation of the modified Phase 2 Project would introduce a substantially more severe impact with the respect to energy, the energy impacts are first determined, then a comparative analysis of the approved Phase 2 Project and the modified Phase 2 Project is provided.

There is no set numerical threshold for which to evaluate energy impacts. Therefore, while energy consumption during construction and operation has been quantified and disclosed in this analysis, a qualitative discussion of whether the modified Phase 2 Project's energy consumption would be considered wasteful, inefficient, or unnecessary is provided. Additionally, the modified Phase 2 Project's consistency with applicable energy efficiency or renewable energy plans is evaluated.

To assess whether the modified Phase 2 Project would be a substantially more severe impact than the approved Phase 2 Project, energy consumption has been quantified and presented in the form of energy per service population (sum of jobs and residents) for both the modified Phase 2 Project and the approved Phase 2 Project. This is consistent with the approach taken in Chapter 4.19, "Greenhouse Gas Emissions and Climate Change."

## ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussion below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.18-a: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation

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Implementation of the modified Phase 2 Project would result in the consumption of additional energy supplies during construction in the form of gasoline and diesel fuel consumption; however, this energy expenditure would not be considered atypical when compared to other construction projects. Operation of new land uses associated with the modified Phase 2 Project would also result in additional energy consumption, but the modified Phase 2 Project would be required to comply with the most recent iteration of the California Energy Code as it becomes more stringent over time. Additionally, the modified Phase 2 Project would provide necessary housing to the City of Lathrop meeting the objectives of the 2019 General Plan Update Housing Element. As compared to the approved Phase 2 Project, the modified Phase 2 Project would be more energy efficient when considered in the context of the number of residents that the modified Phase 2 Project supports. Therefore, the modified Phase 2 Project would not have a more severe impact than the approved Phase 2 Project due to its greater energy efficiency. This impact would be **less than significant**.

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Appendix F and Appendix G of the State CEQA Guidelines require consideration of the energy implications of a project. CEQA requires mitigation measures to prevent or reduce wasteful, inefficient, and unnecessary energy usage. Neither the law nor the State CEQA Guidelines establish thresholds that define when energy consumption is considered wasteful, inefficient, or unnecessary.

Most of the construction-related energy consumption for the modified Phase 2 Project would be associated with off-road equipment and the transport of equipment and materials using on-road haul trucks. An estimated 380,000 gallons of gasoline and 1,090,000 gallons of diesel fuel would be used during construction of the modified Phase 2 Project (see Appendix H for a summary of construction calculations). The energy needs for project construction would occur over a roughly 240-month period (approximately 20 years) and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Gasoline and diesel would also be consumed during worker commute trips. Energy would be required to transport demolition waste and excavated materials. The one-time energy expenditure required to construct the project (spread over the estimate 20-year buildout period) would be nonrecoverable. There is no atypical construction-related energy demand associated with the proposed project. Nonrenewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner when compared to other construction activity in the region. Additionally, as shown in Appendix H, on-road gasoline and diesel fuel consumption associated with construction activity would go down

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every year as the vehicle fleet becomes more fuel-efficient over time. Construction of the approved Phase 2 Project would require the same amount of gasoline and diesel fuel as the modified Phase 2 Project.

Table 4.18-1 summarizes the anticipated operational electricity use, natural gas combustion, and gasoline and diesel fuel consumption per service population associated with the modified Phase 2 Project and approved Phase 2 Project at the first full year of project buildout, estimated to be 2040 in this analysis. Project operation would be typical of residential, commercial, and educational land uses requiring electricity and natural gas for lighting, space and water heating, climate control, home appliances, and landscape maintenance activities. The modified Phase 2 Project would increase electricity and natural gas consumption relative to existing conditions; however, project construction and operation would not require additional or new electrical or natural gas infrastructure outside of the River Islands Development Area (see Section 4.11, "Public Utilities").

Residential and nonresidential buildings would be required to adhere to the 2019 California Energy Code and any subsequent code updates, historically every three years, throughout the project lifetime. Once fully developed, the modified Phase 2 Project would support 10,726 housing units for an estimated 32,178 future residents, which represents an additional 4,010 dwelling units and 12,910 residents beyond what is included in the approved Phase 2 Project (see Table 4.3-7 in Section 4.3, "Population, Employment, and Housing"). The modified Phase 2 Project would also support sufficient commercial space to generate an additional 7,963 jobs as compared to the approved Phase 2 Project.

**Table 4.18-1 Modified Phase 2 Project and Approved Phase 2 Project Operational Energy Consumption at Full Build-Out per Service Population (2040)**

Energy Type	Energy Consumption	Units
<b>Approved Phase 2 Project<sup>1</sup></b>		
Electricity	3.54	MWh/year/SP
Natural Gas	35.40	therms/year/SP
Gasoline	605.14	gal/year/SP
Diesel	127.17	gal/year/SP
<b>Modified Phase 2 Project<sup>2</sup></b>		
Electricity	3.03	MWh/year/SP
Natural Gas	30.30	therms/year/SP
Gasoline	426.77	gal/year/SP
Diesel	89.69	gal/year/SP

Notes: MWh/year/SP = megawatt-hours per year per service population; therms/year/SP = thermal units per year per service population, gal/year/SP = gallons per year per service population.

<sup>1</sup> The approved Phase 2 Project would support a service population of 36,019 (19,268 residents + 16,751 jobs).

<sup>2</sup> The modified Phase 2 Project would support a service population of 56,676 (31,962 residents + 24,714 jobs).

Source: Calculations by Ascent Environmental in 2020

As shown in Table 4.18-1, the modified Phase 2 Project would consume less electricity, natural gas, gasoline, and diesel per service population as compared to the approved Phase 2 Project. While overall energy consumption under the modified Phase 2 Project would be higher (see Appendix H) than the approved Phase 2 Project, the modified Phase 2 would be more efficient per resident as the land uses under the modified Phase 2 Project would be denser and support a greater population.

Although energy use was modeled to reflect 2019 California Energy Code, new iterations of the Code would become increasingly more stringent with updates to the efficiency standards until the modified Phase 2 Project's final buildout year. This would result in increased building energy efficiency over time as buildings continue to be developed within the plan area. As compared to a regional average developed from CEC and U.S. Census data for San Joaquin County per service population in 2020 (i.e., 5.33 MWh/SP of electricity and 247.41 therms/SP of natural gas), the modified Phase 2 Project would be substantially more efficient. This is attributable to the improved 2019 California Energy

Code; existing buildings and facilities in San Joaquin County would have been constructed in accordance with the relevant building code in effect at the time of construction. Therefore, the regional average is less energy efficient as compared to the modified Phase 2 Project.

Notably, the values presented in Table 4.18-1 for electricity and natural gas consumption are associated with the design elements of the 2019 Title 24 California Building Code. It is foreseeable that the Title 24 California Building Code, and the relevant parts that improve the energy efficiency of residential and nonresidential development (i.e., Part 6, California Energy Code, and Part 11, California Green Building Standards Code), is updated on its triennial basis. At this time, it is unknown how energy efficiency will be upgraded in code updates. Therefore, this analysis provides a more conservative estimate of future energy consumption as it is expected that the Title 24 California Building Code in effect in 2040 would result in more energy efficient development to assist the state in meeting its long-term climate change goals (See Chapter 4.19, "Greenhouse Gas Emissions and Climate Change.")

Moreover, as discussed in Section 4.19, "Greenhouse Gas Emissions and Climate Change," the modified Phase 2 Project's proposed land use plan would result in a decrease in VMT per service population (i.e., combined residents and employees) as compared to the land use designations under the approved Phase 2 Project resulting from increased residential density and proximity to the proposed Valley Link Station (i.e., 17,431 VMT per service population [VMT/SP] and 24,478 VMT/SP, respectively), which would result in less transportation-related energy consumption.

The modified Phase 2 Project would also provide high-density housing to the City of Lathrop consistent with Goal 1 of the City of Lathrop's 2019 General Plan Update Housing Element, which promotes the availability of housing affordable to all income levels and household types. Therefore, while the modified Phase 2 Project would introduce new operational energy demand, this energy consumption would not be wasteful, unnecessary, or inefficient as it would serve to meet housing demand for the City of Lathrop (City of Lathrop 2019).

As identified in Section 4.4, "Traffic and Transportation," the VMT analysis provided in that section analyzes a modified Phase 2 Project Without Valley Link scenario as the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. As shown in Tables 4.4-7 through 4.4-10, if the Valley Link Station is not constructed, the modified Phase 2 Project will generate more total VMT and higher VMT per household, per capita, and per employee. This increased VMT would translate into greater operational transportation-related energy consumption in the form of gasoline and diesel fuel. The modified Phase 2 Project with the Valley Link Station would consume 24,187,737 and 5,083,058 gallons of gasoline and diesel fuel, respectively, in 2040 from vehicle movement to and from the project site. By comparison, the modified Phase 2 Project without the Valley Link Station would result in the consumption of 24,915,678 and 5,236,035 gallons of gasoline and diesel fuel, respectively, or an increase of roughly 3 percent. This small increase in gasoline and diesel fuel consumption if the Valley Link Station is not constructed would not change conclusions regarding the energy efficiency of modified Phase 2 Project.

Also, as shown in Table 4.18-1, the modified Phase 2 Project would be more energy efficient than the approved Phase 2 Project when evaluated per service population. This conclusion would also apply if gasoline and diesel fuel consumption were increased by 3 percent if the Valley Link Station were not constructed. Therefore, this impact would be **less than significant** and would not be substantially more severe than the approved Phase 2 Project.

### Mitigation Measures

No mitigation is required.

### Impact 4.18-b: Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency

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Although implementation of the modified Phase 2 Project would increase energy demands compared to existing conditions, development would be required to comply with applicable California Energy Code and RPS. As a result, implementation of the modified Phase 2 Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would therefore be **less than significant**.

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As noted above, new land uses developed as part of the modified Phase 2 Project would comply with the 2019 California Energy Code, which are intended to increase the energy efficiency of new development projects in the state. Through the permitting process, all development projects proposed under the modified Phase 2 Project would comply with the current and future versions of the State's Title 24 California Building Code. The 2019 California Energy Code (and subsequent updates), which the modified Phase 2 Project is subject to, is designed to move the state closer to its zero-net energy goals. For these same reasons, the modified Phase 2 Project would be consistent with the energy conservation Goals and Policies expressed in the City of Lathrop Housing Element identified above in Section 4.18.1, "Regulatory Setting." As also stated in Section 4.18.1, LID, as an electricity utility, is required to comply with the future benchmarks of the state's RPS (i.e., 52 percent renewable by 2027, 60 percent by 2030, and 100 percent by 2045). Because electricity utilities in the state are required to increase the percentage of renewable energy sources in the electricity they provide, over time electricity consumed as part of the modified Phase 2 Project will increasingly be provided by renewable sources. In addition, as stated above in the discussion of Impact 4.18-a, the modified Phase 2 Project would be more energy efficient than the existing approved project.

Due to the inclusion of energy efficiency and renewable energy measures as part of the modified Phase 2 Project and compliance with state regulations related to energy efficiency and renewable energy, project implementation would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, this impact would be **less than significant**.

### Mitigation Measures

No mitigation is required.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

With respect to energy resources, construction-related and building-related energy consumption would be comparatively the same as what was evaluated under Impact 4.18-a. With respect to fuel consumption from vehicles, which relates directly to VMT, the traffic model used to generate VMT values incorporates roadway network conditions under cumulative scenarios that include the widening and improvement of Paradise Road. Therefore, VMT generation includes the effects of a widened and improved Paradise Road being in place. Consequently, the widening and improvement of Paradise Road does not alter the gasoline and diesel fuel consumption identified in Impact 4.18-a. The widening and improvement of Paradise Road also does not change the conclusion that gasoline and diesel fuel consumption for the modified Phase 2 Project is less than for the approved Phase 2 Project.

## 4.19 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Since certification of the 2003 SEIR, increased awareness of greenhouse gas (GHG) emissions and their role in global climate change has resulted in promulgation of laws and regulations designed to curb emissions and reduce the inherently cumulative effect of GHG emissions. At the time the 2003 SEIR was prepared and certified, the State CEQA Guidelines did not identify GHG emissions and climate change as a resource area in Appendix G. Thus, the 2003 SEIR did not provide an environmental or regulatory setting to characterize climate change impacts, nor did the 2003 SEIR evaluate the River Islands Project's contribution of GHG emissions to anthropogenic climate change. In 2009, the Governor's Office of Planning and Research (OPR) amended Appendix G of the State CEQA Guidelines to include project-level analysis of GHG emissions.

Because the 2003 SEIR did not evaluate GHG emissions, this section presents a summary of the current state of climate change science and GHG emissions sources in California; a summary of applicable regulations; quantification of GHG emissions generated by the modified Phase 2 Project; and discussion about the modified Phase 2 Project's potential contribution to global climate change. Where impacts are found to be potentially significant, mitigation is recommended.

For the purposes of this analysis, GHG emissions are measured as metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>). The atmospheric impact of a GHG is based on the global warming potential (GWP) of that gas. GWP is a measure of the heat trapping ability of one unit of a gas over a certain timeframe relative to one unit of carbon dioxide (CO<sub>2</sub>). The GWP of CO<sub>2</sub> is one (IPCC 2014). Consistent with the methodology used by the California Air Resources Board (CARB) in estimating statewide GHG emissions, this analysis uses GWP values from the Fourth Assessment Report Values by the Intergovernmental Panel on Climate Change (IPCC).

### 4.19.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

In *Massachusetts et al. v. Environmental Protection Agency et al.*, 549 U.S. 497 (2007), the Supreme Court of the United States ruled that CO<sub>2</sub> is an air pollutant as defined under the federal Clean Air Act (CAA) and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate GHG emissions. In 2010, EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, including operating permits for "major sources" issued under Title V of the CAA.

However, on April 2, 2018, the EPA administrator announced a final determination that the current standards should be revised. On August 2, 2018, the U.S. Department of Transportation and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks by increasing the stringency of the standards by 1.5 percent per year from models 2021 through 2026 (NHTSA 2020).

The CAA grants California the ability to enact and enforce more strict fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the state applies to EPA for a preemption waiver for those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revokes California's existing waiver to implement its own vehicle emission standard and also established a standard to be adopted and enforced nationwide (84 Federal Register [FR] 51310). At the time of preparing this SEIR, the implications of the SAFE Rule on California's future emissions are contingent upon a variety of unknown factors, including legal challenges by California and other states to the revocation of California's waiver, direction provided by federal leadership, and future cabinet and administration appointments. However, the impact analysis included in this chapter assumes that the SAFE Rule would continue to be implemented, and uses emissions factors developed by CARB that account for the potential for a less fuel-efficient future vehicle fleet as a result of the SAFE Rule (CARB 2019a).



In June 2019, EPA, under the authority of the CAA section 111(d), issued the Affordable Clean Energy rule which provides guidance to states on establishing emissions performance standards for coal-fired electric generating units (EGUs). Under this rule, states are required to submit plans to EPA which demonstrate the use of specifically listed retrofit technologies and operating practices to achieve CO<sub>2</sub> emission reductions through heat rate improvement (HRI). HRI is a measurement of power plant efficiency that EPA determined as part of this rulemaking to be the best system of emission reductions for CO<sub>2</sub> generated from coal-fired EGUs (EPA 2019a).

## STATE

### Statewide GHG Emission Targets and Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades. GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. Executive Order B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the U.S. to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius (United Nations 2015).

*California's 2017 Climate Change Scoping Plan* (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other state agencies also released the *January 2019 Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* consistent with the carbon neutrality goal of Executive Order B-55-18 (California Environmental Protection Agency et al. 2019).

The state has also passed more detailed legislation addressing GHG emissions associated with transportation, electricity generation, and energy consumption, as summarized below.

### Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel-powered on-road vehicles than EPA. In addition, the program's zero-emission vehicle (ZEV) regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018a). When the rules are fully implemented by 2025, GHG emissions from the statewide fleet of new cars and light-duty trucks will be reduced by 34 percent and cars will emit 75 percent less smog-forming pollution than the statewide fleet in 2016 (CARB 2016).

Executive Order B-48-18, signed into law in January 2018, requires all state entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen-fueling stations and 250,000 EV-charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

The CCA requires that a waiver be provided by EPA for states to enact more stringent emissions standards for new cars, which was granted to CARB by EPA on June 14, 2011; however, in addition to the SAFE Rule, but as a separate action, on September 19, 2019, EPA issued a final action entitled the "One National Program Rule" which would institute a nationwide, uniform fuel economy and GHG standard for all automobiles and light-duty trucks (EPA 2019b). The action would include the revocation of California's waiver under the CCA which would affect the enforceability of CARB's ZEV programs. While EPA has issued an action to revoke the waiver, the outcome of any related lawsuits and how such lawsuits could delay or affect the SAFE Rule implementation or CARB's ZEV programs is unknown at this time.

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity (CI) of California's transportation fuels. Low-CI fuels emit less CO<sub>2</sub> than other fossil fuel-based fuels such as gasoline and fossil diesel. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

In addition to regulations that address tailpipe emissions and transportation fuels, the state legislature has passed regulations to address the amount of driving by on-road vehicles. Since passage of SB 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to develop and adopt sustainable communities strategies (SCSs) as a component of the federally-prepared regional transportation plans (RTPs) to show reductions in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035 (CARB 2018b). These plans link land use and housing allocation to transportation planning and related mobile-source emissions. The San Joaquin Council of Governments (SJCOG) serves as the MPO for the County of San Joaquin encompassing the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. SJCOG adopted its first RTP/SCS in 2014 with a planning horizon year of 2040. In June 2018, SJCOG adopted its second 2018 RTP/SCS (SJCOG 2018). In its initial iteration of targets under SB 375, CARB did not assign a numerical target for SJCOG for 2020 or 2035. However, in March 2018, CARB adopted the Target Update for the SB 375 targets, tasking SJCOG to achieve a 12 percent and a 16 percent per capita reduction by 2020 and 2035, respectively, for plans developed and adopted after September 30, 2018 (CARB 2018a). At this time, SJCOG has not released an updated plan to reflect land use planning and transportation design features to achieve these benchmark goals.

SB 743 of 2013 required that OPR propose changes to the State CEQA Guidelines to address transportation impacts in transit priority areas and other areas of the state. In response, Section 15064.3 was added to CEQA in December 2018, requiring that transportation impacts no longer consider congestion but instead focus on the impacts of vehicle miles traveled (VMT). Agencies have until July 1, 2020 to implement these changes, but can also choose to implement these changes immediately. In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which recommends that the transportation impact of a project be based on whether the project would generate a level of VMT per capita (or VMT per employee or some equivalent metric) that is 15 percent lower than that of existing development in the region, or that a different threshold is used based on substantial evidence (OPR 2017). OPR's technical advisory explains that this criterion is consistent with Public Resources Code Section 21099, which states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions" (OPR 2017). This metric is intended to replace the use of delay and level of service to measure transportation-related impacts. More detail about SB 743 is provided in the "Regulatory Setting" section of Section 4.4, "Traffic and Transportation."

### **Legislation Associated with Electricity Generation**

The state has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018).

### **Building Energy Efficiency Standards (Title 24, Part 6)**

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Code of Regulations Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Commission (CEC) updates the California Energy Code every three years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The current California Energy code will require builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use. CEC estimates that the combination of required energy-efficiency features and mandatory solar panels in the 2019 California Energy Code will result in new residential buildings that use 53 percent less energy than those designed to meet the 2016 California Energy Code. CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficacy lighting (CEC 2018).

## Legislation Associated with Landfill Emissions

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. In 2018, per capita disposal rates for Lathrop jurisdiction (8.8 pounds per day [lb/day] per capita) are below the target disposal rates established by AB 939 (20.4 lb/day per resident) (California Department of Resources Recycling and Recovery 2019).

## LOCAL

### San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is the primary agency responsible for addressing air quality concerns in San Joaquin County. Its role is discussed further in Section 4.5, "Air Quality." SJVAPCD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. SJVAPCD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. SJVAPCD's goals in developing GHG thresholds include ease of implementation, use of standard analysis tools, and emissions mitigation consistent with AB 32. However, since the passage of SB 32, which mandates a statewide emissions target of 40 percent below 1990 levels by 2030, SJVAPCD has not developed new thresholds in compliance with this target.

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The *City of Lathrop General Plan* (2004) contains the following policy and program that may apply to the project:

- ▶ **Policy 4-1-3:** Promote energy conservation activities in all residential neighborhoods.
  - Program: Supply energy conservation awareness brochures in all public meeting places.

## 4.19.2 Environmental Setting

### GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (IPCC 2014).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year

to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO<sub>2</sub> is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO<sub>2</sub> emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO<sub>2</sub> emissions remain stored in the atmosphere (IPCC 2013).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered to be enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

## GREENHOUSE GAS EMISSION SOURCES

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2017 was 424 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e) (CARB 2019b). This is less than the 2020 target of 431 MMTCO<sub>2</sub>e (CARB 2019b). Table 4.19-1 summarizes the statewide GHG inventory for California by percentage.

**Table 4.19-1 Statewide GHG Emissions by Economic Sector**

Sector	Percent
Transportation	41
Industrial	24
Electricity generation (in state)	9
Agriculture	8
Residential	7
Electricity generation (imports)	6
Commercial	5

Source: CARB 2019b

As shown in Table 4.19-1, transportation, industry, and in-state electricity generation are the largest GHG emission sectors.

Emissions of CO<sub>2</sub> are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO<sub>2</sub> sinks, or reservoirs, include vegetation and the ocean, which absorb CO<sub>2</sub> through sequestration and dissolution (CO<sub>2</sub> dissolving into the water) and are two of the most common processes for removing CO<sub>2</sub> from the atmosphere.

The City of Lathrop has not conducted a citywide GHG inventory as of 2020.

## EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

According to IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.7 to 4.8 degrees Celsius (°C) (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014:10). According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate California will experience average daily high temperatures that are warmer than the historic average by 2.5 °F from 2006 to 2039, by 4.4 °F from 2040 to 2069, and by 5.6 °F from 2070 to 2100; and if GHG emissions continue at current

rates then California will experience average daily high temperatures that are warmer than the historic average by 2.7 °F from 2006 to 2039, by 5.8 °F from 2040 to 2069, and by 8.8 °F from 2070 to 2100 (OPR et al. 2018).

Since its previous climate change assessment in 2012, California has experienced several of the most extreme natural events in its recorded history: a severe drought from 2012–2016, an almost non-existent Sierra Nevada winter snowpack in 2014–2015, increasingly large and severe wildfires, and back-to-back years of the warmest average temperatures (OPR et al. 2018). According to CNRA's *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). According to the National Oceanic and Atmospheric Administration and the National Aeronautics and Space Administration, 2016, 2017, and 2018 were the hottest recorded years in history (NOAA 2019). In contrast, the northern Sierra Nevada experienced one of its wettest years on record during the 2016–2017 water year (CNRA 2018). The changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods which lowers the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires has increased. In November 2018, the Camp Fire completely destroyed the town of Paradise in Butte County and caused 85 fatalities, becoming the state's deadliest fire in recorded history, and the largest fires in the state's history have occurred in the 2018–2020 period. Moreover, changes in the intensity of precipitation events following wildfires can also result in devastating landslides. In January 2018, following the Thomas Fire, 0.5 inch of rain fell in 5 minutes in Santa Barbara causing destructive mudslides formed from the debris and loose soil left behind by the fire. These mudslides resulted in 21 deaths.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet and the glaciers atop Greenland, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (OPR et al. 2018).

Temperature increases and changes to historical precipitation patterns will likely affect ecological productivity and stability. Existing habitats may migrate from climatic changes where possible, and those habitats and species that lack the ability to retreat will be severely threatened. Altered climate conditions will also facilitate the movement of invasive species to new habitats thus outcompeting native species. Altered climatic conditions dramatically endanger the survival of arthropods (e.g., insects, spiders) which could have cascading effects throughout ecosystems (Lister and Garcia 2018). Conversely, a warming climate may support the populations of other insects such as ticks and mosquitos, which transmit diseases harmful to human health such as the Zika virus, West Nile virus, and Lyme disease (European Commission Joint Research Centre 2018).

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; OPR et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive, physical damage to communities and the state.

Additionally, adjusting to the physical changes associated with climate change can produce mental health impacts such as depression and anxiety.

### 4.19.3 Environmental Impacts and Mitigation Measures

#### METHODOLOGY

The 2003 SEIR was prepared prior to the addition of GHGs to Appendix G of the State CEQA Guidelines; therefore, while GHGs would have been emitted from construction and operation of approved Phases 1 and 2 of the River Islands Project, these emissions were not estimated or evaluated for significance. The analysis below determines if the modified Phase 2 Project would result in significant GHG impacts. Also, to assess whether the modified Phase 2

Project would result in a substantially new severe impacts to global climate change, construction and operational emissions of the approved River Islands Project land uses in the Phase 2 area (herein referred to as the approved Phase 2 Project) were estimated to provide a comparative analysis of the projected construction and operational GHG emissions associated with the modified Phase 2 Project (evaluated in this Draft SEIR).

GHG emissions associated with the modified Phase 2 Project would be generated during construction and operation. Short-term construction-generated and long-term operational-related GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 as recommended by SJVACPD and other air districts in California (CAPCOA 2016). Modeling was based on project-specific information (e.g., demolition, construction activity, estimated hauling trips, worker trips) where available; assumptions based on typical construction activities; and default values in CalEEMod that are based on the project's location and land use type. Construction for both the approved Phase 2 Project and the modified Phase 2 Project were both assumed to occur over a 20-year period commencing in 2021 and ending in 2040. Total construction emissions were amortized over a 20-year period and added as a component of total annual GHG emissions for the first full year of operation.

The first year of full buildout of the modified Phase 2 Project is projected to be 2041; however, the CalEEMod computer program does not generate emissions estimates for the incremental years between 2040 and 2045. Therefore, the first year of full buildout was assumed to occur in 2040. Notably, as land uses are constructed over the lifetime of the modified Phase 2 Project (20-year construction period), land uses will incrementally become operational as construction unfolds. It would be expected that residences and commercial spaces would be occupied and operational as construction occurs simultaneously. Nonetheless, to better characterize total operational emissions associated with the project, operational emissions were calculated for 2040.

CalEEMod default energy values were amended to reflect compliance with the 2019 California Energy Code. Notably, the California Energy Code is updated triennially, therefore, residential and nonresidential buildings constructed throughout the lifespan of the modified Phase 2 Project would likely be more energy efficient and indirectly emit fewer GHGs than is assumed in this analysis as the Title 24 California Building Code continues to decarbonize (i.e., limit on-site natural gas combustion associated with water heaters and stoves) and improve its efficiency. It is therefore foreseeable that emissions estimates associated with energy consumption disclosed in this analysis are more conservative than the actual emissions that would be generated from the energy sector as buildings are constructed in accordance with future iterations of the Title 24 California Building Code. However, it is unknown at this time what level of improved efficiency would be achieved from code updates to Parts 6 (California Energy Code) and 11 (California Green Building Standards Code). For instance, as discussed in Section 4.19.1, "Regulatory Setting," in this chapter, the 2019 California Energy Code accomplished a 53 and 30 percent improved energy efficiency for residential and nonresidential development, respectively, from the 2016 California Energy Code. The percent improved efficiency between the 2019 and 2022 (and other future triennial updates) versions of the California Energy Code are speculative at this time, and this analysis does not claim emissions reductions associated with improved energy efficiency that may occur as a result of adherence to future versions of the Title 24 California Building Code.

In addition, default vehicle emissions factors in CalEEMod were adjusted based on updated EMFAC SAFE Rule emissions factors (see Section 4.19.1, "Regulatory Setting"). As noted previously, implementation of the SAFE Rule may be contested or defeated due to legal challenges, or overturned by new federal leadership; nevertheless, to provide a more conservative estimate, mobile-source emissions were estimated using CARB-developed emissions factors that assume the SAFE Rule would be implemented as written (CARB 2019a).

GHG emissions associated with solid waste disposal, water consumption, and wastewater generation were derived using values found elsewhere in this SEIR and the 2003 SEIR (see Sections 4.10, "Public Services," and 4.11, "Public Utilities"). Where appropriate, values taken from the 2003 SEIR were updated to be consistent with the regulatory and environmental setting of 2020. For example, solid waste disposal rates for the approved Phase 2 Project was adjusted to reflect 2019 solid waste disposal rates for the City of Lathrop from data provided by the California Department of Resources Recovery and Recycling.

GHG emissions from landscaping activity were derived using CalEEMod default values.

Detailed model assumptions and inputs for these calculations are presented in Appendix C.

## THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact on climate change is addressed only as a cumulative impact.

The significance criteria used to evaluate project impacts on climate change under CEQA are based on Section 15064 of the CEQA statute and relevant portions of Appendix G of the State CEQA Guidelines, which recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. Implementation of a project would result in a cumulatively considerable contribution to climate change if it would:

- ▶ generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- ▶ conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

As noted previously, the 2003 SEIR did not estimate or evaluate the significance of GHG emissions associated with the River Islands Project. To ascertain whether implementation of the modified Phase 2 Project would introduce a substantially more severe impact with the respect to climate change, the impacts of GHG are first determined, then a comparative analysis of the approved Phase 2 Project and the modified Phase 2 Project is provided.

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (Section 15064.4[a]). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (Section 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (Section 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Appendix G is a sample Initial Study checklist that includes a number of factual inquiries related to the subject of climate change, as it does on a whole series of additional environmental topics. Notably, lead agencies are under no obligation to use these inquiries in fashioning thresholds of significance on these subjects, or indeed on any subject addressed in the checklist. (*Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Rather, with few exceptions, "CEQA grants agencies discretion to develop their own thresholds of significance." (*Ibid.*) Even so, it is a common practice for lead agencies to take the language from the inquiries set forth in Appendix G and to use that language in fashioning thresholds. The City has done so here.

To assess the significance of the modified Phase 2 Project, the City has produced an efficiency metric measured in MTCO<sub>2e</sub> per year per service population (MTCO<sub>2e</sub>/year/SP). In this context, service population encompasses both residents and employees within a geographic area. Because the modified Phase 2 Project's first year of full buildout was assumed to be 2040, an efficiency metric for 2040 was derived in light of the state's trajectory to meeting statewide GHG reduction targets established by SB 32 (i.e., a 40 percent reduction from 1990 GHG levels by 2030) and directed by Executive Order S-3-05 (i.e., an 80 percent reduction from 1990 GHG levels by 2050), then adjusted based on the land use types/economic sectors supported by the modified Phase 2 Project. Although no legislative mandate exists for a GHG reduction target by 2040, a GHG reduction goal of 60 percent from 1990 GHG levels can be linearly extrapolated. An efficiency metric may be used to represent a project's consistency with the state's long-term reduction targets and thus evaluate a project's cumulative contribution to global climate change.

The statewide efficiency metric for 2040 was calculated by dividing statewide GHG emissions by the sum of statewide jobs and residents (referred to in sum as "service population or SP"); however, not all statewide emission sources are present in the Phase 2 area. Accordingly, the statewide inventory was adjusted to exclude emissions sources not applicable to the modified Phase 2 Project (i.e., the agricultural and industrial sectors). Following the removal of these sectors, total GHG emissions in 1990 totaled 318 MMTCO<sub>2e</sub>. Assuming the state will continue to meet its long-term climate change goals in 2040, a 60 percent reduction from 1990 levels was applied resulting in a 2040 GHG inventory of 127 MMTCO<sub>2e</sub>.

Service population for 2040 was estimated from population projections coupled with a modified employment projection (California Department of Finance 2020; Employment Development Department 2020). Total employment in the state was adjusted by removing jobs within the agricultural, forestry, manufacturing, mining, and logging sectors from the total estimate as land uses within the Phase 2 area would not support these industries. A growth rate of 10 percent derived from the projected population growth between 2020 and 2040 was applied to 2020 employment data to produce estimates of statewide employees in 2040. Using this 2040 service population and the 2040 GHG inventory adjusted in consideration of statewide GHG reduction goals, an efficiency metric of 2.12 MTCO<sub>2e</sub>/SP for 2040 was developed. See Appendix C for detailed modeling assumptions and calculations.

Thus, to determine the potential significance of the modified Phase 2 Project, project-generated GHG emissions are assessed against this efficiency metric. For the purposes of determining the significance of the modified Phase 2 Project, the project would result in a cumulatively considerable contribution to climate change if it would:

- ▶ generate GHG emissions in 2040 greater than an efficiency metric of 2.12 MTCO<sub>2e</sub>/year/SP.

The impact would be a new significant impact if the impact would occur for the modified Phase 2 Project, but not for the approved Phase 2 Project. The impact would be substantially more severe if the impact for both the approved and modified project is significant, but the modified Phase 2 Project would result in a substantially worse efficiency metric than the approved Phase 2 Project.

## ISSUES NOT DISCUSSED FURTHER

All issues identified in the above thresholds are addressed in the impact discussion below.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.19-a: Project-Generated GHG Emissions

Construction of the approved Phase 2 Project would generate a total of 14,882 MTCO<sub>2e</sub>, or 744 MTCO<sub>2e</sub>/year, when amortized over a 20-year period. Construction of the modified Phase 2 Project would generate 14,549 MTCO<sub>2e</sub>, or 724 MTCO<sub>2e</sub>/year. Operational emissions associated with the approved Phase 2 Project and the modified Phase 2 Project would result in GHG emissions associated with transportation, electricity and natural gas combustion, water consumption, and wastewater and solid waste generation. Operation of the approved Phase 2 Project would generate approximately 10.67 MTCO<sub>2e</sub>/year/SP in 2040. The modified Phase 2 Project would generate approximately 7.73 MTCO<sub>2e</sub>/year/SP in 2040. This level of emissions is greater than 2.12 MTCO<sub>2e</sub>/year/SP; however, the efficiency metric under the modified Phase 2 Project would be less than what would have occurred under the approved Phase 2 Project. Nonetheless, because the modified Phase 2 Project would generate GHG emissions in exceedance of 2.12 MTCO<sub>2e</sub>/year/SP in 2040, this impact would be **potentially significant**. This impact would, however, not be more severe, and in fact would be less than would have occurred with the approved Phase 2 Project.

Construction-related activities would generate GHG emissions from the use of heavy-duty off-road equipment, materials transport, and worker commute. Based on modeling conducted of the approved Phase 2 Project and the modified Phase 2 Project, construction is estimated to generate a total of 14,882 and 14,549 MTCO<sub>2e</sub>, respectively, for the duration of construction activities (2021–2040). These emissions, amortized over a 20-year period, would be 744 and 727 MTCO<sub>2e</sub> per year, respectively. Refer to Appendix C for detailed input parameters and assumptions.



Operation of the approved Phase 2 Project and the modified Phase 2 Project would directly generate GHG emissions from vehicle movement to and from the project site, on-site natural gas consumption (e.g., stoves, fireplaces, water heaters), and use of landscaping equipment. GHGs would be indirectly emitted from electricity consumption, solid waste disposal at landfills, and water and wastewater treatment.

Table 4.19-2 summarizes the anticipated level of emissions for the approved Phase 2 Project and the modified Phase 2 Project by emissions sector. Refer to Appendix C for detailed input parameters and assumptions.

**Table 4.19-2 Greenhouse Gas Emissions of the Approved Phase 2 Project and the Modified Phase 2 Project**

Emissions Sector <sup>1</sup>	MTCO <sub>2</sub> e
<b>Approved Phase 2 Project</b>	
Mobile Source <sup>1</sup>	328,375
Energy Consumption <sup>2</sup>	22,197
Solid Waste Generation	20,730
Area Sources	8,119
Water Consumption and Wastewater Treatment	4,045
Amortized Construction Emissions <sup>2</sup>	744
<b>Total Operational GHG Emissions</b>	<b>384,209</b>
Service Population <sup>3</sup>	36,019
<b>Efficiency Metric (MTCO<sub>2</sub>e/year/SP)</b>	<b>10.67</b>
<b>Modified Phase 2 Project</b>	
Mobile Source <sup>1</sup>	366,085
Energy Consumption <sup>2</sup>	19,805
Solid Waste Generation	30,940
Area Sources	12,362
Water Consumption and Wastewater Treatment	2,255
Amortized Construction Emissions <sup>2</sup>	727
<b>Total Operational GHG Emissions</b>	<b>432,175</b>
Service Population <sup>3</sup>	56,676
<b>Efficiency Metric (MTCO<sub>2</sub>e/year/SP)</b>	<b>7.73</b>
<b>Net Change in Efficiency Metric (MTCO<sub>2</sub>e/year/SP) vs Approved Project</b>	<b>-3.04</b>
<b>2040 Efficiency Metric (MTCO<sub>2</sub>/year/SP)</b>	<b>2.12</b>
<b>Exceeds Metric</b>	<b>Yes</b>

Notes: Totals may not add due to rounding.

MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalent, MTCO<sub>2</sub>e/year/SP = metric tons of carbon dioxide equivalent per year per service population.

<sup>1</sup> Mobile source emissions reflect the federal Safer Affordable Fuel Economy Rule.

<sup>2</sup> Energy was estimated in accordance with the 2019 California Energy Code (Part 6 of the Title 24 California Building Code). The California Energy Code is updated triennially and expected to enhance the energy efficiency and decarbonization of future development. With a construction period of 20 years, it is expected that energy consumption would decrease as buildings become more energy efficient and feature minimal or no on-site natural gas use.

<sup>3</sup> Construction emissions were amortized over a 20-year period.

<sup>4</sup> Service population represents both residents and employees of the approved Phase 2 Project and the modified Phase 2 Project sites.

See Appendix C for detailed input parameters and modeling results.

Source: Modeled by Ascent Environmental in 2020

As shown in Table 4.19-3, the modified Phase 2 Project and approved Phase 2 Project would generate approximately 432,000 and 384,000 MTCO<sub>2</sub>e/year, respectively, in 2040. While the total emissions associated with the modified Phase 2 Project would ultimately be greater than what would occur under the approved Phase 2 Project, the modified Phase 2 Project would result in more efficient generation of emissions when considering the anticipated service population it supports. This is an important consideration for GHGs. Because climate change is global in nature, the efficiency at which GHGs are emitted reflects the ultimate global production of these emissions. Individual projects generally do not change the ultimate population or employment (together, the SP) levels of a region or the state. Thus, an individual project that produces less GHG emissions per SP than another project is beneficial in terms of total (global) GHG generation. The high-density land uses proposed as a component of the modified Phase 2 Project would support 10,726 housing units for an estimated 31,962 future residents, which represents an additional 4,010 dwelling units and 12,694 residents beyond what was identified in the 2003 SEIR (see Table 4.3-7 in Section 4.3, "Population, Employment, and Housing"). Because of this increase in total service population, the modified Phase 2 Project would result in 7.73 MTCO<sub>2</sub>e/year/SP as compared to 10.67 MTCO<sub>2</sub>e/year/SP for the approved Phase 2 Project. Additionally, the modified Phase 2 Project includes transit-oriented development (TOD), and mixed-use and high-density development. TOD is a type of development that maximizes the amount of residential, business, and leisure space within walking distance of public transportation. This increased availability of transit makes transit use more appealing and accessible to residents of a project site, thus minimizing the need to travel via automobile. Also, mixed-use development reduces dependency on automobiles by siting several development types within one area. By siting non-residential land use types near residential areas, the overall distance between these land use types is reduced which, in turn, supports alternate zero-emission modes of transportation such as cycling and walking. High-density, transit-oriented housing is identified in the 2017 Scoping Plan as a component of how the state will achieve its 40 percent reduction from 1990 GHG levels by 2030 as mandated by SB 32 (CARB 2017). Therefore, the modified Phase 2 Project's emphasis on TOD and high-density housing as compared to the approved Phase 2 Project demonstrates greater consistency with the goals of the 2017 Scoping Plan.

As identified in Section 4.4, "Traffic and Transportation," the VMT analysis provided in that section analyzes a modified Phase 2 Project Without Valley Link scenario as the City of Lathrop and the project applicant do not have control over whether Valley Link is ultimately implemented. As shown in Tables 4.4-7 through 4.4-10, if the Valley Link Station is not constructed, the modified Phase 2 Project will generate more total VMT and higher VMT per household, per capita, and per employee. This increased VMT would translate into higher mobile source GHG emissions. As shown in Appendix C, mobile source emissions of GHGs under the No Valley Link Scenario would total approximately 373,000 MTCO<sub>2</sub>e/year as compared to 366,000 MTCO<sub>2</sub>e/year under the modified Phase 2 Project, which includes the Valley Link Station. In total, the No Valley Link Scenario would produce an efficiency metric of 7.82 MTCO<sub>2</sub>e/year/SP, which is greater than the 7.63 MTCO<sub>2</sub>e/year/SP of the modified Phase 2 Project, but still less than the 10.67 MTCO<sub>2</sub>e/year/SP for the approved Phase 2 Project.

Overall, while the modified Phase 2 Project (with or without the Valley Link Station) would generate fewer emissions per service population as compared to the approved Phase 2 Project, the modified Phase 2 Project would emit emissions greater than the target of 2.12 MTCO<sub>2</sub>e/year/SP in 2040. Thus, the modified Phase 2 Project would have a cumulatively considerable impact on climate change. This impact would be **potentially significant**.

## Mitigation Measures

### 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 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.
- 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.
  - 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.
- 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<sub>2</sub>e/year/SP, the project applicant shall offset the remaining GHG emissions to meet 2.12 MTCO<sub>2</sub>e/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 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<sub>2</sub>e/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 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.

### Significance after Mitigation

Implementation of New Mitigation Measures 4.19-a(1) and 4.19-a(2) would help ensure that the modified Phase 2 Project would reach the 2040 2.12 MTCO<sub>2</sub>e/year/SP target through the application of all feasible, on-site GHG reduction measures and purchase of carbon offsets, which would demonstrate consistency with the state's long-term climate change goals. If these measures are feasible, the modified Phase 2 Project would not conflict with CARB's 2017 Scoping Plan or any established statewide GHG reduction targets (i.e., Executive Order S-3-05). However, it cannot be assured, at this time, that all mitigation is feasible. For instance, the cost or availability of offsets that meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional is unknown. Thus, the modified Phase 2 Project's contribution to climate change, while it may be reduced to a less-than-significant level, is considered **significant and unavoidable** due to these uncertainties.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of this roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

With respect to GHGs, construction- and building-related energy consumption, water and wastewater generation, landscaping, and solid waste disposal would be comparatively the same as what was evaluated under Impact 4.19-a for the modified Phase 2 Project. With respect to VMT, the traffic model used to generate VMT values incorporates roadway network conditions under cumulative scenarios that include the widening and improvement of Paradise Road. Therefore, VMT generation includes the effects of a widened and improved Paradise Road being in place. Therefore, the widening and improvement of Paradise Road does not alter the mobile source GHG emissions effects

identified in Impact 4.19-a. The widening and improvement of Paradise Road also does not change the conclusion that GHG emissions from the modified Phase 2 Project are less than for the approved Phase 2 Project.

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening to support implementation of the road widening would be required to implement all applicable mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of New Mitigation Measure 4.19-a(1), Implement All Feasible On-Site Greenhouse Gas Reduction Measures; and New Mitigation Measure 4.19-a(2), Purchase Real, Quantifiable, Permanent, Verifiable, Enforceable, and Additional Carbon Offsets. These mitigation measures would be equally effective at reducing any significant GHG impacts for both the Paradise Road widening and the modified Phase 2 Project, but not to a less-than-significant level. This impact would remain significant and unavoidable.

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## 4.20 WILDFIRE

This section describes the potential impacts of the modified Phase 2 Project related to wildfire and wildfire-related risks.

Wildfire was not addressed in the 2003 SEIR because a wildfire analysis was not required at that time. Changes to Appendix G of the State CEQA Guidelines were adopted in December 2018 and wildfire was added as a new issue to be evaluated in CEQA documents. The thresholds of significance used for the analysis of wildfire impacts are provided in Section 4.20.3, "Impact Analysis and Mitigation Measures."

### 4.20.1 Regulatory Setting

The following describes the current regulatory setting applicable to the modified Phase 2 Project.

#### FEDERAL

No federal plans, policies, regulations, or laws related to wildfire are applicable to the modified Phase 2 Project.

#### STATE

##### California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of the state's privately-owned wildlands. Public Resource Code (PRC) Sections 4125-4137 establish that CAL FIRE has the primary financial responsibility of preventing and suppressing fires in the State Responsibility Area (SRA). PRC Section 4290 states that CAL FIRE also has responsibility for enforcement of Fire Safe Standards including road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; fuel breaks and greenbelts. PRC Section 4291 gives CAL FIRE the authority to enforce 100 feet of defensible space around all buildings and structures on non-federal SRA lands, or non-federal forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material.

Additionally, CAL FIRE is also responsible for a broad range of programs that guide forest policy and planning within California, such as the *2018 Strategic Fire Plan for California* discussed below, and for implementing the Fire and Resource Assessment Program (FRAP). FRAP assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. Fire Hazard Severity Zones for community planning are developed under FRAP and identify areas with very high fire hazards in both the SRA and local responsibility area (LRA).

##### 2018 Strategic Fire Plan for California

The *2018 Strategic Fire Plan for California* lays out central goals for reducing and preventing the impacts of fire in the state (California Board of Forestry and Fire Protection and CAL FIRE 2018). The goals are meant to establish, through local, state, federal, and private partnerships, a natural environment that is more resilient and human-made assets that are more resistant to the occurrence and effects of wildland fire.

##### Public Resources Code

PRC Section 4427 includes fire safety statutes that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with internal combustion engines; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on site for various types of work in fire-prone areas.



## California Fire Code

The California Fire Code (Title 24, Part 9, California Code of Regulations [CFC]) establishes the minimum requirements nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency situations. The CFC specifies fire resistant ratings for building materials and finishes, installation of sprinklers, use and storage of hazardous or flammable materials, and means of egress. Many local jurisdictions have adopted the CFC as part of their local codes.

## Emergency Response and Evacuation Plans

The State of California Emergency Plan was adopted on October 1, 2017 and describes how state government mobilizes and responds to emergencies and disasters in coordination with partners in all levels of government, the private sector, non-profits, and community-based organizations. The Plan also works in conjunction with the California Emergency Services Act and outlines a robust program of emergency preparedness, response, recovery, and mitigation for all hazards, both natural and human-caused. All local governments with a certified disaster council are required to develop their own emergency operations plan for their jurisdiction that meet state and federal requirements. Local emergency operations plans contain specific emergency planning considerations, such as evacuation and transportation, sheltering, hazard specific planning, regional planning, public-private partnerships, and recovery planning (California Governor's OES 2017).

## LOCAL

### San Joaquin County Office of Emergency Services

The San Joaquin County Office of Emergency Services (OES) maintains an Emergency Operations Plan that serves as the official emergency plan for San Joaquin County. It includes planned operational and overall responsibilities of County Departments during an emergency situation. The Emergency Operations Plan also contains an Emergency Support Function Annex that describes how San Joaquin County would manage emergency incident or disaster mitigation, preparedness, response, and restoration related to fire and rescue (San Joaquin County OES 2019a). The Emergency Support Function Annex includes an emergency alert and notification process, guidelines to ensure fire and dispatch centers are adequately equipped, and law enforcement coordination for evacuation and rescue procedures.

The San Joaquin County OES has published evacuation maps for communities within the county, including River Islands (Phase 1). The established evacuation routes are to exit River Islands via River Islands Parkway and via Lakeside Drive to Interstate 5 (I-5) (San Joaquin County OES 2019b).

The San Joaquin County OES is also processing a draft evacuation map for Reclamation Districts (RD) 2062 and 2107 – Stewart Mossdale Tract that establishes additional evacuation routes for River Islands residents (San Joaquin County OES 2020). In this draft evacuation map, the evacuation route for River Islands residents evacuating from the west of Somerston Parkway is to head east on River Islands Parkway, turn right on Somerston Parkway heading south, turn left onto Lakeside Drive heading southeast until the road turns into Stewart Road, and then turn left onto Manthey Road. River Islands residents who live to the east of Somerston Parkway should head west on River Islands Parkway, turn left on Somerston Parkway heading south, turn left onto Lakeside Drive heading southeast until the road turns into Stewart Road, and then turn left onto Manthey Road.

### City of Lathrop General Plan

Although the City of Lathrop is currently updating its General Plan, the existing *City of Lathrop General Plan* is the plan that is currently in effect and is the document used for this SEIR. The Hazard Management Element section of the *City of Lathrop General Plan* (2004) contains the following policies that may be applicable to the project:

#### Policies

1. The City will continue to give high priority to the support of police protection, and to fire suppression and prevention and life safety functions of the Fire Department. Ultimate expansion of the City's fire service is to

include additional stations affording adequate response within a maximum of 3-4 minutes to all parts of the urban area.

2. The City will work to maintain a fire flow standard of 3,000 gpm for all commercial and industrial areas, and 1,500 gpm for residential areas, to assure capability to suppress urban fires.
3. The City will maintain a street system which is capable of providing access to any fires that may develop within the urban area, and which is capable of providing for the adequate evacuation of residents in the event of an emergency condition of magnitude.

### **City of Lathrop Municipal Code**

Section 15.18.010 of the Lathrop Municipal Code adopts by reference the 2019 CFC and select appendices of the CFC.

### **Lathrop-Manteca Fire District**

The Lathrop-Manteca Fire District provides fire protection for the City of Lathrop, including the River Islands Project, rural Lathrop, and rural Manteca. The Lathrop-Manteca Fire Protection District has a fully functioning Fire Prevention Bureau that is charged with the review and enforcement of Fire and Life Safety laws. The Fire Prevention Bureau regulates the maintenance of fire protection and the elimination of fire hazards on land and in buildings, structures and other property, including those under construction and the maintenance of means of egress. The Lathrop-Manteca Fire District owns and operates Fire Station 35 within the Phase 1 area, which provides full-service fire and life safety activities and contains the District's administrative offices.

## **4.20.2 Environmental Setting**

### **WILDFIRE BEHAVIOR AND CONTROLLING FACTORS**

Wildfire behavior is a product of several variables, primarily climate, vegetation, topography, and human influences that intermix to produce local and regional fire regimes that affect how, when, and where fires burn. The fire regime in any area is defined by several factors, including fire frequency, intensity, severity, and area burned. Each of these are important for an understanding of how the variables that affect fire behavior produce fire risks. Fire frequency refers to the number of fires that occur in a given area over a given period of time; fire intensity refers to the speed at which fire travels and the heat that it produces; fire severity involves the extent to which ecosystems and existing conditions are affected or changed by a fire; and area burned is the size of the area burned by wildfire.

Human influence on wildfire is broad and can be substantial. It includes direct influences such as the ignition and suppression of fires, and indirect influences such as through alterations in land use patterns that support modified vegetative regimes and increased development in the Wildland-Urban Interface.

Wildfires are a significant threat in California, particularly in recent years as the landscape responds to climate change and decades of fire suppression. As climate change persists, it is anticipated to produce increasing temperatures and drier conditions that would generate abundant dry fuels. All wildfires (those initiated by both natural and manmade sources) tend to be larger under drier atmospheric conditions and when fed by drier fuel sources (Balch et al. 2017).

Additionally, climate change has led to exacerbation of wildfire conditions during a longer period of the year as the spring season has warmed—driving an earlier spring snowmelt, and as winter precipitation has decreased overall (Westerling et al. 2006). Further, wildfire activity is closely related to temperature and drought conditions, and in recent decades, increasing drought frequency and warming temperatures have led to an increase in wildfire activity (Westerling et al. 2006, Schoennagel et al. 2017). In particular, the western U.S., including California, has seen increases in wildfire activity in terms of area burned, number of large fires, and fire season length (Westerling et al. 2006, Abatzoglou and Williams 2016).

## WILDFIRE ENVIRONMENT WITHIN THE CITY OF LATHROP

As discussed in Section 4.20.1, "Regulatory Setting," CAL FIRE maintains fire hazard severity zone (FHSZ) maps for the LRA and SRA. These areas are mapped based on fuels, terrain, weather, and other relevant factors. According to the *City of Lathrop General Plan Existing Conditions Report* (2019), and consistent with the FHSZ map available from CAL FIRE (CAL FIRE 2007), almost the entire City Planning Area is designated as LRA. Within the Planning Area, four relatively small locations have a FHSZ designation (Figure 4.20-1): a developed area adjacent south of the Defense Depot San Joaquin Sharpe site and the Sharpe AAF Airport, a developed area near D'Arcy Parkway, an area along the San Joaquin River just west of I-5, and an undeveloped area along the San Joaquin River in the westernmost Planning Area (which is the only one of these sites within the Phase 2 area and is described further in the section below). These four FHSZ areas are designated "Moderate" by CAL FIRE within the designation regime of "Moderate," "High," and "Very High." There are no SRAs within the vicinity of the Planning Area. One Federal Responsibility Area (FRA) is located in northern Lathrop (the Defense Depot San Joaquin Sharpe site and the Sharpe AAF Airport) (Figure 4.20-1).

No portion of the City of Lathrop is categorized as a "High" or "Very High" FHSZ by CAL FIRE. Further, no cities or communities within San Joaquin County are categorized as a "Very High" FHSZ by CAL FIRE.

## WILDFIRE ENVIRONMENT WITHIN PHASE 2 AREA

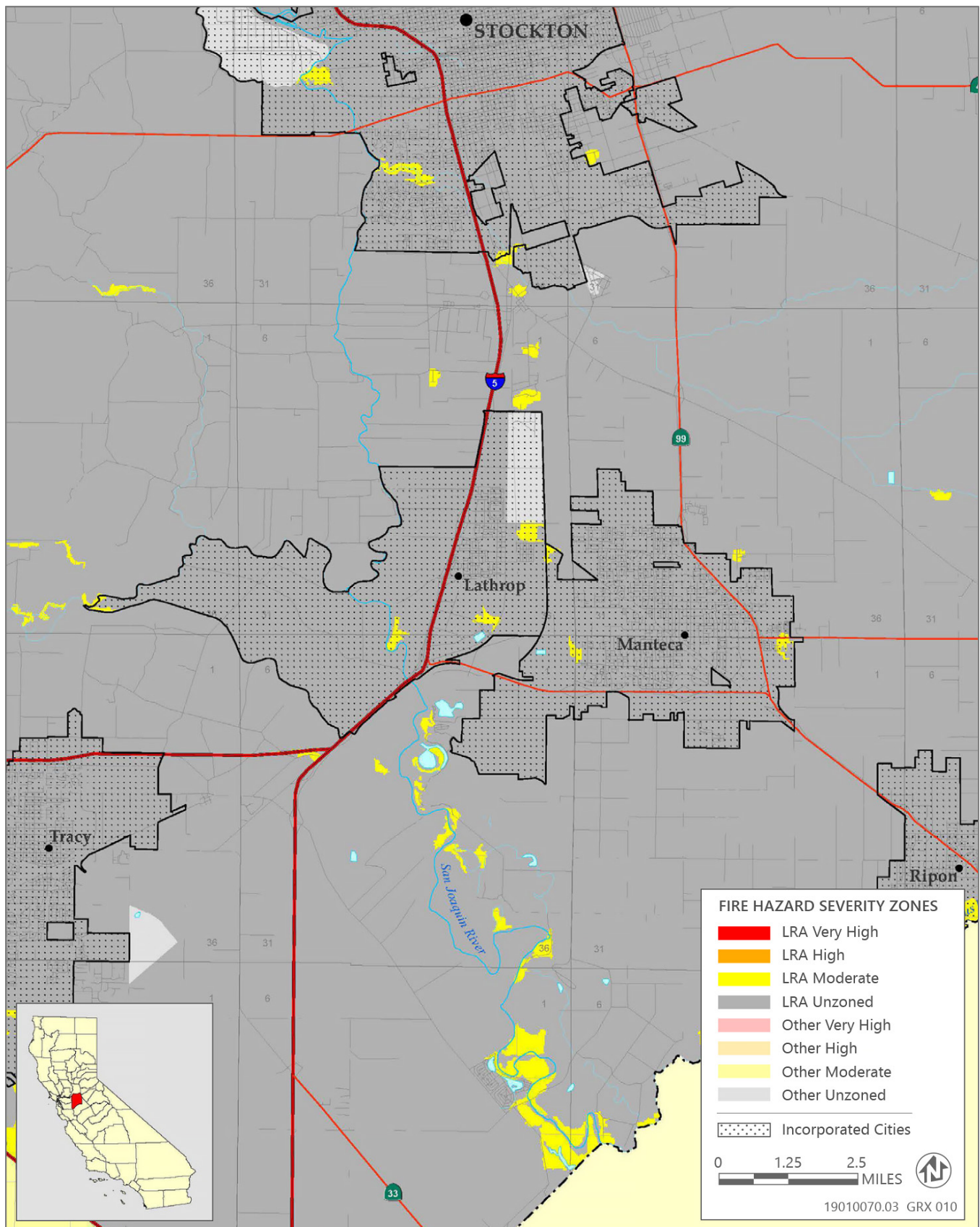
The Phase 2 area is mostly undeveloped and/or agricultural land. The project area is relatively flat due to active farming and agricultural operations. The portion of the Phase 2 area proposed for development is bordered by several water ways. Bordering the project area from the east and north is Old River and the San Joaquin River is to the west. Paradise Cut, which is part of the Phase 2 area as the Paradise Cut Conservation Area, but not part of the Phase 2 Development Area (see Figure 3-1), is to the south.

The project area is located within the LRA but, with one exception, is not located in an FHSZ (Figure 4.20-1). One area of FHSZ, which is designated as a "Moderate" FHSZ, is a small patch of undeveloped, vegetated land (riparian forest) located at the western tip of the Paradise Cut Conservation Area. This is the only FHSZ within the Phase 2 area and is several thousand feet west of the nearest portion of the Phase 2 Development Area. Another FHSZ is located on the opposite side of the San Joaquin River from the Phase 1 area, outside the River Islands Project site. This FHSZ consists of a riparian habitat preserve along the San Joaquin River near Mossdale Village (CAL FIRE 2007).

Fire Station #35 is located within the Phase 1 area at 19050 Golden Valley Parkway, Lathrop, CA and is in operation. The modified Phase 2 Project would include an approximately 3.5-acre fire station in the Phase 2 area. Specifically, Fire Station #36 would be constructed in the Woodlands District, near River Islands Parkway.

An emergency response/evacuation plan for the project site would continue to be updated as development proceeds in coordination with the police and fire departments, Stewart Tract reclamation districts (RD 2062 and RD 2107), and the San Joaquin County OES to ensure that River Islands Project residents would be evacuated safely in the event of a large-scale emergency or natural disaster.

In the event of an evacuation, the agencies responsible for alerting, warning, and evacuating River Islands residents would be the City of Lathrop, Lathrop-Manteca Fire District, and the San Joaquin County Sheriff's Department. Additionally, the City of Lathrop and San Joaquin County maintain a shelter-in-place plan for the urban area protected by the River Islands at Lathrop Stage 1 Ring Levee for the contingency that these residents are physically isolated by flooding in areas adjacent to this higher standard levee (San Joaquin County OES 2020).



Source: CAL FIRE 2007

Figure 4.20-1 Fire Hazard Severity Zones

## 4.20.3 Environmental Impacts and Mitigation Measures

### METHODOLOGY

The analysis of environmental impacts on wildfire risk focuses on the potential for new or increased risks associated with wildfire, including impairment of an emergency response plan, exposing people or structures to uncontrolled fire, and post-fire risks such as slope instability or debris-flows. Information used in this section was obtained from the City of Lathrop General Plan, relevant fire and emergency-related plans, scientific journals, and relevant reports.

### THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are based on Appendix G of the State CEQA Guidelines. The modified Phase 2 Project would cause a significant impact related to wildfire if it would:

- ▶ impair an adopted emergency response plan or emergency evacuation plan;
- ▶ due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- ▶ require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- ▶ expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

### ISSUES NOT DISCUSSED FURTHER

The Phase 2 Development Area is not located within a FHSZ. The nearest FHSZs are patches of riparian vegetation several thousand feet to the west at the western tip of the Paradise Cut Conservation Area and a riparian preserve on the opposite side of the San Joaquin River from the Phase 1 area (Figure 4.20-1). Both these FHSZs are designated by CAL FIRE as Moderate. Other FHSZs in the area are small scattered "patches" located miles from the project site and are also designated as Moderate. There are no areas designated as having a high wildfire risk in the project vicinity. Further, the project would be required to comply with existing state and local regulations for fire protection.

Development would be constructed and maintained in compliance with state and local regulations for fire protection, including the use of fire-resistant building materials, fire-resistant landscaping, defensible space, adequate water supply, and emergency access. The flat topography of the project site and its proximity to water do not exacerbate wildfire risk. Because the location and topography of the project do not exacerbate wildfire risk, factors such as slope and prevailing wind would not further exacerbate the wildfire risk because the risk is already minimal; therefore, project occupants would not be potentially exposed to pollutant concentrations or the uncontrolled spread of a wildfire. Project facilities would be constructed, designed, inspected, and maintained in accordance with applicable state and local regulations to reduce fire risk. Finally, the project is in an area of relatively flat terrain and would not involve the changing of slopes that could expose people to risks of flooding from post-fire instability. Thus, these issues are not discussed further.

## ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Impact 4.20-a: Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

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The San Joaquin County OES maintains an Emergency Operations Plan (2019) that serves as the official emergency plan for the county. Additionally, the San Joaquin County OES has published evacuation maps for communities within the county, including River Islands. The established evacuation route is to exit River Islands via Lakeside Drive to I-5. Construction activities associated with the project could result in temporary lane closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. As part of project operation, adequate emergency access routes to and from the development area would be established and emergency response would not be impaired. Nonetheless, because construction activities could interfere with or slow down emergency vehicle access and services, this impact would be **potentially significant**.

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The San Joaquin County OES manages emergencies including in the project area and has published evacuation maps for communities within the county, including River Islands. The established evacuation routes are to exit River Islands (Phase 1) via River Islands Parkway and via Lakeside Drive to I-5 (San Joaquin County OES 2019b). The San Joaquin County OES also maintains an Emergency Operations Plan that describes how San Joaquin County would manage emergency incident or disaster mitigation, preparedness, response, and restoration related to fire and rescue. The Emergency Operations Plan includes an emergency alert and notification process, guidelines to ensure fire and dispatch centers are adequately equipped, and law enforcement coordination for evacuation and rescue procedures. The San Joaquin County OES also is processing a draft evacuation map for RD 2062 and 2107 – Stewart Mossdale Tract that establishes additional evacuation routes for River Islands residents. In this draft evacuation map, the evacuation route for River Islands residents evacuating from the west of Somerston Parkway, River Islands residents are directed to head east on River Islands Parkway, turn right on Somerston Parkway heading south, turn left onto Lakeside Drive heading southeast until the road turns into Stewart Road, and then turn left onto Manthey Road. River Islands residents who live to the east of Somerston Parkway should head west on River Islands Parkway, turn left on Somerston Parkway heading south, turn left onto Lakeside Drive heading southeast until the road turns into Stewart Road, and then turn left onto Manthey Road (San Joaquin County OES 2020). Further, an emergency response/evacuation plan for the project site would continue to be updated as development proceeds in coordination with the police and fire departments, Stewart Tract reclamation districts (RD 2062 and RD 2107), and the San Joaquin County OES to ensure that River Islands Project residents would be evacuated safely in the event of a large-scale emergency or natural disaster.

Construction activities associated with the modified Phase 2 Project would involve truck traffic and temporary lane/shoulder closures in work zones that could result in temporary lane closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services.

As part of project operation, the proposed Phase 2 modifications would increase the number and density of residential development and add a mixed-use town center within the original boundaries of the Phase 2 area. The allowance of additional housing potential, increased density of housing, and additional retail and commercial development could increase the number of River Islands Project residents using evacuation routes. The multiple emergency response resources in place would adequately allow for the evacuation of River Islands Project residents with emergency alert notifications, rapid dispatch and emergency response, and law enforcement coordination to implement evacuation operations. Further, adequate emergency access routes to and from the development area would be established as required by state and local regulations. In addition, as project development proceeds, new traffic and circulation routes could be available for evacuation purposes (e.g., Paradise Road [public use of the bridge over Paradise Cut is currently prohibited during project construction] and Golden Valley Parkway). This could provide an improvement over existing conditions, whereby the current evacuation routes to and from River Islands is limited to River Islands Parkway and Lakeside Drive (to I-5). It is anticipated that local jurisdictions, including San Joaquin County, would update their evacuation plans to include these new routes as applicable. These additional traffic and circulation routes would help accommodate the increased number of residents that would be added by the project that would need to evacuate the project area in an emergency.

Nonetheless, because construction activities could interfere with or slow down emergency vehicle access and services as project development proceeds, this impact would be **potentially significant**.

## Mitigation Measures

### Adopted Mitigation Measure 4.10-a: Obstruction of Roadways during Construction

Implement Adopted Mitigation Measure 4.10-a in Section 4.10, "Public Services."

This mitigation measure has been implemented successfully during Phase 1 and would continue to be implemented during Phase 2.

#### Significance after Mitigation

Implementation of Adopted Mitigation Measure 4.10-a would reduce impacts associated with potential obstruction of roadways during construction through preparation and implementation of a traffic control plan pursuant to City requirements and Caltrans standards. After mitigation, impacts related to obstruction of roadways during construction would be **less than significant**.

## PARADISE ROAD WIDENING

As discussed in Chapter 3, "Description of the Proposed Project," current traffic modelling indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes sufficiently on Paradise Road that criteria will be triggered for widening of the road. To accommodate these increased traffic volumes, Paradise Road would be improved from a two-lane rural road to a four-lane arterial between Paradise Cut and the future connection with Golden Valley Parkway (once Golden Valley Parkway is constructed) (see Figure 3-7). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. The total distance of widened/improved roadway would be approximately 2.7 miles. The widening and improvement of the roughly 2.7 miles of roadway would not change the above analysis of the Phase 2 area. As described in more detail in Section 1.2, "Type and Purpose of this Draft Subsequent EIR," the discussion below provides a program level of analysis for the potential widening and improvement of Paradise Road. The analysis below assesses and documents the range of potential environmental effects of the potential roadway in the event the expansion is needed.

The Paradise Road expansion area is located within the LRA, but is not located in a FHSZ (CAL FIRE 2007). The topography of the project site and its proximity to water is unlikely to exacerbate wildfire risk. Because the location and topography of the project site are unlikely to exacerbate wildfire risk, factors such as slope and prevailing wind would not further exacerbate the wildfire risk because the risk is already minimal. Finally, the expansion of Paradise Road would not involve the changing of slopes that could expose people to risks of flooding from post-fire instability. Thus, these issues are not discussed further.

The expansion of Paradise Road would have the same potential as the modified Phase 2 Project to impair an adopted emergency response plan or emergency evacuation plan during project construction (Impact 4.20-a). Construction activities associated with the road widening and improvement could result in temporary lane closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services; therefore, the preparation and implementation of traffic control plans for construction activities would be required, similar to the modified Phase 2 Project.

The current San Joaquin County OES evacuation map for River Islands establishes evacuation routes via River Islands Parkway and via Lakeside Drive (to I-5) (San Joaquin County OES 2019b). The San Joaquin County OES also is processing a draft evacuation map for RD 2062 and 2107 – Stewart Mossdale Tract that establishes additional evacuation routes for River Islands residents (San Joaquin County OES 2020). Once project development has progressed sufficiently to allow the re-opening of the Paradise Road bridge to public access, Paradise Road will provide another evacuation option for the project site. It is anticipated that local jurisdictions, including San Joaquin County, would update their evacuation plans to include Paradise Road as a new route to help accommodate the

increased number of residents that would be added by the modified Phase 2 Project that would need to evacuate the project area in an emergency. The widening and improvement of Paradise Road could provide an improvement to the potential function of the road as an evacuation route by expanding vehicle movement capacity.

Any future CEQA lead agency that uses this programmatic analysis of Paradise Road widening to support implementation of the road widening would be required to implement all applicable mitigation measures identified above for the modified Phase 2 Project. For this analysis, this consists of Adopted Mitigation Measure 4.10-a, Obstruction of Roadways during Construction. This mitigation measure would be equally effective at reducing any significant wildfire impacts associated with the obstruction of roadways to a less-than-significant level for both Paradise Road and the modified Phase 2 Project. Compared to the modified Phase 2 Project, the Paradise Road expansion would have no new significant impact and the impacts are not substantially more severe.



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# 5 CUMULATIVE IMPACTS

## 5.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

This Draft SEIR provides an analysis of cumulative impacts of the modified Phase 2 Project taken together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the incremental contribution to any such cumulatively significant impacts by the project would be “cumulatively considerable” (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], Section 15064[h], and Section 15065[c]; and *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal. App. 4th 98, 120.) In other words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the project site itself, and then to determine whether the project’s incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., “cumulatively considerable”).

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]).

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this Draft SEIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if:

- ▶ the cumulative effects of development without the project are not significant and the project’s additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- ▶ the cumulative effects of development without the project are already significant and the project contributes measurably to the effect.

The term “measurably” is subject to interpretation. The standards used herein to determine measurability are that the impact must be noticeable to a reasonable person, or must exceed an established threshold of significance (defined throughout the resource sections in Chapter 4 of this Draft SEIR).

## 5.2 CUMULATIVE IMPACT APPROACH

State CEQA Guidelines Section 15130 identifies two basic methods for establishing the cumulative environment in which a project is considered: the use of a list of past, present, and probable future projects or the use of development projections from an adopted general plan, other regional planning document, or a certified EIR for such a planning document. This cumulative analysis uses a combination of the “list” approach and the “plan” approach to identify the cumulative setting. The effects of past and present projects on the environment are reflected by the existing conditions in the project area.

Probable future projects are those in the project vicinity that have the possibility of interacting with the project to generate a cumulative impact and:

- ▶ are partially occupied or under construction;
- ▶ have received final discretionary approvals;
- ▶ have applications accepted as complete by local agencies and are undergoing environmental review; or
- ▶ are otherwise considered likely to be developed, based on historic development patterns, including the rate of development, in the City of Lathrop.

As discussed below in Section 5.4.3, "Traffic and Transportation," the City of Lathrop Travel Demand Model used for the traffic analysis accounts for future traffic generation using project development found in various plans, including the City of Lathrop General Plan, Central Lathrop Specific Plan, and City of Manteca General Plan. Therefore, the traffic analysis incorporates the "plan" approach into the cumulative impact analysis.

## 5.3 CUMULATIVE SETTING

### 5.3.1 Geographic Scope

The geographic area that could be affected by the project and is appropriate for a cumulative impact analysis varies depending on the environmental resource topic, as presented in Table 5-1.

**Table 5-1 Geographic Scope of Cumulative Impacts**

Resource Topic	Geographic Area
Land Use	Local (limited to River Islands Project area)
Population, Employment, and Housing	Local (population, employment, and housing near the project site)
Traffic and Transportation	Regional and local
Air Quality	Regional (pollutant emissions that affect the air basins) and immediate project vicinity (pollutant emissions that are highly localized)
Noise and Vibration	Local (immediate project vicinity where project-generated noise could be heard concurrently with noise from other sources)
Geology, Soils, and Mineral Resources	Local (limited to River Islands Project area)
Hydrology and Water Quality	San Joaquin River Basin, City of Lathrop
Hazardous Materials and Public Health	Local (limited to River Islands Project area)
Public Services	Regional and local service areas
Public Utilities	Local service areas
Recreation	Regional (overall accessibility of recreational opportunities) and local (interactions with individual recreational activities)
Agricultural Resources	San Joaquin County
Terrestrial Biology	Regional, San Joaquin County, City of Lathrop
Fisheries	Regional, San Joaquin County, City of Lathrop
Cultural and Tribal Cultural Resources	Local (limited to River Islands Project area), with regional implications
Aesthetics	Local (River Islands Project area and surrounding public viewpoints)
Energy	Pacific Gas and Electric Company service area
Greenhouse Gas Emissions and Climate Change	Global
Wildfire	Local (limited to River Islands Project area), with regional implications

Source: Compiled by Ascent Environmental in 2021

### 5.3.2 List of Related Projects

Table 5-2 presents a list of past, present, and probable future projects. Past projects in Table 5-2 are from the recent past (roughly within the last five years). These past and current projects in the project vicinity were considered as part of the cumulative setting because they contribute to the existing conditions against which the proposed project's and each probable future project's environmental effects are compared. Projects approved in the past that have already been developed, although not listed in Table 5-2, are reflected by the existing conditions in the project area. The probable future projects considered in the analysis meet the requirements identified in the "Cumulative Impact Approach" section, above. These include primarily development projects located near the Interstate 5 (I-5) corridor and in the City of Lathrop near the River Islands Project area (Figure 5-1). This list of projects was used in the analysis of the cumulative impacts for each resource topic.

## 5.4 CUMULATIVE IMPACTS ANALYSIS

The following sections contain a discussion of the cumulative effects anticipated from implementation of the modified Phase 2 Project, together with related projects and planned development in the City of Lathrop, for each of the environmental issue areas evaluated in this Draft SEIR. The analysis conforms with Section 15130(b) of the State CEQA Guidelines, which specifies that the "discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

When considered in relation to other reasonably foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the proposed project alone.

For purposes of this SEIR, the project would result in a significant cumulative effect if:

- ▶ the cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the modified Phase 2 Project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- ▶ the cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the modified Phase 2 Project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

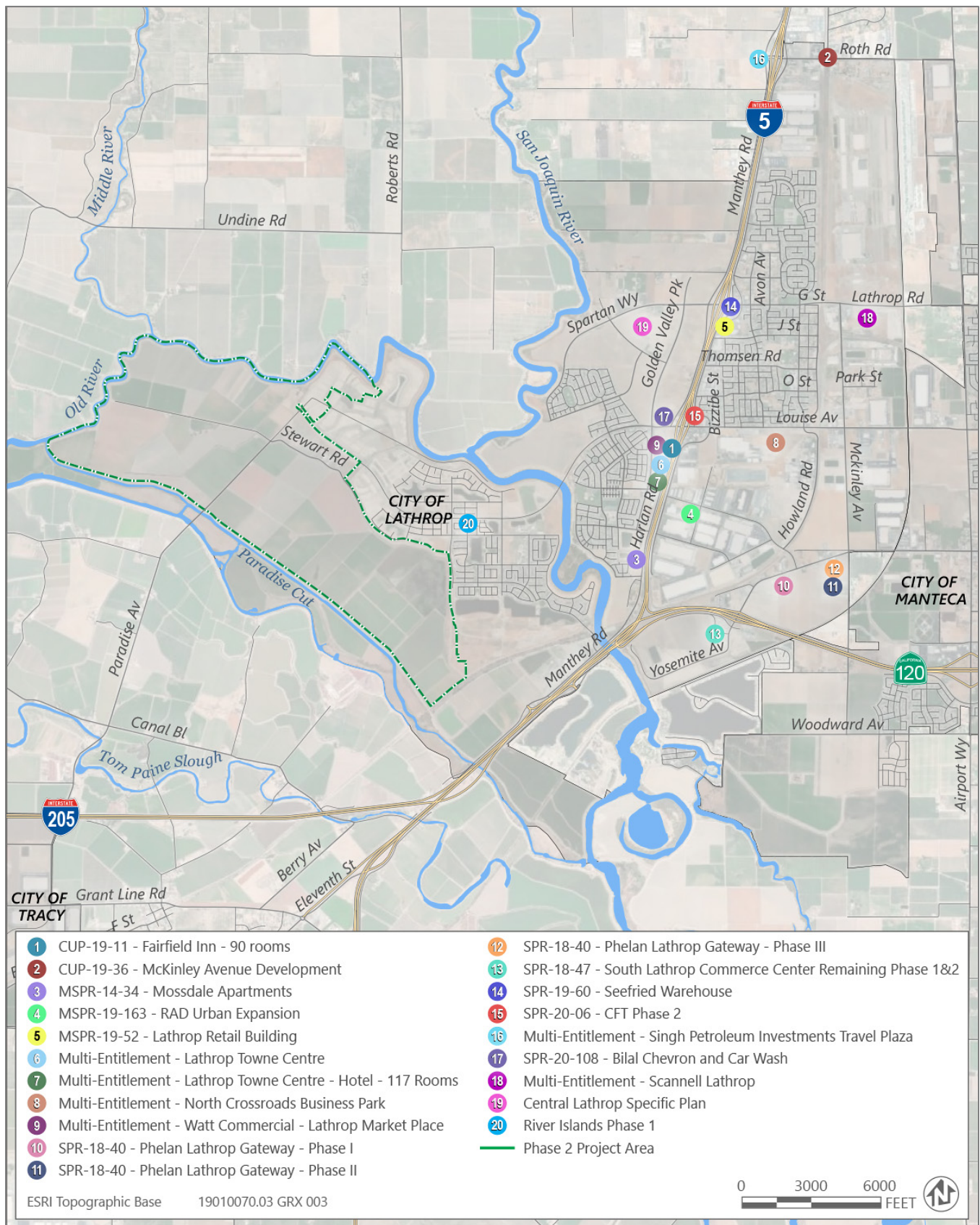
This cumulative analysis assumes that all mitigation measures identified in Chapter 4 to mitigate project impacts are adopted and implemented, and all elements of the project design that avoid or minimize environmental effects are implemented. The analysis herein analyzes whether, after implementation of project-specific mitigation and project design elements that avoid or minimize environmental effects, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would so contribute, additional mitigation is recommended where feasible.

**Table 5-2 Projected Development in the City of Lathrop**

Map Number	Project	Address	Assessor's Parcel Number(s)	Single-Family Development Units	Apartment Units	Commercial (square Feet)	Industrial (square feet)
<b>Approved and Pending Construction</b>							
1	CUP-19-11 - Fairfield Inn - 90 rooms	N/A	191-760-02	—	—	50,458	—
2	CUP-19-36 - McKinley Avenue Development	16300 S. McKinley Avenue	198-100-11	—	—	14,800	—
3	MSPR-14-34 - Mossdale Apartments	18007, 18149, and 18250 S. Manthey Road	241-020-65, -66, and -61	—	204	—	—
4	MSPR-19-163 - RAD Urban Expansion	18231 Murphy Parkway	198-190-30	—	—	—	87,435
5	MSPR-19-52 - Lathrop Retail Building	15322 S. Harlan Road	196-110-19	—	—	7,848	—
6	Multi-Entitlement - Lathrop Towne Centre	17100 Golden Valley Parkway	191-119-049	—	—	126,000	—
7	Multi-Entitlement - Lathrop Towne Centre - Hotel - 117 Rooms	17100 Golden Valley Parkway	191-119-049	—	—	60,000	—
8	Multi-Entitlement - North Crossroads Business Park	500 and 1300 E. Louise Avenue	198-120-08 and 198-140-16	—	—	—	1,000,000
9	Multi-Entitlement - Watt Commercial - Lathrop Market Place	N/A	191-760-02 thru -12, -16 thru 21	—	—	175,000	—
10	SPR-18-40 - Phelan Lathrop Gateway - Phase I (under construction as of January 2021)	Various	241-400-09 thru -13, 241-400-29 thru -33 and 241-280-12	—	—	—	990,525
11	SPR-18-40 - Phelan Lathrop Gateway - Phase II	Various		—	—	—	890,350
12	SPR-18-40 - Phelan Lathrop Gateway - Phase III	Various		—	—	—	1,155,050
13	SPR-18-47 - South Lathrop Commerce Center Remaining Phase 1 and Phase 2	Various	241-030-15, -17 thru -26	—	—	—	3,826,000
14	SPR-19-60 - Seefried Warehouse	18284 S. Harlan Road	198-130-64	—	—	—	189,000
15	SPR-20-06 - CFT Phase 2	15107 and 15135 Old Harlan Road	196-110-29 and -30	—	—	2,470	—
<b>SUB-TOTALS</b>				<b>0</b>	<b>204</b>	<b>436,576</b>	<b>8,050,925</b>
<b>Pending Development Projects - Currently Processing Application(s)</b>							
16	Multi-Entitlement – Singh Petroleum Investments Travel Plaza	11293 S. Manthey Road	191-250-14	—	—	19,500	—
17	SPR-20-108 – Bilal Chevron and Car Wash	16400 Golden Valley Parkway	192-040-40 and -36	—	—	8,446	—
18	Multi-Entitlement – Scannell Lathrop	1520 Lathrop Road	—	—	—	—	191,160
<b>SUB-TOTALS</b>				<b>0</b>	<b>0</b>	<b>27,946</b>	<b>191,160</b>

Map Number	Project	Address	Assessor's Parcel Number(s)	Single-Family Development Units	Apartment Units	Commercial (square Feet)	Industrial (square feet)
<b>Residential Development</b>							
<b>Building Permits Issued (Single-Family Development)</b>							
	2014			190	—	—	—
	2015			343	—	—	—
	2016			170	—	—	—
	2017			297	—	—	—
	2018			383	—	—	—
	2019			389	—	—	—
<b>Projected Building Permits based on Average from 2014-2019</b>							
	2020			295	—	—	—
	2021			295	—	—	—
	2022			295	—	—	—
	2023			295	—	—	—
19	CLSP – Tract 3789 – Phase 1A – Remaining Dwelling Units (based on total number of lots per Final Maps approved (418) minus permits reviewed and approved (186) as of 01.12.21			232	—	—	—
	CLSP - Tract 3647 and 3967 - Phase 1B			603	—	—	—
	CLSP – Tract 3647 – Phase 1C			191	—	—	—
	CLSP – Tract 3647 – Phase 1D			358	274		
20	River Islands Phase 1 Project - Remaining Dwelling Units (based on total number of dwelling units per Tract 3694 (4,284) minus the total number of lots per Final Maps approved (2,702 as of 01.12.21)			1,582	—	—	—
<b>SUB-TOTALS</b>				<b>5,918</b>	<b>274</b>	<b>0</b>	<b>0</b>
<b>TOTALS</b>				<b>6,304</b>	<b>478</b>	<b>464,522</b>	<b>8,242,085</b>

Source: Data provided by the City of Lathrop in January 2021



Source: Image created by Ascent Environmental in 2020 based on data provided by the City of Lathrop in January 2021

Figure 5-1 Cumulative Projects

## 5.4.1 Land Use

Impacts related to consistency with land use plans or policies would generally be localized and would not generally combine to result in cumulative impacts. The threshold of significance for land use impacts is whether a project would conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such conflicts are inherently site specific and are addressed by individual projects. As discussed in Section 4.2, "Land Use," the modified Phase 2 Project would be consistent with the proposed amendments to the City of Lathrop General Plan and the West Lathrop Specific Plan (WLSP) currently in effect.

*As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to land use would be **less than significant***

## 5.4.2 Population, Employment, and Housing

The cumulative context for population, employment, and housing for implementation of the modified Phase 2 Project includes the project region (i.e., project area, the city of Lathrop, and the county of San Joaquin). Table 4.3-1 presents the County's growth forecast; according to calculations by the San Joaquin Council of Governments (SJCOG), approximately 230,205 new residents are expected in the County between 2020 and 2040. Development of the modified Phase 2 Project would generate an estimated 31,962 new residents at full buildout in 2040, which represents approximately 14 percent of the SJCOG forecast. The modified Phase 2 Project would result in 12,694 more new residents than the currently approved project.

There are numerous past, present, and probable future projects that should be considered as part of the cumulative setting because they contribute to the existing conditions against which the proposed project's and each probable future project's environmental effects are compared. Table 5-2 lists and describes these projects. The largest and closest to the Phase 2 area is the River Islands Phase 1 Project with a remainder of 1,582 dwelling units to construct. The four phases of the Central Lathrop Specific Plan project would result in a total of 1,658 dwelling units. Table 5-2 indicates that cumulative projects in the City of Lathrop would add a total of 6,396 dwelling units; using an average of 3 persons per dwelling unit, this would increase the population of the City by approximately 19,188 persons.

The modified Phase 2 Project would have a jobs-housing ratio of approximately 0.74:1, making it housing-rich. Table 5.2 shows 8,515,447 square feet of non-residential floor area for cumulative projects; using the industry standard of 4 employees per 1,000 square feet, this would result in 34,062 new jobs in the City of Lathrop. With an expected population increase of approximately 19,188 persons related to cumulative projects in Table 5-2, the cumulative scenario for the City appears to be jobs-rich. Therefore, the Phase 2 Project's contribution would serve to provide more balance to the City by adding more housing relative to the number of projected jobs that would be added by cumulative projects.

Population growth, by itself, is not considered a significant cumulative effect because it is not an environmental impact. However, population growth, and related housing and infrastructure, does lead to conversion of land to other uses, the impacts of which are considered in the appropriate sections of this document.

*As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to population, employment, and housing would be **less than significant***

## 5.4.3 Traffic and Transportation

The discussion of vehicle miles traveled (VMT) impacts associated with the modified Phase 2 Project for Impact 4.4-a is inherently a cumulative impact analysis as it addresses the project generated VMT in the context of a cumulative scenario that incorporates buildout of the City's General Plan and other regional development. The VMT impact analysis uses the City of Lathrop Travel Demand Model to estimate VMT, which accounts for roadway improvements and land use projections in the cumulative year consistent with the SJCOG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), City of Lathrop General Plan, Central Lathrop Specific Plan, and City of



Manteca General Plan. The model accounts for the interactions among past, present, and reasonably foreseeable future projects by factoring how all land uses and transportation improvements within the cumulative scenario may generate, attract, lengthen, and shorten vehicle trips into the modeling results. Thus, VMT generated by the modified Phase 2 Project is influenced by the mix and availability of surrounding land uses, and the VMT generated by surrounding development is influenced by the mix and availability of land uses in the Phase 2 area. Therefore, the VMT impacts expressed in Impact 4.4-a reflect the cumulative interactions among the modified Phase 2 Project and other projects and development in the immediate region.

As detailed under Impact 4.4-a, implementation of the modified Phase 2 Project results in a reduction in VMT per household, VMT per capita, and VMT per employee compared to the existing approved project. Therefore, VMT generated by the modified Phase 2 Project would not result in a significant impact. As stated above, this impact conclusion is within the context of cumulative development and transportation improvements and their effects on VMT.

*As a result, the project's contribution to effects related to VMT would not be cumulatively considerable. Therefore, cumulative impacts related to VMT would be **less than significant**.*

As described under Impact 4.4-b, implementation of the modified Phase 2 Project would include a pedestrian/ bicycle trail system where no pedestrian or bicycle facilities (i.e., within the undeveloped Phase 2 area) exist. The trail system would provide access to the project neighborhoods and districts and would connect to existing and planned trails in Lathrop and the surrounding areas. Additionally, as described under Impact 4.4-b, the modified Phase 2 Project expands and builds upon the existing plans for pedestrian and bicycle facilities. Therefore, the modified Phase 2 Project would not result in a conflict with an existing or planned pedestrian or bicycle facility and would not interfere with the implementation of a plan related to these travel modes.

As described under Impact 4.4-b, the modified Phase 2 Project includes design features (e.g., bus pullouts) that would accommodate and support local-oriented and commuter transit in an area with no existing transit stops or facilities. Additionally, the planning of the Valley Link transit service has taken into account the increased transit demand/ridership associated with the project. Therefore, the modified Phase 2 Project would not interfere with the implementation of a plan related to transit; and would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

*As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to transit, bicycle, and pedestrian facilities would be **less than significant**.*

Cumulative impacts from project-generated construction effects on transportation may result if other future planned construction activities were to take place close to the project site and cumulatively combine to exacerbate the construction-related transportation impacts of the project. As discussed in Impact 4.4-e, construction activities associated with the modified Phase 2 Project could result in temporary roadway, bikeway, and sidewalk closures; degradation of roadway pavement conditions; temporary degradation in traffic operations; and an increase in potential for conflicts between construction vehicles and bicyclists and pedestrians. Therefore, the modified Phase 2 Project could result in hazardous conditions for motorists, bicyclists, pedestrians, or transit users; and substantially inhibit access for emergency response vehicles.

If construction of the project were to occur simultaneously with one or more nearby projects, the construction-related transportation impacts of these projects (i.e., the modified Phase 2 Project and nearby projects) may combine to exacerbate construction-related transportation impacts from the project and create a significant cumulative impact. Implementation of Modified Mitigation Measure 4.4-v would require that a construction traffic control plan be completed and implemented for all modified Phase 2 Project construction activities. Implementation of Modified Mitigation Measure 4.4-v would reduce potential transportation impacts during construction by managing construction traffic on local roadways and requiring the identification and implementation of measures to maintain emergency vehicle access and prevent hazardous conflicts with vehicles, bicyclists, and pedestrians.

*As a result, with the implementation of Modified Mitigation Measure 4.4-v, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to construction traffic would be **less than significant**.*

## 5.4.4 Air Quality

The cumulative context for air quality impacts is San Joaquin County and the San Joaquin Valley Air Basin (SJVAB). Past development in the County and the SJVAB has resulted in, in combination with meteorological conditions and transport of pollutants from other air basins, substantial to severe air quality problems in the SJVAB, which is currently in nonattainment for national ambient air quality standards (NAAQS) for ozone and fine particulate matter with an aerodynamic diameter of 2.5 or less (PM<sub>2.5</sub>); and California ambient air quality standards (CAAQS) for ozone and respirable particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), and PM<sub>2.5</sub>.

As described in the Methodology section of Section 4.5, "Air Quality," the San Joaquin Valley Air Pollution Control District (SJVAPCD) has set numerical thresholds for construction- and operation-related emissions of criteria air pollutants and precursors to determine whether a project's discrete emissions would result in a regional contribution to the baseline nonattainment status of SJVAPCD. Therefore, these thresholds can be used to also assess whether a project's emissions of criteria air pollutants result in a significant contribution to adverse cumulative air quality conditions in the air basin. According to SJVAPCD, projects with emissions below these thresholds of significance would demonstrate consistency with SJVAPCD's air quality plans. Therefore, for this analysis, a project with emissions below the thresholds would be considered not to make a substantial contribution to a significant cumulative air quality impact in the SJVAB.

The modified Phase 2 Project would result in construction-related emissions below applicable SJVAPCD thresholds with implementation of Modified Mitigation Measure 4.5-a and New Mitigation Measure 4.5-a(2). Therefore, construction of the modified Phase 2 Project would not make a substantial contribution to adverse cumulative air quality conditions in the SJVAB. Although not necessary to make this less than significant conclusion, it is reasonable to assume that all related projects would implement similar construction emission control measures consistent with SJVAPCD guidelines, and would also generate construction emissions below SJVAPCD thresholds.

As identified in the discussion of Impact 4.5-b in Section 4.5, "Air Quality," the modified Phase 2 Project would not be a source of odorous emissions and is not located near existing sources of odorous emissions. Therefore, there are no odor sources or receptors associated with the modified Phase 2 Project that would interact in an adverse cumulative manner with odor sources/receptors in other areas. Therefore, the modified Phase 2 Project would not contribute to any adverse cumulative odor impact.

As described in Section 4.5, "Air Quality," toxic air contaminants (TACs) are regulated to by various state and local agencies. For the modified Phase 2 Project, potential stationary source emissions of TACs are considered less than significant because of these regulatory regimes as well as the character of land uses included in the modified Phase 2 Project. The primary mobile source TAC of concern, diesel particulate matter (diesel PM), disperses quickly and the modified Phase 2 Project impacts related to this TAC source are mitigated to a less than significant level by maintaining sufficient distances between diesel trucks and sensitive receptors. Related projects would be subject to these same regulatory regimes and with the rapid dispersal of diesel PM, only projects that are in close proximity can affect the same receptor with diesel PM emissions in a cumulative manner. Given the levees, rivers, and other features separating the project site from other development, there is not an opportunity for diesel PM potentially generated in the Phase 2 area to interact in a harmful way with diesel PM generated in other locations. Therefore, the modified Phase 2 Project would not make a substantial contribution to a significant adverse effect related to TACs. In addition, as described in Section 4.5, "Air Quality," CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. Therefore, any potential for an adverse cumulative impact from mobile-source TACs will be further reduced over time.

Carbon monoxide (CO) emissions modeled in the 2003 SEIR were based on cumulative traffic data (modified Phase 2 Project plus foreseeable future development) to specifically evaluate local mobile source CO concentrations for future

conditions. Given that the emissions modelling was based on cumulative traffic data, the analysis results reflect cumulative CO emissions and not just emissions attributable to the modified Phase 2 Project. As described in the 2003 SEIR, based on the traffic data and using worst-case meteorological conditions (e.g., no wind to disperse CO), the cumulative conditions would not exceed the applicable significance thresholds. Consequently, the cumulative impact of the modified Phase 2 Project's contribution to traffic volumes on the local roadway network relative to CO concentrations was considered less than significant. As described in the discussion of Impact 4.5-e in this SEIR, the modified Phase 2 Project would not alter traffic conditions in a manner that would increase localized CO concentrations from those identified in 2003. Therefore, the cumulative impact of the modified Phase 2 Project's contribution to traffic volumes on the local roadway network relative to CO concentrations would also be less than significant.

As identified in Impact 4.5-f, based on the emissions modelling conducted for operation of the modified Phase 2 Project, the modified Phase 2 Project would result in an individual significant air quality impact with respect to long-term regional emissions because emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> would exceed SJVAPCD thresholds. Although implementation of Modified Mitigation Measure 4.5-f reduces the modified Phase 2 Project's operational emissions, there is not feasible mitigation to reduce the emissions to a less-than-significant level. The exceedance of the emission thresholds can, to a large degree, be attributed to the size of the modified Phase 2 Project. As discussed in Section 4.4, "Traffic and Transportation," the modified Phase 2 Project generates fewer vehicle miles travelled (VMT) per capita and per employee than the approved Phase 2 Project; thereby also resulting in lower mobile source emissions per capita and per employee. However, the number of residents and employees associated with the modified Phase 2 Project "overwhelms" this efficiency. Similarly, the increased proportion of multi-family housing increases the per-household energy efficiency and reduces the per household emissions compared to the approved Phase 2 Project, but the overall number of housing units contributes to emissions that exceed SJVAPCD thresholds. Therefore, emissions attributable to the modified Phase 2 Project, along with emissions from other reasonably foreseeable future projects in the City of Lathrop and the SJVAB as a whole, would continue to contribute to long-term increases in emissions that would exacerbate existing and projected nonattainment conditions in the SJVAB. Thus, the modified Phase 2 Project would make a substantial contribution to a significant and unavoidable cumulative air quality impact.

*In summary, the modified Phase 2 Project would not result in substantial contributions to significant adverse cumulative impacts related to construction emissions, odors, TACs, and CO. However, total modified Phase 2 Project operational emissions, even with implementation of feasible mitigation, would contribute to the nonattainment status of the SJVAB for several criteria pollutants. Therefore, the modified Phase 2 Project **would make a considerable contribution** to a significant cumulative air quality impact.*

## 5.4.5 Noise and Vibration

Additional development in the region surrounding the Phase 2 area would contribute to the noise environment at sensitive receptors in the vicinity. Continuing development as part of the Mossdale Village Specific Plan would involve construction activities near sensitive uses also affected by construction of the modified Phase 2 Project, such as existing and future Phase 1 residences. Additional projects including the Manthey Road Bridge Replacement may occur simultaneously with construction of the modified Phase 2 Project. As the nearest of these developments would be segments of Mossdale Village located across the San Joaquin River approximately 7,000 feet from the Phase 2 area, cumulative noise or groundborne vibration resulting from construction of the modified Phase 2 Project concurrent with other developments in the vicinity would not result in a substantial noise or vibration increase at sensitive receptors affected by other developments. These noise and vibration sources are too far apart for noise or groundborne vibration generated by one source to add to noise or vibration generated from the other source at sufficient levels to result in the exceedance of a noise or vibration standard.

Traffic noise increases under future cumulative scenarios were analyzed under Impact 4.6-c in Section 4.6, "Noise and Vibration." The analysis is based on cumulative traffic generation; therefore, the results inherently reflect the results of a cumulative impact. Significant noise increases are expected along nearly all of the roadway segments analyzed in

this assessment. As seen in Table 4.6-14 in Section 4.6, "Noise and Vibration," traffic noise increases resulting from the project alone under the Existing Plus Proposed Project scenario would constitute a substantial portion of the overall future cumulative noise increase along most roadway segments. Therefore, the modified Phase 2 Project would make a substantial contribution to a significant cumulative traffic noise impact. As described in New Mitigation Measure 4.6-c, implementation of traffic noise mitigation policies would not be sufficient to reduce project-generated traffic noise to a less-than-significant level. Therefore, the modified Phase 2 Project would make a substantial contribution to a cumulative impact related to traffic noise increases that is significant and unavoidable.

*In summary, the modified Phase 2 Project would not result in substantial contributions to significant adverse cumulative impacts related to construction noise, stationary source noise, or groundborne vibration. However, project-related traffic noise, even with implementation of feasible mitigation, would represent a substantial portion of the overall future cumulative noise increase along most area roadway segments. Therefore, the modified Phase 2 Project would make a considerable contribution to a significant cumulative traffic noise impact, and the contribution would be **significant and unavoidable**.*

## 5.4.6 Geology, Soils, and Mineral Resources

Geotechnical impacts are site-specific rather than regional in nature. Seldom do separate projects interact in a manner that would cause geotechnical impacts to be any more or less severe unless they are in very close proximity. There are no other projects in close enough proximity to the Phase 2 area for geotechnical impacts to interact. In addition, any development occurring within the Phase 2 area, and any reasonably foreseeable future projects, would be subject to, at minimum, uniform site development and construction and regulatory standards relative to seismic and other geologic conditions that are prevalent within the region, such as the California Building Code standards.

*As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to geology and soils would be **less than significant**, and no additional mitigation is necessary to reduce the project's contribution to cumulative impacts to geologic conditions in the area.*

## 5.4.7 Hydrology and Water Quality

The cumulative context for hydrology and water quality for implementation of the modified Phase 2 Project includes the San Joaquin River basin and the City of Lathrop. Because waterways adjacent to the project site (San Joaquin River, Old River, Paradise Cut) are part of the Sacramento-San Joaquin River Delta system, local hydrology and water quality conditions are often affected by regional activities.

Past and present projects from the Sierra Nevada (dams and reservoirs, mining operations, logging, urban development) through the Delta (water supply diversions, agricultural diversions, flood control projects, urban development, river channelization) affect hydrology and water quality conditions in the project vicinity. The ability of waterways surrounding the project site to accommodate changes resulting from the modified Phase 2 Project and related projects is influenced by the effects of other activities in the Sacramento-San Joaquin River Delta. The following evaluation of cumulative hydrology and water quality impacts is made in light of the interrelated nature of the Delta system. However, the focus is on effects on water bodies in the project vicinity (San Joaquin River, Old River, Paradise Cut) and how the modified Phase 2 Project and related projects may alter hydrologic and water quality conditions in these areas.

## SURFACE WATER QUALITY

The modified Phase 2 Project, along with several other projects in the area (e.g., Mossdale Landing and Central Lathrop Specific Plan) would discharge stormwater runoff to the nearby Delta waterways and would potentially degrade water quality of the system. As discussed in Section 4.8, "Hydrology and Water Quality," agricultural drain water, excess irrigation water, and excess precipitation are collected in the RID Area agricultural drain system. Water from the drain system is pumped into Paradise Cut at a pumping station at the southwest end of the RID Area. Under

the overall River Islands Project, as well as the modified Phase 2 Project, the conversion from agricultural land uses to residential uses, commercial uses, parks and paseos, water treatment wetlands, and the internal lake system, would result in the total volume of discharges and the annual loading for water contaminants decreasing. For the six contaminants where concentrations and mass loading would increase, the increased levels of these contaminants would not violate any water quality standards or waste discharge requirements. Additionally, discharges for the River Islands Project as a whole and under the modified Phase 2 Project would not occur as frequently as under the existing condition, and when they do occur, they would do so in the winter months, when higher flows in the Delta would further reduce post-project concentrations. Hence, the modified Phase 2 Project would result in beneficial or less-than-significant water quality impacts related to stormwater discharges.

While there are no assurances that other projects in the vicinity would incorporate the same degree of treatment as the River Islands project, several projects would phase out existing agricultural runoff discharges from their respective sites and, like the modified Phase 2 Project, could provide some level of water quality improvement. Also, each project that would discharge stormwater runoff would be required to comply with National Pollutant Discharge Elimination System (NPDES) discharge permits from the Regional Water Quality Control Board (RWQCB), which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality. Therefore, while more urban runoff may be discharged to the Delta system with implementation of regional projects due to increased impervious surfaces, the associated surface water quality impacts would be expected to be less than significant because of improved or similar quality of runoff compared to existing conditions. Additionally, there are other programs, such as the Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (Bay-Delta Plan), that reduce regional water quality impacts on the Delta.

The modified Phase 2 Project along with other projects in the area (e.g., Mossdale Landing, Central Lathrop Specific Plan) may include construction activities that could result in sediment or contaminant releases in the San Joaquin River; such as stormwater outfalls and utility crossings under the river. While levee construction and utility crossings have been completed in the Phase 1 and Phase 2 areas of the River Islands Project site, some earth moving in or near water bodies could still occur as part of Phase 2 (e.g., habitat enhancement work in Paradise Cut). Mitigation measures are included in Section 4.8, "Hydrology and Water Quality," to reduce or eliminate the potential for releases of sediment and contaminants as well as specific requirements to be included in Storm Water Pollution Prevention Plans (SWPPPs) prepared for project development. These measures would reduce impacts on water quality from construction activities associated with the modified Phase 2 Project to less-than-significant levels. While there are no assurances that nearby projects would incorporate the same mitigation as the River Islands project, each project that would include construction within the levees of the San Joaquin River or other waterways would, at a minimum, be required to obtain and comply with permits from the RWQCB, the California Department of Fish and Wildlife (CDFW), California State Lands Commission, and the appropriate reclamation district (RD). Permits would likely be required from this same list of agencies for utilities crossing under the river. Each permit would include measures to protect water quality in the San Joaquin River and other waterways during construction. Therefore, any potential for construction related sedimentation or contamination would be limited for each individual project and the cumulative effect would be less than significant.

## SURFACE DRAINAGE

The project site is currently surrounded by levees, consistent with approved plans and entitlements. Therefore, all stormwater runoff would be naturally contained within the project site. Stormwater runoff that does collect in the River Islands Development Area (RID Area) would be held in the internal lake system and would percolate to groundwater or be discharged into Paradise Cut. Therefore, the proposed modifications to the Phase 2 Project would not have the potential to divert runoff to adjacent properties, causing drainage impacts to such properties. Therefore, no cumulative drainage impact on adjacent properties would occur.

## FLOOD CONTROL

As discussed in Impact 4.8-m, the entire RID Area was in the 100-year floodplain at the time of project approval in 2003. The 2003 analysis noted that under the existing levee conditions, levee failures along Stewart Tract during flood events result in flooding of the entire island, resulting in lower flood elevations downstream of the island. As discussed in Impact 4.8-l, levee construction and improvements surrounding both the Phase 1 and Phase 2 areas have been completed. The modified Phase 2 Project does not include any modifications to the levee system beyond what has been approved in the 2003 SEIR and subsequent Addenda and, therefore, the modified Phase 2 Project would have the same potential to influence flood stage elevations in the surrounding area during severe flood events as indicated in the 2003 SEIR and subsequent Addenda.

None of the projects in the cumulative setting would remove new areas from the 1-in-100 Annual Exceedance Probability (AEP) floodplain. Therefore, these projects could not contribute to a cumulative increase in flood elevations in this manner. However, several projects could result in additional discharges of stormwater into the San Joaquin River during storm events (e.g., Mossdale Landing and Central Lathrop Specific Plan). This could lead to an incremental increase in peak stormwater runoff to the San Joaquin River and potential increases in downstream flood elevations. However, the City requires a 30 percent reduction in peak flows via the use of onsite retention basins so that a large part of onsite runoff from nearby projects would be discharged to the river after peak storm events and after water levels in the river have subsided. In addition, because retention basins would be available, discharges could be temporarily limited in some instances during peak river flows. Also, the reduced flood elevations resulting from the overall flood protection system improvements included with the River Islands Project helps offset any increased discharges associated with the nearby projects. Therefore, the incremental addition of stormwater discharges from nearby projects and increased flows associated with the modified Phase 2 Project are not considered to have a significant cumulative effect on peak flows in the San Joaquin River during flood events.

## GROUNDWATER QUALITY

The modified Phase 2 Project would include excavation activities that could intersect shallow groundwater and result in sediments or contaminants entering the groundwater. However, as discussed in Impact 4.8-o, the SWPPP developed and implemented as part of Modified 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. As discussed in Impact 4.8-p, project operation could intersect groundwater at the interior lake system and the expanded Paradise Cut channel, though the shallow groundwater tables where this would occur are well above (75 feet or more) deeper groundwater tables used for potable water. The water quality in the interior lake system and the quality of recycled water used for project irrigation would be sufficiently high due to the installation of multiple BMPs to treat stormwater before it enters the lake and recycled water used for irrigation would meet all applicable water quality standards for Title 22 disinfected tertiary-treated effluent; thus, that shallow groundwater would not be adversely affected by contact with these water sources.

Projects in the cumulative context would be developed at multiple locations with varying depths to groundwater, would generate varying degrees of construction and urban runoff, would likely implement varying levels of application rates for the land disposal of recycled water, and would likely implement varying levels of BMPs that would protect groundwater. Some nearby projects, such as the North Crossroads Business Park or Bilal Chevron and Car Wash, could include industrial components that could potentially involve the use and/or storage of untreated wastewater and/or hazardous materials that, if allowed to percolate to the groundwater, could result in groundwater quality degradation. Although there would likely be considerable variation among the projects, and thus potentially varying levels of possible groundwater impacts, there are a considerable number of regulatory safeguards in place to ensure that groundwater contamination does not occur. These include, but are not limited to, treated wastewater discharge requirements, separation distance requirements between wastewater storage ponds and groundwater, storage pond lining requirements, and hazardous materials handling requirements. Furthermore, many of the nearby projects would replace existing agricultural operations that use pesticides, herbicides, and fertilizers over large areas; ending potential adverse groundwater effects from these activities. Therefore, it is anticipated that less-than-

significant cumulative impacts would occur, and if such impacts were to occur, the modified Phase 2 Project would not contribute to them.

*In summary, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to hydrology and water quality would be **less than significant**, and no additional mitigation is necessary to reduce the project's contribution to cumulative hydrology and water quality impacts in the area.*

## 5.4.8 Hazardous Materials and Public Health

The cumulative context for hazards and hazardous materials for implementation of the modified Phase 2 Project includes the project region (i.e., project area, the city of Lathrop, and the county of San Joaquin). However, most hazardous material, human health, and safety impacts are generally site-specific and not cumulative by nature, because impacts generally vary by land use, site characteristics, and site history.

Future development or redevelopment in the region, including in the River Islands area, is subject to contemporary safety and hazardous materials controls, as set forth in the numerous regulations that control the use of potentially hazardous materials. The modified Phase 2 Project does not propose an intensification of heavy industrial or manufacturing uses and, instead, focuses on densification of housing and development of a mixed-use Transit Oriented Development (TOD) area as part of the Employment Center District. Such uses would not generate the use or transport of large amounts of hazardous materials. Implementation of Adopted Mitigation Measure 4.9-b from the 2003 SEIR is required for all subsequent projects within River Islands, which would minimize risk of exposure of existing hazardous materials during construction. Implementation of applicable hazardous materials management laws and regulations adopted at the local, state, and federal level address the regulation of the handling (including transportation), storage, and disposal of hazardous materials and wastes. These regulations would ensure the modified Phase 2 Project's contribution to risk of hazardous materials releases either through routine use or upset/accident conditions would not be cumulatively considerable.

Construction activities associated with cumulative development would involve the movement of heavy equipment, material deliveries, and utility work. These activities could result in the need for lane closures or narrowing in the project area. Such impacts tend to be localized and would be short-term and would not combine to produce a significant cumulative effect. Construction traffic control plans are typically used to mitigate potential effects. As required by Adopted Mitigation Measure 4.10-a, construction traffic control plans would be implemented for the modified Phase 2 Project, which would ensure that the project's impact would not be cumulatively considerable.

*Compliance with local, state, and federal regulations concerning hazardous materials and sites, as well as implementation of Adopted Mitigation Measures 4.9-b and 4.10-a, would ensure that the public would be protected from significant effects of hazardous materials. As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to hazardous materials and public health would be **less than significant**.*

## 5.4.9 Public Services

The cumulative context for public services includes the project region (i.e., project area, the city of Lathrop, and San Joaquin County). Most public services impacts are generally regional and can be cumulative by nature because public services are frequently shared across an area or region.

The modified Phase 2 Project includes densification of residential land uses and development of a mixed-use Transit Oriented Development (TOD) area as part of the Employment Center District. The modified Phase 2 project would include a total of 10,726 dwelling units which would generate an estimated 32,178 residents. Non-residential land uses included in the modified Phase 2 project are estimated to generate 7,963 new jobs. Future development or redevelopment in the region, including in the River Islands area, would result in additional demands for public services including, fire protection services and facilities, police protection services and facilities, animal control services and facilities, schools, and storage of solid waste.

Project construction would result in increased usage of roadways in the project area and project vicinity. Construction activities associated with cumulative development would involve the movement of heavy equipment, material deliveries, and utility work. These activities could result in the need for lane closures or narrowing in the project area that could adversely affect emergency vehicle access. Such impacts tend to be localized and would be short-term and would not combine to produce a significant cumulative effect. Construction traffic control plans are typically used to mitigate potential effects. As required by Adopted Mitigation Measure 4.10-a, construction traffic control plans would be implemented, which would ensure that any local limitations on vehicle access would not make a cumulative contribution to adverse effects on emergency vehicle access.

Implementation of Phase 2 modifications would result in an increased demand for fire and police protection facilities and services. To maintain adequate service levels of 1:1,000 sworn police-officers-to-residents ratio, 1.2:1,000 firefighter-to-residents ratio, and responses times of 3-4 minutes within the region, additional fire and police protection services would be needed. Implementation of Modified Mitigation Measures 4.10-b and 4.10-e would be required for implementation of the Phase 2 Project adding police and fire service capacity to meet project generated demand. In addition, Adopted Mitigation Measure 4.10-d would ensure that minimum flow requirements in accordance with the CBC would be met to support emergency fire suppression on site. Implementation of these mitigation measures would ensure that adequate fire and police faculties and services would be available to reduce project impacts to fire and police protection services to a level that is not cumulatively considerable.

Additional housing potential, increased density of housing, and additional retail and commercial development would result in an increased demand for animal control facilities and services. Since certification of the 2003 SEIR, the City of Lathrop Animal Control Division has increased their full-time employees from two to four individuals, while maintaining two service vehicles. New residents would increase the number of pets and wildlife encounters on the project site. Modified Mitigation Measure 4.10-f would require the project applicant and City of Lathrop to 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, to ensure adequate resources are available to meet the demand associated with the project. Through implementation of this mitigation measure, impacts to animal services would not be cumulatively considerable.

At full project buildout, the project is expected to generate approximately 6,380 students in grades K-8 and 1,653 students in grades 9-12. The River Islands Project is currently served by the Banta Elementary School District, which currently serves grades K-8, and the Tracy Unified School District, which serves grades 9-12. To accommodate additional students generated by the modified Phase 2 Project, the project would include construction of four grade K-8 schools and one high school. In addition, Modified Mitigation Measure 4.10-g would require the provision of school services or payment of the state-mandated school impact fee City. Construction of the new school facilities and implementation of Modified Mitigation Measure 4.10-g would ensure that adequate school facilities and services are available and that impacts to schools would not be cumulatively considerable.

With the Phase 2 modifications, the project is expected to generate approximately 43,685 tons (or approximately 2.55 times) more solid waste per year at full project buildout of Phase 2 than assumed in the 2003 SEIR. The project and the region are served by the Foothill Sanitary Landfill, which has approximately 50 million tons of available capacity remaining (California Department of Resources Recycling and Recovery 2020). The project would not substantially contribute to the expenditure of remaining capacity available at the Foothill Sanitary Landfill and the project would comply with all federal, state, and local regulations related to solid waste reduction and recycling. The additional amount of solid waste that would be generated by the project would be minimal relative to available disposal capacity, and ample disposal capacity would remain available for other users. Therefore, any contribution to a cumulative impact would not be cumulatively considerable.

*Implementation of mitigation measures would ensure adequate public facilities and services would be available to serve the project. As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to public services would be **less than significant**.*



## 5.4.10 Public Utilities

The cumulative context for public utilities for implementation of the modified Phase 2 Project includes the project region (i.e., project area, the City of Lathrop, and San Joaquin County). Public utility impacts are generally cumulative by nature because public utilities are typically provided across a region or large service area.

Future development or redevelopment in the region, including in the River Islands area, would increase the overall demand for public utilities such as potable water; wastewater treatment, storage, and disposal; stormwater/surface runoff management; and electricity and natural gas. The modified Phase 2 Project includes densification of housing and development of a mixed-use Transit Oriented Development (TOD) area as part of the Employment Center District. Implementation of the proposed Phase 2 modifications would not result in substantial changes to the overall demand for public utilities as analyzed in the 2003 SEIR. In addition, implementation of Adopted Mitigation Measure 4.11-a would ensure that sufficient water is available for the project, as well as the City, before development is authorized (even though the WSA indicates that sufficient water is available for all cumulative development in the City through 2040). Mitigation Measure 4.11-d ensures the availability of wastewater treatment capacity before development is approved. The River Islands development includes localized measures, such as best management practices associated with the central lake system, to provide sufficient stormwater management and maintain water quality. Implementation of Adopted Mitigation Measure 4.11-g would ensure that adequate recycled water storage and disposal is available for the modified Phase 2 Project. In addition, the Lathrop Irrigation District and the Lathrop Consolidated Treatment Facility have projected adequate capacity to serve the service areas at full project buildout.

*Compliance with all existing City, PG&E, and applicable Building Code requirements, as well as implementation of Adopted Mitigation Measures 4.11-a, 4.11-d, and 4.11-g, would ensure that there would not be significant impacts related to the provision of public utilities. As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to public utilities would be **less than significant**.*

## 5.4.11 Recreation

The cumulative context for recreation is the Sacramento-San Joaquin River Delta for the overall accessibility of regional recreational opportunities and the City of Lathrop and the project site for overall demand for parkland.

### PARKLAND

Planned residential development in the City of Lathrop and associated increases in population would result in a cumulative increase in the demand for parkland. Projects located in the surrounding region would result in growth that would place additional demand on existing parks and recreation facilities. However, these development projects would be required by their respective jurisdictions to construct parks and recreation facilities, pay in-lieu fees, contribute to regional recreational facilities, or dedicate parkland in accordance with standards established by the applicable jurisdiction that would support increased demand for parks and recreation facilities. Implementation of the modified Phase 2 Project could cumulatively combine with other projects to result in a significant cumulative impact on parks and recreation facilities. The modified Phase 2 Project would include 162.41 acres of neighborhood and community parks, which would exceed the City of Lathrop General Plan requirements for parkland (by approximately 1.5 acres); additionally, the modified Phase 2 Project would include 68.74 acres of other parks, for a total of 231.15 acres of parks. Because the City's parkland standards would be met by future development in the project area through construction of park facilities, payment of in-lieu fees, contribution to regional recreation facilities, and dedication of land for parks, implementing the project would not result in a considerable contribution to a cumulative impact on parks and recreation facilities. This impact would be less than significant.

*Compliance with local standards that require projects to include adequate parkland would ensure that increased demand on existing parks and recreational facilities does not result in substantial physical deterioration of these facilities. As a result, the project would not contribute to cumulative impacts related to the provision of parkland. Therefore, cumulative impacts related to the provision of parkland would be **less than significant** because the required park acreage would be met.*

## REGIONAL RECREATIONAL OPPORTUNITIES

The River Islands Project, including the modified Phase 2 Project, would include a network trails and landscaped open space corridors that may be connected to a regional network of similar facilities via pedestrian and bicycle access across project bridges and connections to an open space corridors along the San Joaquin River. Future development in and outside the City of Lathrop may extend trails and open space corridors beyond the project site and increase the regional recreation opportunities. Because the River Islands Project, including the modified Phase 2 Project, would facilitate the development of a regional network of trails and open space corridors, the modified Phase 2 Project would result in a beneficial cumulative impact with regard to regional recreational opportunities.

Development of future projects in the region would increase the demand for boating opportunities. A significant cumulative impact would result if the demand from planned projects would exceed the carrying capacity of Delta waterways or if adequate access to the waterways is not provided. Carrying capacity for recreational boat users in the Sacramento-San Joaquin River Delta is not believed to be a limiting factor. As described in the 2003 SEIR, the California Department of Boating and Waterways considers recreational boating capacity on river systems to typically be limited by boat launch facilities rather than available waterways, as these systems provide an extensive area for boating. Therefore, the addition of boaters wishing to access the Delta system associated with the Phase 2 Project and other planned projects in the City and County is not expected to degrade the recreational experience for existing boaters in the Delta because the availability of boat launch facilities would continue to limit the number of boats on these waterways. Although the 2003 SEIR identified docks and boat launch facilities as being part of the project, these elements were removed from the project in subsequent Addenda. No significant cumulative impact related to carrying capacity of the Delta would result.

*Because the modified Phase 2 Project would facilitate the development of a regional network of trails and open space corridors, the modified Phase 2 Project would result in a beneficial cumulative impact with regard to regional recreational opportunities. Although residential development included as part of the modified Phase 2 Project may increase demand for boating opportunities on the Sacramento- San Joaquin River Delta, access is limited by boat launch opportunities, which the project does not change. Therefore, the project would not contribute to an adverse cumulative impact regarding carrying capacity in the waterways for recreational boaters. The project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related regional recreational opportunities would be **less than significant**.*

### 5.4.12 Agricultural Resources

The cumulative context for agricultural resources includes the project region (i.e., project area, the city of Lathrop, and San Joaquin County). Cumulative agricultural land impacts could occur in conjunction with development proposed in the City of Lathrop and San Joaquin County.

In 2016, it was estimated that 615,075 acres of Important Farmland was available in San Joaquin County: 381,634 acres of Prime Farmland, 82,618 acres of Farmland of Statewide Importance, 81,920 acres of Unique Farmland, and 68,903 acres of Farmland of Local Importance (SJCOG 2020).

According to the California Department of Conservation (DOC) land conversions table for San Joaquin County, 23,069 acres of Important Farmland were converted to other uses between 1990 and 2016 (Table 4.13-1 in Section 4.13, "Agricultural Resources"). Acres of land classified as Unique Farmland and Farmland of Local Importance increased during this period (likely due more to designation of existing farmland as unique or important rather than new farmland being put into production). However, an overall net loss of Important Farmland still occurred. On average, the combined categories of Important Farmland lost approximately 2,842 acres per year over the 26-year period. The County estimates that implementation of the *San Joaquin County 2035 General Plan* would result in the conversion of 5,968 acres of Important Farmland in the County to nonagricultural use by 2035; more than half of this is designated as Prime Farmland (San Joaquin County 2014:4.B-29). The California Department of Finance (DOF) projects the County's population to grow from 782,454 in 2020 to 963,236 by 2040 and 1,085,803 by 2060, putting continued pressure on agricultural lands for conversion (DOF 2019). SJCOG estimates that by 2051, 57,635 acres of agricultural

habitat land in the County could be converted (SJCOG 2000a:4). Additional conversions can be expected from implementation of habitat restoration and water storage projects associated with other regional efforts.

The loss of an estimated 3,620 acres of Prime Farmland and Farmland of Statewide Importance on the River Islands Project site, with over 2,000 of these acres being in the Phase 2 area, would be a significant cumulative impact when considered with past farmland conversions and planned future development proposed in the City of Lathrop, surrounding cities, and the County as a whole. As required by Adopted Mitigation Measure 4.13-a, the project applicant would participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) by contributing fees, on a per-acre basis, for agricultural lands that are developed. SJCOG would use these fees, in part, to purchase conservation easements on agricultural lands, providing greater protection to these farmlands in the County. However, these measures cannot fully mitigate the project's cumulative contribution to the loss of agricultural land in San Joaquin County.

*Implementation of Adopted Mitigation Measure 4.13-a would reduce cumulative impacts associated with conversion of Important Farmland and cancellation of Williamson Act contracts by requiring participation in the SJMSCP to purchase conservation easements and payment of agricultural mitigation fees for the Central Valley Farmland Trust. However, these measures cannot fully mitigate the project's cumulative contribution to the loss of agricultural land in San Joaquin County. As a result, the project's contribution to cumulative impacts would be cumulatively considerable. Therefore, cumulative impacts related to agricultural resources would remain **significant and unavoidable** as identified in the 2003 SEIR.*

### 5.4.13 Terrestrial Biology

The cumulative context for terrestrial biological resources for implementation of the modified Phase 2 Project includes the project region (i.e., project area, the city of Lathrop, and San Joaquin County) and the Central San Joaquin Valley and Delta. The 2003 SEIR evaluated the potential loss of agricultural, ruderal, riparian, and wetland habitats. The loss of agricultural and ruderal habitats was determined to be a less-than-significant impact because agricultural and ruderal habitats are abundant locally and regionally. These habitats continue to be abundant locally and regionally, and the implementation of future development projects within San Joaquin County would fall under the SJMSCP, which would offset the loss of these habitats through the implementation of a coordinated preserve system. In addition, while the riparian and wetland habitats in the region have been subject to past conversion to agriculture and urban development, any losses of riparian and wetland habitat as a result of the modified Phase 2 Project and future projects within the region would be required to meet the mitigation standards of the U.S. Army Corps of Engineers, California Department of Fish and Wildlife, and regional water quality control board, which would result in no further net loss of riparian habitats, wetland habitats, and waters of the U.S. Therefore, the loss of agricultural, ruderal, riparian, and wetland habitat from the implementation of the modified Phase 2 Project would not contribute considerably to any current or future adverse cumulative condition related to biological resources.

Implementation of the modified Phase 2 Project would result in loss of individuals and habitats of common raptors and special-status plant and animal species. For the special-status species covered under the SJMSCP, the project applicant would continue to obtain take coverage and implement SJMSCP incidental take avoidance and minimization measures in Phase 2. Mitigation measures would avoid or minimize impacts to non-covered species. In addition, while implementation of the SJMSCP is designed to meet the conservation needs of covered species, the interconnected preserve system within the SJMSCP provides benefits to both covered species and non-covered species over the life of that plan (SJCOG 2000b).

The SJMSCP projects conversion of up approximately 109,000 acres of open space land to non-open space uses in San Joaquin County between 2001 and 2051 (SJCOG 2000a). The proposed project and related projects would contribute to this Countywide conversion. However, the SJMSCP was developed to minimize and mitigate impacts on plant and wildlife habitat (and associated species) resulting from this regional loss of open space lands. The SJMSCP relies, in part, on compensation for such conversion through preservation of agricultural lands and preservation and creation of natural habitats to be managed in perpetuity through the establishment of conservation easements and preserves. The goal of the SJMSCP is to provide approximately 101,000 acres of agricultural and habitat preserve. The SJMSCP concludes that this would adequately compensate for cumulative impacts on plant and wildlife species

covered by the plan. Because the SJMSCP potentially provides a streamlined mechanism for impacts on resources covered under the plan, it is assumed that a majority of qualifying projects within the County would use the SJMSCP for mitigation. Therefore, cumulative impacts on terrestrial biological resources covered under the SJMSCP would be less than significant.

While riparian brush rabbit is a SJMSCP-covered species and the project applicant would implement the SJMSCP avoidance and minimization measures for effects on terrestrial species, impacts to occupied habitat in Paradise Cut are not covered under the SJMSCP and separate Endangered Species Act (ESA) consultation would be required for impacts to this species. The result of the ESA consultation would be implementation of specific actions to protect and benefit the species and the project would not make a substantial contribution to any adverse cumulative impact on riparian brush rabbit. In addition, the riparian brush rabbit has a very limited range, with populations limited to Caswell State Park, portions of the River Islands site, and nearby areas. Therefore, almost all the related projects would not contribute impacts to riparian brush rabbit, and those that might, would also need to participate in the SJMSCP and/or complete ESA consultation for the species.

*The modified Phase 2 Project would result in conversion of agricultural, ruderal, riparian, and wetlands that provide habitat for common and special-status species, as well as the potential loss of individuals of common and special-status species. However, the project applicant would participate in the SJMSCP, which is designed to address county wide biological impacts through a regional interconnected preserve system that provides habitat for special-status and common species. The project applicant would implement avoidance and minimization measures included in the SJMSCP, as well as implement ESA required actions to protect riparian brush rabbit. As a result, the project's contribution to cumulative impacts on terrestrial biological resources would not be cumulatively considerable. Therefore, cumulative impacts related to terrestrial biological resources would be **less than significant**.*

## 5.4.14 Fisheries

The cumulative context for fisheries for implementation of the modified Phase 2 Project includes the project region (i.e., project area, the city of Lathrop, and the county of San Joaquin) and the San Joaquin Delta. The 2003 SEIR disclosed that the project could result in temporary inhibition of spawning for Sacramento splittail, and impede or delay chinook salmon migrations due to increased sediment from levee breaching, dock construction, and dredging of back bays constructed along the San Joaquin River and Old River. These activities are no longer part of the project and are not proposed for Phase 2; therefore, these actions would no longer have an impact on fisheries or contribute considerably to a cumulative effect. Phase 2 would continue habitat modifications in Paradise Cut; provide structural habitat for fishes; add fish habitat in the internal lake system; and include the removal of pumps in Paradise Cut, installation of screens on existing pumps, and implement pumping during "fish-friendly" seasons. These project elements would be beneficial to fisheries, and would therefore not contribute considerably to an adverse cumulative condition.

The internal lake system is proposed to be stocked with fish that would include exotic game fish species; however, only species currently in the Delta would be stocked, and therefore the introduction of exotic fish into the Delta that would result from the project would have a less-than-significant impact on fisheries. Future development in the region and the San Joaquin Delta may result in additional release of exotic fishes into the Delta through the release of live bait used in recreational fishing and the stocking of additional water features associated with development. However, as described in the 2003 SEIR, the Delta is currently inhabited primarily by exotic fish and invertebrate species and the potential introduction of exotic fishes to the Delta as a result of Phase 2 would not provide a considerable contribution to any current or future adverse cumulative condition.

Construction of Phase 2 would have potentially adverse effects on fisheries from sediment runoff due to RID area construction and construction of bridges. However, these effects would be reduced by the implementation of a SWPPP to reduce sediment runoff from RID construction, and the implementation of Modified Mitigation Measures 4.15-b and 4.15-c and Adopted Mitigation Measure 4.15-d, which would reduce impacts from in water construction and runoff. These measures would reduce these effects such that they would not contribute considerably to any current or future adverse cumulative condition.

Implementation of Phase 2 would also result in altered timing of surface runoff discharges to Paradise Cut, but the discharge would have reduced pollutant levels compared to the existing discharge. Nonetheless, the cumulative changes in the timing of runoff may have a minor impact on summer water quality and a minor change in the use of Paradise Cut by chinook salmon smolts. Physical alterations to Paradise Cut included as part of the project may also improve habitat conditions for chinook salmon smolts. However, the use of Paradise Cut by chinook smolts may result in an increase in mortality from predation and entrainment further downstream in Old River. This minor impact is limited to Paradise Cut, is local in nature and therefore is not likely to combine with other past, present, and probable future projects in the region to have a substantial cumulative effect on the fishery in Paradise Cut.

The Phase 2 modifications would decrease the use of surface water compared to estimates for the approved project. This decrease would not contribute substantially to the forecasted increase in water consumption in the region as a whole resulting from increased development associated with various reasonably foreseeable future projects.

*The modified Phase 2 Project does not include various project elements that have been removed from the River Islands Project since certification of the 2003 SEIR (e.g., back bays, docks on exterior water features) that were previously identified as resulting in impacts on fisheries. The modified Phase 2 Project would continue to implement removal of water intakes from Paradise Cut, screen remaining water intakes, and construct fish habitat; would implement construction stormwater controls and implement mitigation to reduce construction impacts; would have minor localized impacts to water quality in Paradise Cut that would not be combined with effects from current or probable future projects; and would result in a decrease in water consumption that would not contribute considerably to the cumulative water consumption in the region. All of these items either improve fishery conditions, result in little or no effect, or result in effects that would not interact with other projects and activities. Therefore, the modified Phase 2 Project's contribution to cumulative impacts related to fisheries would be **less than significant**.*

## 5.4.15 Cultural and Tribal Cultural Resources

As described in the analysis of project specific impacts in Section 4.16 of this SEIR, the modified Phase 2 Project would have little to no effect on historic resources. Effects on historic resources in the project vicinity are primarily associated with Phase 1 of the River Islands Project and applicable mitigation measures have been implemented. Therefore, the modified Phase 2 Project would not make a significant contribution to any cumulative impact on historic resources and this aspect of cultural resources is not evaluated further.

The geographic scope for the analysis of cumulative impacts to archaeological resources, tribal cultural resources (TCRs), and human remains is the historic lands of the Northern Valley Yokuts, the Buena Vista Rancheria Me-Wuk Indians, and the California Valley Miwok, all Native American Tribes traditionally and culturally affiliated with the project area and that expressed an interest in the project through the CEQA process. The historic lands occupied by these tribes consists of much of the northern San Joaquin Valley.

All significant cultural resources are unique and nonrenewable members of finite classes, meaning there are a limited number of significant cultural resources; therefore, all adverse effects erode a dwindling resource base. The loss of any one archaeological site could affect the scientific value of others in a region because these resources are best understood in the context of the entirety of the cultural system of which they are a part. The cultural system is represented archaeologically by the total inventory of all sites and other cultural remains in the region. As a result, a meaningful approach to preserving and managing cultural resources must focus on the likely distribution of cultural resources, rather than on a single project or parcel boundary.

The historic lands of the three Tribes identified above have been affected by development since the arrival of the first Spanish settlers in 1829. The 1849 discovery of gold in Coloma, the 1860s expansion of the Central Pacific Railroad, and San Joaquin County's agricultural growth in the 1870s, were soon followed by reclamation of the Delta, and the commercial development and the establishment of Stockton and Lodi. Development of the Gabrieleño lands continued with residential growth, which increased after World War II and has greatly intensified since 2000. These activities have resulted in an existing significant adverse effect on archaeological resources, TCRs, and human

remains. Cumulative development, including projects described in Table 5-2, continues to contribute to the disturbance of cultural resources.

No known unique archaeological resources, TCRs, or human remains are located within the boundaries of the Phase 2 area. Although unlikely given the lack of any evidence or records indicating that these resources are present in the Phase 2 area, project-related earth-disturbing activities could damage undiscovered archaeological resources, subsurface resources that could qualify as TCRs, or human remains. The modified Phase 2 Project, in combination with other development in the region, could contribute to ongoing substantial adverse changes in the significance of unique archaeological resources resulting from urban development and conversion of natural lands. Cumulative development could result in potentially significant archaeological resource impacts.

Implementation of Modified Mitigation Measure 4.16-d would ensure that the project's contribution to cumulatively significant archeological resource impacts, including resources that might qualify as TCRs, would not be considerable. This would be achieved by requiring construction work to cease in the event of an accidental find and the appropriate treatment of such discovered resources in accordance with pertinent laws and regulations.

Implementation of Adopted Mitigation Measure 4.16-e would create the same result for accidental discoveries of human remains. Implementation of Adopted Mitigation Measure 4.16-f would ensure that the potential contribution to cumulative impacts to significant archeological resources, resources that might qualify as TCRs, and human remains resulting from construction of offsite facilities would not be substantial.

*With implementation of these mitigation measures, the project's contribution to cultural and tribal impacts would be effectively minimized. Further, cumulative development would be required to implement similar mitigation to avoid/reduce impacts to archaeological resources and TCRs. Based on the available evidence, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to archaeological resources, TCRs, and human remains would be **less than significant**.*

## 5.4.16 Aesthetics

The cumulative context for the aesthetics analysis considers the local context of visual resources within and nearby the project vicinity. Specifically, the analysis focuses on changes to visual character or quality of views; consistency with the River Islands Urban Design Concept (UDC) and the guidelines in the General Plan and WLSP; impacts to light and glare; and impacts to shade and shadow.

The project area consists mainly of agricultural land, residential development, and commercial development. The modified Phase 2 Project would alter the visual character and quality of views and incrementally increase light and glare within the project site and the nearby area. Although there would be changes to the visual character and quality of views of the project site, in some cases these changes would be beneficial. Water elements, which include several man-made lakes, parks, open space, and landscaping are incorporated throughout the project site and would improve the visual character and quality of the area, in comparison to the existing undeveloped, ruderal, or agricultural land. Project improvements along riverways and waterways would provide diverse visual elements such as landscaping that would improve the overall views available to recreational boaters. Overall views would be limited in nature, available primarily from raised levees and roadways and would be similar to surrounding development. Cumulative development in the project vicinity, specifically in the City of Lathrop and the existing Phase 1 project area, consists of residential and commercial development complementary to the proposed project and existing development in the project vicinity. The new mixed-use/commercial land uses provided by the Phase 2 Project act as regional focal point. Habit restoration and the incorporation of water elements throughout the project area reinforce the area's Delta setting. The project would comply with the River Islands Phase 2 UDC and guidelines in the General Plan and amended WLSP to ensure that future development is consistent with development in the project vicinity. Implementation of Adopted Mitigation Measure 4.17-f would ensure consistency with the amended WLSP. All subsequent development within River Islands that would be located adjacent to an existing or planned arterial roadway would be required to implement Adopted Mitigation Measure 4.17-f.

*Compliance with the River Islands Phase 2 UDC and guidelines in the General Plan and amended WLSP; incorporation of water features and natural color schemes; and implementation of the Adopted Mitigation Measure 4.17-f, would improve the visual character and quality of the area and ensure that significant effects to aesthetics would not occur in the project vicinity. As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to aesthetics would be **less than significant**.*

## 5.4.17 Energy

As identified in Impact 4.18-a of Section 4.18, "Energy," implementation of the modified Phase 2 Project would increase electricity and natural gas consumption in the Phase 2 area relative to existing conditions; however, the residences and commercial buildings would be constructed in compliance with the most recent California Energy Code (currently the 2019 code) and subsequent code updates and other applicable energy efficiency and renewable energy regulations and standards. In addition, utilities providing energy to the project would comply with various statewide regulations related to use of renewable energy and energy efficiency. Other projects would also be constructed and operated consistent with the requirements of the applicable Energy Code and energy efficiency regulations and supplied by the same regulated energy utilities. The modified Phase 2 Project alone, as well as when considered with other reasonably foreseeable future projects, would not make a substantial contribution to any possible cumulative pattern of wasteful, inefficient, or unnecessary consumption of energy, nor conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Energy would also be consumed as part of the modified Phase 2 Project in the form of gasoline and diesel fuel during construction activities as well as from vehicle trips to and from the Phase 2 area. Energy consumption was not evaluated in the 2003 SEIR, however, as discussed in Impact 4.18-a, the residential land uses proposed under the modified Phase 2 Project would be of higher density than the land uses evaluated in the 2003 SEIR. This would result in lower energy use per capita as well as lower VMT per capita (as discussed in greater detail in Section 4.19, "Greenhouse Gas Emissions and Climate Change"). In addition, any increase in total energy consumption from implementation of the modified Phase 2 Project would not require additional electricity or natural infrastructure beyond what is already present or included in the already approved project (see Section 4.11, "Public Utilities").

Increased energy demand generated by the modified Phase 2 Project combined with increased energy demand from other projects in a cumulative context within the City of Lathrop would be accounted for in Pacific Gas & Electric's (PG&E) energy demand forecast report, which is submitted to the California Energy Commission annually for review, combined with forecasts obtained by LID for River Islands. Therefore, PG&E includes cumulative energy from development areas of the City other than River Islands and LID forecasts that it can meet the energy demands of both Phase 1 of River Islands and the modified Phase 2 Project.

*Given all these conditions, the modified Phase 2 Project **would not have a considerable contribution** to any significant cumulative energy impact.*

## 5.4.18 Greenhouse Gas Emissions and Climate Change

Greenhouse gas (GHG) emissions generated by project construction and operation, discussed under Impact 4.19-a of this SEIR, are inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions. The modified Phase 2 Project would generate GHG emissions greater than 2.12 metric tons of carbon dioxide equivalent per year per service population (MTCO<sub>2</sub>e/year/SP), which was used a threshold for determining significance. As such, mitigation was recommended. Through the application of New Mitigation Measures 4.19-a(1) and 4.19-a(2), the modified Phase 2 Project would reduce its emissions to the 2.12 MTCO<sub>2</sub>e/year/SP threshold of significance but there is uncertainty regarding the feasibility of these measures.

Given the uncertainty regarding the feasibility of New Mitigation Measures 4.19-a(1) and 4.19-a(2), the project **would result in a considerable contribution** to a significant cumulative GHG impact.

## 5.4.19 Wildfire

The project area is located within a Local Responsibility Area, as mapped by the California Department of Forestry and Fire Protection (CAL FIRE) but the developed portion of the project is not located in a fire hazard severity zone (FHSZ) (CAL FIRE 2007) (see Figure 4.20-1 in Section 4.20, "Wildfire"). A small area of riparian forest along the far western edge of the Paradise Cut Conservation Area is identified as a FHSZ with a designation of "Moderate." However, this patch of riparian forest is several thousand feet west of planned development and does not pose a fire risk to project facilities. Further, project development would not exacerbate wildfire risks and, thus, would not contribute considerably to a cumulative impact related to wildfires. Due to the dominance of agricultural and developed land uses in the project region, flat topography, and frequency of rivers and other waterways associated with the Sacramento/San Joaquin Delta, there is little wildfire risk associated with all of the cumulative projects.

Construction activities associated with cumulative development would likely involve truck traffic and temporary lane/shoulder closures in work zones that could result in temporary lane closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services. Such impacts tend to be localized, short-term, and would not combine to produce a significant cumulative effect. Construction traffic management plans are typically used to mitigate potential effects. As required by Adopted Mitigation Measure 4.10-a, a construction traffic management plan would be implemented for the proposed project, which would ensure that project construction would not interfere with or impair emergency vehicle access, and the project's contribution to the impact would not be cumulatively considerable.

Future projects in the region would add additional residents and businesses to the region, that collectively would increase the number of people and vehicles using established evacuation routes. These projects would be subject to state and local regulations that govern emergency response planning, emergency response and access, and evacuation routes. The multiple emergency response resources in place would adequately allow for the evacuation of residents in the region with emergency alert notifications, rapid dispatch and emergency response, and law enforcement coordination to implement evacuation operations. These regulations would ensure the Phase 2 Project's contribution to the long-term impairment of emergency response or evacuation plans would not be cumulatively considerable.

Development of the modified Phase 2 Project could provide a benefit to the cumulative condition related to evacuation routes in that new traffic and circulation routes would be available for evacuation purposes (e.g., Paradise Road [public use of the bridge over Paradise Cut is currently prohibited during project construction] and Golden Valley Parkway). It is anticipated that local jurisdictions, including San Joaquin County, would update their evacuation plans to include these new routes as applicable.

*Implementation of Adopted Mitigation Measure 4.10-a as well as compliance with state and local regulations concerning emergency response planning, emergency response and access, and evacuation routes would ensure that the public would be protected from significant effects related to impairment of emergency response or evacuation plans. As a result, the project's contribution to cumulative impacts would not be cumulatively considerable. Therefore, cumulative impacts related to impairment of emergency response or evacuation plans would be **less than significant***



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## 6 GROWTH-INDUCING IMPACTS

### 6.1 INTRODUCTION

CEQA specifies that the growth-inducing impacts of a project must be addressed in an EIR (Section 21100[b][5]). Specifically, Section 15126.2(d) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- ▶ substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- ▶ substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- ▶ removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open-space land to urban uses, and other effects.

Any plan that designates undeveloped land for future development can be defined as "growth inducing." The City's objectives for the River Islands Project include "generation of substantial permanent employment opportunities" and "provide local jobs, homes, and revenue-generating uses that complement other Lathrop development"; thus, the project is inherently growth inducing. As stated in the State CEQA Guidelines, it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. The purpose of this section is to evaluate the potential growth-inducing impacts resulting from implementing the project in the project area, the project vicinity, and throughout the region. A more detailed discussion related to population growth and housing is provided in Section 4.3, "Population, Employment, and Housing."

### 6.2 GROWTH-INDUCING IMPACTS OF THE PROJECT

Chapter 6, "Growth-Inducing Impacts," of the 2003 SEIR evaluated the potential for the River Islands Project to result in growth-inducing impacts (see pages 6-1 through 6-4 of the 2003 SEIR). The 2003 SEIR concluded that, overall, the River Islands Project would be growth inducing for the reasons described below.

Because the proposed Phase 2 modifications would increase the number of residential units and density of residential development and would add a mixed-use town center within the original boundaries of the Phase 2 area, the

modified Phase 2 Project would continue to be growth inducing, consistent with the conclusion in the 2003 SEIR. However, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. See the below discussion for additional details.

## 6.2.1 Area Planned for Development

### SUMMARY OF 2003 SEIR ANALYSIS

The 2003 SEIR evaluated whether the River Islands Project would be growth inducing with respect to placing urban development in an area not already planned for such development. First, the analysis noted that the project site was planned for development (Stewart Tract) and open space uses (Paradise Cut) under the *City of Lathrop General Plan* (2004) and the *West Lathrop Specific Plan* (WLSP). Although there are substantive differences between the River Islands Project and the development envisioned in the WLSP at that time (most notably that the original WLSP envisioned an entertainment-oriented, theme park-centered development), the City determined that many aspects of the River Islands Project were consistent with the Lathrop General Plan, WLSP, and other City planning documents. Additionally, the analysis noted that the River Islands Project would develop, or support development of, portions of the areawide road network (Golden Valley Parkway, River Islands Parkway, I-205 interchange at Chrisman) consistent with the WLSP and would pay the required WLSP transportation impact fees. Finally, mitigation in the 2003 SEIR required the project applicant to pay all applicable San Joaquin County Multi-Species Habitat and Open Space Conservation Plan (SJMSCP) fees as development proceeds. The 2003 SEIR concluded that the River Islands Project would be consistent with applicable land use, infrastructure, fee, and environmental plans; therefore, it was determined that the River Islands Project would not be growth inducing in this respect because it would not result in development of an area not already planned for development.

While the River Islands Project as analyzed in the 2003 SEIR had some inconsistencies with the general plan and WLSP in effect at that time, both documents were revised to be aligned with the River Islands Project.

### ANALYSIS OF MODIFIED PHASE 2 PROJECT

The proposed Phase 2 modifications would result in development of the same footprint as that evaluated in the 2003 SEIR. Under the modified Phase 2 Project considered herein, roadway and utility infrastructure would generally be developed as envisioned in the 2003 SEIR with some updates and refinements. These refinements reflect substantial roadway and infrastructure construction that has been completed in portions of the Phase 1 area. Moreover, detailed utility planning has been completed for Phase 2 (see Chapter 3, "Description of the Proposed Project"). Providing additional housing opportunities, accommodating a Valley Link rail station and surrounding Transit Oriented Development, and an approximately eight percent reduction in square footage for non-residential development (e.g., retail and commercial) would result in changed land uses as compared to those analyzed in the 2003 SEIR. The modified Phase 2 Project includes an amendment to the existing WLSP and the *City of Lathrop General Plan* (2004) to reflect proposed changes to land use designations and the internal circulation system. With implementation of the proposed amendments to the General Plan, the modified Phase 2 Project would be consistent with applicable land use and circulation policies; however, without these amendments, the modified Phase 2 Project would not be consistent with the General Plan land use and circulation policies.

Consistent with the analyses in the 2003 SEIR, the River Islands Project is confined, geographically, to an island known as Stewart Tract. Stewart Tract is surrounded on the north and west by lands that are designated as part of the Primary Zone of the Delta and on the south by flood plain area (i.e., Paradise Cut). In this regard, Senate Bill 5 would require the provision of a 200-year level of flood protection and poses a constraint on any potential urban development beyond Stewart Tract. Because the modified Phase 2 Project would result in the build out of an area previously planned for urban development for more than two decades, with Phase 1 nearly complete, the intensification of development within the Phase 2 area boundaries would not result in an expansion of planned urban development. Moreover, as the urban development would continue to progress in Stewart Tract—an island—urban

development is not capable of being expanded beyond Stewart Tract. The site's physical constraints (i.e., Primary zone and floodplain) would prohibit any development north, west, and south of Stewart Tract.

Additionally, the project applicant would continue to pay required developer fees including WLSP transportation impact fees and applicable SJMSCP fees as development proceeds, consistent with project conditions of approval and adopted mitigation measures. The applicant also has committed to paying Agriculture Mitigation Fees to enable the purchase of 0.5 acre of agricultural land for every 1 acre of land dedicated to urban development. The payment of the SJMSCP fees and the Agricultural Mitigation Fee combined, satisfies the project's obligation to mitigate for the loss of agricultural lands caused as a result urban development.

Therefore, the modified Phase 2 Project would be consistent with applicable utility infrastructure plans, fees, and environmental plans, but would not be consistent with the General Plan land use and circulation elements. Although the project would offset the conversion of agricultural land to urban development, the modified Phase 2 Project would be growth inducing in this respect because it would result in higher density urban development than currently planned for in the adopted General Plan.

## 6.2.2 Extension of Infrastructure

### SUMMARY OF 2003 SEIR ANALYSIS

The 2003 SEIR evaluated whether the River Islands Project would be growth inducing with respect to the proposed extension of infrastructure. The analysis noted that the River Islands Project would contribute to the development of a new roadway network and drainage system consistent with the WLSP. The River Islands Project would also extend wastewater and recycled water pipelines to and from the project site consistent with the *Lathrop Water, Wastewater, and Recycled Water Master Plan*. During Phase 1, the project applicant contributed to the development of water well #21 and the WRP #1 Phase 1 Expansion Project by paying its fair share of these utility infrastructure improvements designed to serve City-approved and planned development. When needed during later project development, the project applicant agreed to pay its fair share for additional well development and WRP construction/expansion consistent with the *Lathrop Water, Wastewater, and Recycled Water Master Plan*. These activities were found to represent both an extension of roadways and municipal storm drain and utility infrastructure to an area not currently served by such systems and a contribution to the creation of additional potable water and wastewater treatment capacity planned to support development in the City. As the first development project on Stewart Tract under the WLSP, the currently approved River Islands Project was determined to be growth inducing because it would remove obstacles to further growth on the remaining Stewart Tract (which is outside of the project area). In addition, extension of Golden Valley Parkway south to I-205 could increase growth pressures along this corridor south of the project site.

### ANALYSIS OF MODIFIED PHASE 2 PROJECT

The proposed Phase 2 modifications would result in development of the same footprint as that evaluated in the 2003 SEIR. Under the modified Phase 2 Project, roadway and utility infrastructure would generally be developed as envisioned in the 2003 SEIR with some updates and refinements reflecting construction completed in portions of Phase 1 have and detailed utility planning completed for Phase 2 (see Chapter 3, "Description of the Proposed Project"). The project applicant would continue to pay its fair share of various utility infrastructure improvements as development proceeds, consistent with project conditions of approval and adopted mitigation measures. Therefore, the modified Phase 2 Project would continue to extend roadways and municipal storm drain and utility infrastructure to the Phase 2 area and would continue to contribute to the creation of additional potable water and wastewater treatment capacity planned to support development in the City. This extension of infrastructure has already been approved and the updates and refinements to the utility infrastructure would not change the conclusions regarding growth inducement in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

Additionally, the modified Phase 2 Project would include a mixed-use Transit Oriented Development area to complement the future planned Valley Link transit station. This could indirectly be growth-inducing by reducing an existing constraint to growth. Commutes to the Bay Area are lengthy and time consuming, which is exacerbated by congested roadways, reducing the desirability of housing in the project region for those employed in the Bay Area. The introduction of a rail commute option has the potential to reduce this transportation constraint to growth. While the Valley Link project itself would more directly contribute to potential growth, the project would contribute to the feasibility of the Valley Link project by supporting it with complementary transit-oriented land uses. The specific connection between the project and the potential for growth from a rail project is attenuated and, to a degree, speculative. However, it bares noting that this relationship exists.

As described in Section 3.5.3, "Offsite Elements," an offsite road improvement considered in this SEIR is the widening and improvement of Paradise Road. Current traffic modelling (described in more detail in Section 4.4, "Traffic and Transportation") indicates that traffic generated by the River Islands Project, and in particular, traffic travelling to and from the Phase 2 area, will eventually increase traffic volumes on Paradise Road triggering the widening of the road. Once leaving the project site and entering unincorporated San Joaquin County, Paradise Road would be improved from a two-lane rural road to a four-lane arterial up to the connection with Golden Valley Parkway (once Golden Valley Parkway is constructed). Between the intersection with Golden Valley Parkway and I-205, six lanes would be needed to accommodate combined traffic volumes from both Paradise Road and Golden Valley Parkway. A portion of this six-lane segment has been studied by others as part of an I-205/Chrisman Road Interchange Project (California Department of Transportation 2012). The total distance of widened/improved roadway would be approximately 2.7 miles. This may be growth inducing because additional roadway capacity would be provided in an area not currently served by this capacity. The project applicant is proposing to size Paradise Road to accommodate additional commute traffic from the project, which is not accommodated by transit. Also, the road is being expanded in an area that is in the floodplain, which is outside the city limits. It is questionable whether 200-year flood protection would even be feasible. In fact, a portion of this area is being considered for expansion of the Paradise Cut bypass (as a regional improvement under consideration by the California Department of Water Resources), which would result in less available land for any development and significantly affects the feasibility of development in this area.

Thus, the modified Phase 2 Project would continue to extend roadways and utility infrastructure to the Phase 2 area as envisioned in the 2003 SEIR and approved by the City. In addition, the modified Phase 2 project would contribute to improved transportation infrastructure that would reduce an existing transportation constraint to growth to the areas served by, or near this infrastructure. In these respects, the modified Phase 2 Project, would continue to be growth inducing, consistent with the general mechanisms and conclusions in the 2003 SEIR. This extension of infrastructure and the modified Phase 2 Project would not change the conclusions regarding growth inducement in the 2003 SEIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

## 6.2.3 Construction-Related Growth

### SUMMARY OF 2003 SEIR ANALYSIS

The 2003 SEIR evaluated whether the River Islands Project would be growth inducing with respect to construction-related growth. The analysis noted that the River Islands Project would involve a substantial construction effort over a 20-year period that would bring up to 300 construction workers to the project site during peak periods. Because construction workers typically do not change where they live when they are assigned to a new construction site, it was not anticipated that there would be any substantial relocation of construction workers to the City of Lathrop associated with the project. In addition, the existing (at the time of the 2003 SEIR) number of construction workers in the City and County would likely be sufficient to meet the demand for construction workers that would be generated by the project. Therefore, it was concluded that no substantial increase in demand for housing or goods and services would be created by the River Islands Project and, thus, no growth inducement associated with these workers would occur.

## ANALYSIS OF MODIFIED PHASE 2 PROJECT

The proposed Phase 2 modifications would result in development of the same footprint over the same construction period (20 years) as evaluated in the 2003 SEIR. Modified Phase 2 construction activities are anticipated to require up to an estimated 224 construction workers during peak construction, which is similar to the estimate for the overall River Islands Project (300 construction workers). As of March 2020, 12,600 residents in San Joaquin County are employed in the construction industry (Employment Development Department 2020). Because the existing number of construction workers in the County would likely be sufficient to meet the demand that would be generated by the modified Phase 2 Project, no substantial increase in demand for housing or goods and services would be created by the modified Phase 2 Project and, thus, no growth inducement associated with these workers would occur.

### 6.2.4 Population Growth

#### SUMMARY OF 2003 SEIR ANALYSIS

The 2003 SEIR evaluated whether the River Islands Project would be growth inducing in terms of population growth. The analysis noted that the River Islands Project would include the development of 11,000 residential units with an estimated population of 31,680. Although the River Islands Project would include the provision of commercial land uses and an office/retail center, onsite services would meet only some of the needs of the project population. The additional population associated with the project would increase demand for goods and services in the City and region, which could potentially result in additional development to satisfy this demand. In this respect, the River Islands Project was concluded to be growth inducing.

#### ANALYSIS OF MODIFIED PHASE 2 PROJECT

The proposed Phase 2 modifications would result in the development of 4,010 additional residential units (which, combined with the approved 11,000 units, would result in a total of 15,010 residential units for the River Islands Project). The estimated increase in Phase 2 population would be 12,910 additional residents compared with the projected 19,268 Phase 2 residents identified in the 2003 SEIR (or a 67 percent increase from the population projection in the 2003 SEIR). The modified Phase 2 Project would also include a mix of land uses, similar to that described in the 2003 SEIR, that would serve some but not all of the Phase 2 population. Consistent with the 2003 SEIR, the additional population associated with the modified Phase 2 Project would increase demand for goods and services in the City and region, which could potentially result in additional development to satisfy this demand. Thus, the modified Phase 2 Project would be growth inducing.

### 6.2.5 Public Service Capacity

#### SUMMARY OF 2003 SEIR ANALYSIS

The 2003 SEIR evaluated whether the River Islands Project would be growth inducing in terms of public service capacity. The analysis noted that schools and fire stations would be developed onsite as part of the River Islands Project. The River Islands Project school system was not expected to serve students from offsite areas. Similarly, fire stations would be constructed to serve the River Islands Project residents and would provide service to offsite areas only when mutual aid agreements with other stations or agencies were exercised. Police, animal control, and other City services would be expanded only as necessary to meet project demand. Therefore, with respect to public services, it was concluded that the River Islands Project would not facilitate additional development because it would not create additional public service capacity in the City.

Since publication of the 2003 SEIR, the operation of schools on the River Islands Project site has been modified in that schools on the project site accept and serve students from outside River Islands. The school system has been

integrated with the Banta School District and accepts students from throughout the district boundary, and the Steam Charter Academy accepts students from the region. However, the acceptance of students from outside the project site is in response to demand. Service to students from inside the River Islands Project site is prioritized, then students from outside the project site are accepted based on availability of space and demand. The service to a limited number of students from outside the project site, which was not considered in the 2003 SEIR, is not sufficient to remove school availability as an obstacle to growth outside the project site.

## **ANALYSIS OF MODIFIED PHASE 2 PROJECT**

The approved Phase 2 Project included 106.4 acres of school. The proposed modifications to the Phase 2 Project would add 2.2 acres of schools, for a total of 108.6 acres of schools in the Phase 2 area. Specifically, four schools are proposed to serve grades K-8 students and one high school is proposed to serve grades 9-12 students. Fire protection services are, and would continue to be, provided by the Lathrop-Manteca Fire District. The approved River Islands Project included one fire station in the Phase 1 area and one in the Phase 2 area. The Phase 1 fire station (Fire Station 35) is completed and is in operation. The modified Phase 2 Project would include an approximately 3.5-acre fire station (Fire Station 36). Police services are, and would continue to be, provided by the Lathrop Police Department. As identified in Section 4.10, "Public Services," these facilities and services are appropriately sized to serve the modified Phase 2 Project. Additionally, the project applicant would continue to work with public service providers to ensure project demands are met, by paying required impact fees, providing dedication of land, and installing regional infrastructure to serve these public use facilities as development proceeds, consistent with project conditions of approval and adopted mitigation measures. Thus, with respect to public services, the modified Phase 2 Project would not facilitate additional development in the City because it would not create additional public service capacity in the City beyond that which is needed to support the project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.

## **6.2.6 Employment Growth**

### **SUMMARY OF 2003 SEIR ANALYSIS**

The 2003 SEIR evaluated whether the River Islands Project would be growth inducing in terms of employment growth. The analysis noted that the River Islands Project, as a whole, would generate a total of 16,751 jobs (including 8,525 jobs during Phase 1 and 8,226 jobs during Phase 2), which would exceed employable residents by approximately 5,000 jobs. Therefore, the River Islands Project could generate additional housing demand in the City and facilitate additional housing development. However, San Joaquin County was (at the time of preparation of the 2003 SEIR) considered jobs-poor and housing-rich, with tens of thousands of County residents commuting to jobs outside the County, and the conditions expected to worsen over the project's 20-year buildout. Given these conditions, jobs generated by the River Islands Project were expected to be filled in large part by the existing resident labor pool in the region. Therefore, the 2003 SEIR concluded that any potential increases in housing demand in the City and the County attributable to jobs generated from the River Islands Project would be minimal, and the project would not be growth inducing in this respect.

### **ANALYSIS OF MODIFIED PHASE 2 PROJECT**

The proposed Phase 2 modifications would generate 7,963 jobs (or 263 fewer jobs than the employment projection in the 2003 SEIR). As discussed in Section 4.3, "Population, Employment, and Housing," the modified Phase 2 Project would have a jobs:housing ratio of approximately 0.74:1, making it housing-rich. The Phase 2 modifications would increase the number of residential units and decrease the square footage of job-generating uses compared to the approved project; therefore, it would alleviate the imbalance of the jobs to housing ratio identified in the 2003 SEIR. Any potential growth inducement related to employment would be less for the modified Phase 2 Project than for the approved project.

## 6.2.7 Summary

Overall, the 2003 SEIR concluded that the River Islands Project would be growth inducing because it would extend roadway and utility infrastructure to an area not currently served by such infrastructure (Stewart Tract) and would extend/improve roadway access between the project site and I-205 via Golden Valley Parkway and a new interchange on I-205, thereby removing obstacles to growth. Increased population associated with the currently approved River Islands Project would increase demand for goods and services, which would foster population and economic growth in the City and nearby communities. Further, implementing the River Islands Project would effectively result in development of a population and employment base that is the size of a large town/small city. Similar to the description in the WLSP EIR, a successful River Islands Project would place pressure on adjacent areas to seek development entitlements. It would be speculative, however, to assume that these areas, designated for retention for agriculture (and floodplain) in the San Joaquin County and City of Tracy General Plans, would in fact develop with urban uses. Much of the growth the project would induce was evaluated and accommodated in the *City of Lathrop General Plan*, WLSP, WLSP EIR, and the *Lathrop Water, Wastewater, and Recycled Water Master Plan*, and previously addressed in the 2003 SEIR.

As described above, the proposed Phase 2 modifications would increase the number dwelling units (by 4,010 units) and therefore increase the density of residential development, accommodate a Valley Link rail station and surrounding Transit Oriented Development, and add a mixed-use town center within the original boundaries of the Phase 2 area. Consistent with the 2003 SEIR, the modified Phase 2 Project would continue to extend roadway and utility infrastructure to the Phase 2 area, as envisioned in the 2003 SEIR and approved by the City. Finally, increased population associated with the modified Phase 2 Project would increase demand for goods and services, which would foster population and economic growth in the City and nearby communities. Therefore, the modified Phase 2 Project would be consistent with the conclusion in the 2003 SEIR that the River Islands Project would continue to be growth inducing. There is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR.



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## 7 SIGNIFICANT AND UNAVOIDABLE IMPACTS

### 7.1 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

The State CEQA Guidelines Section 15126.2(b) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. As documented throughout Chapter 4 (project level impacts) and Chapter 5, "Cumulative Impacts," of this Draft SEIR, after implementation of the recommended mitigation measures, most of the impacts associated with the modified Phase 2 Project would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level.

#### 7.1.1 Air Quality

##### Impact 4.5-f: Increases in Long-Term Regional Emissions

The 2003 SEIR evaluated the generation of long-term regional emissions of criteria air pollutants and ozone precursors and determined that emissions of reactive organic gases (ROG) and oxides of nitrogen (NO<sub>x</sub>) would exceed the thresholds of significance of the San Joaquin Valley Air Pollution Control District (SJVAPCD) that were in effect in 2003. Since certification of the 2003 SEIR, SJVAPCD has issued new guidance and thresholds of significance for determining long-term operational emissions of criteria air pollutants and ozone precursors. The approved Phase 2 Project and modified Phase 2 Project would generate emissions of ROG, NO<sub>x</sub>, carbon monoxide (CO), respirable particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), and fine particulate matter with an aerodynamic diameter of 2.5 or less (PM<sub>2.5</sub>) in exceedance of SJVAPCD's operational thresholds of significance, consistent with the findings of the 2003 SEIR. However, the modified Phase 2 Project would result in greater total emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> as compared to the approved project. Therefore, this impact would be more severe than the impact identified in the 2003 SEIR. This impact would remain potentially significant as identified in the 2003 SEIR.

Implementation of Modified Mitigation Measure 4.5-f would reduce emissions of criteria air pollutants through incorporation of project design features that would reduce on-site and off-site emissions of criteria air pollutants. However, like the 2003 SEIR, implementation of Adopted Mitigation Measure 4.5-f would reduce operational emissions, but not necessarily to a less-than-significant level. Because reducing operational emissions below applicable thresholds cannot be assured, this impact remains **significant and unavoidable**, consistent with the conclusion in the 2003 SEIR.

#### 7.1.2 Noise and Vibration

##### Impact 4.6-c: Increases in Existing Traffic Noise Levels

The 2003 SEIR evaluated the potential for the River Islands Project to cause a substantial permanent traffic noise level increase at existing sensitive land uses in the vicinity. This impact was identified as less than significant in the 2003 SEIR. The proposed Phase 2 modifications would increase the amount and density of residential development and, therefore, would likely increase total vehicle traffic and traffic noise levels. As further buildout of the area within the project vicinity has occurred since the 2003 SEIR, there are new and more noise-sensitive receptors located along roadways affected by project-generated traffic. An updated traffic noise study was prepared to determine current existing traffic noise levels and noise level increases resulting from the modified Phase 2 Project. New traffic data shows greater increases in noise resulting from the modified Phase 2 Project, and due to the introduction of new noise-sensitive receptors along project-affected roadways, there would be a substantial increase in the traffic noise impact identified in the 2003 SEIR. Therefore, the impact would now be significant.

New Mitigation Measure 4.6-c involves other non-acoustical considerations. Roadways and noise barriers would be located within the public right-of-way, necessitating agreements with the City. Noise barriers and sound insulation treatments must be done on private property necessitating agreements with each property owner. However, it is not expected that implementation of the actions included in this mitigation measure will be feasible at all affected receptors or will be able to reduce substantial noise increases to acceptable levels at all noise sensitive areas. Therefore, project traffic noise increases would result in a **significant and unavoidable** impact.

#### **Impact 4.6-d: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels**

The 2003 SEIR evaluated the compatibility of the River Islands Project with the City's "normally acceptable" land use compatibility noise standards. The analysis concluded that the impact was significant, and even with mitigation, exterior noise levels could not be maintained below applicable thresholds in all circumstances. Therefore, the impact was significant and unavoidable. The proposed Phase 2 modifications would not introduce any new categories of land use which were not previously analyzed in the 2003 SEIR. Noise levels in the Phase 2 area have changed since the 2003 SEIR and were reanalyzed based on noise measurement survey and traffic noise modeling data. As the majority of the Phase 2 area is not located near any new and substantial sources of environmental noise, the impact would be similar to that identified in the 2003 SEIR. There would be no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. The impact would remain significant.

As described in the 2003 SEIR, implementation of Modified Mitigation Measure 4.6-d would be effective in reducing impacts associated with interior noise levels to a less-than significant level. However, as exterior noise levels in some locations would still be anticipated to exceed General Plan land use compatibility noise standards, even after implementing Modified Mitigation Measure 4.6-d and New Mitigation Measure 4.6-d(1), this impact would remain **significant and unavoidable**, consistent with the conclusion in the 2003 SEIR.

### **7.1.3 Agricultural Resources**

#### **Impact 4.13-a: Conversion of Important Farmland**

The 2003 SEIR evaluated whether the River Islands Project would result in a conversion of Important Farmland to non-agricultural use. The impact was identified as significant, and because no feasible mitigation could create new Important Farmland to replace farmland that was converted, the impact was significant and unavoidable. Implementation of the River Islands Project would result in the permanent conversion of approximately 3,620 acres of Prime Farmland and Farmland of Statewide Importance. Because the project footprint has not expanded, implementation of the modified Phase 2 Project would not result in the additional conversion of Important Farmland beyond the amount identified and evaluated in the 2003 SEIR. While this SEIR makes a technical correction to the amount of land that would be converted in the Phase 2 area, it does not identify any new areas proposed to be converted; the same land that was identified as being converted in the 2003 SEIR would be converted as a result of the modified Phase 2 Project. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, this impact would remain significant as identified in the 2003 SEIR.

Implementation of Modified Mitigation Measure 4.13-a would reduce overall impacts associated with the conversion of Important Farmland, but not sufficiently to reduce the impact to a less-than-significant level because no new farmland would be made available, and the productivity of existing farmland would not be improved. After mitigation, this impact would remain **significant and unavoidable**, consistent with the conclusion in the 2003 SEIR.

#### **Impact 4.13-b: Potential Williamson Act Contract Cancellations (only if Paradise Road Widening triggers a cancellation)**

The 2003 SEIR evaluated whether the River Islands Project would cause a conflict with a Williamson Act contract. The analysis noted that implementation of the River Islands Project would result in the cancellation of Williamson Act contracts for at least 415 acres and no more than 1,770 acres in the Phase 1 area. This impact was concluded to be significant and unavoidable despite mitigation.

Implementation of the modified Phase 2 Project would not conflict with land under a Williamson Act contract or result in the cancellation of Williamson Act contracts because there are no longer any Williamson Act contracts in effect in the Phase 2 area (since certification of the 2003 SEIR, the Williamson Act contracts in the Phase 2 area were not renewed, and as anticipated, the contracts have since expired). Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the 2003 SEIR. Therefore, there would be no impact for the modified Phase 2 Project.

Unlike the modified Phase 2 Project, the expansion of Paradise Road could have the potential to result in the cancellation of Williamson Act contracts (Impact 4.13-b). Many of the parcels adjacent to the road are under Williamson Act Contracts (San Joaquin County 2020). Although the Phase 2 area does not contain lands in an FSZ, one parcel immediately adjacent to the existing road is located in a Farmland Security Zone (FSZ) (San Joaquin County 2020). FSZs are similar to Williamson Act contracts, but extend the contract time period from 10 to 20 years. However, the conditions of Williamson Act Contracts and FSZs may allow for agricultural lands under the contract to be transferred to public agencies for infrastructure projects. Also, the current County right-of-way for Paradise Road may extend beyond the existing roadway onto a portion of the adjacent agricultural lands, permitting road improvement activities on these lands. Therefore, further site-specific research will be required once a road design is developed to confirm whether or not any Williamson Act or FSZ contracts will need to be cancelled.

Per Modified Mitigation Measure 4.13-b, if the entity implementing the Paradise Road widening utilizes this SEIR for CEQA compliance for the project, fees to the San Joaquin Council of Governments (SJCOG) would be paid on a per-acre basis for lost agricultural land and would be used by SJCOG, in part, to purchase agricultural conservation easements. Despite this mitigation, this impact would remain significant and unavoidable because agricultural lands currently under a Williamson Act contract would likely be converted to a non-agricultural use before the contracts expire, new farmland would not be made available, and the productivity of existing farmland would not be improved. After mitigation, this impact would remain **significant and unavoidable**, consistent with the conclusion in the 2003 SEIR.

## 7.1.4 Greenhouse Gas Emissions and Climate Change

### Impact 4.19-a: Project-Generated GHG Emissions

Since certification of the 2003 SEIR, increased awareness of greenhouse gas (GHG) emissions and their role in global climate change has resulted in promulgation of laws and regulations designed to curb emissions and reduce the inherently cumulative effect of GHG emissions. At the time the 2003 SEIR was prepared and certified, the State CEQA Guidelines did not identify GHG emissions and climate change as a resource area in Appendix G. Thus, the River Islands Project did not provide an environmental or regulatory setting to characterize climate change impacts, nor did the 2003 SEIR evaluate the River Islands Project's contribution of GHG emissions to anthropogenic climate change.

GHG emissions are calculated and evaluated in this SEIR. It is estimated that construction of the approved River Islands Project would generate a total of 14,882 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e), or 744 MTCO<sub>2</sub>e/year, when amortized over a 20-year period. Construction of the modified Phase 2 Project would generate 14,549 MTCO<sub>2</sub>e, or 724 MTCO<sub>2</sub>e/year. Operational emissions associated with the approved Phase 2 Project and the modified Phase 2 Project would result in GHG emissions associated with transportation, electricity and natural gas combustion, water consumption, and wastewater and solid waste generation. Operation of the approved Phase 2 Project would generate approximately 10.67 MTCO<sub>2</sub>e/year per service population (SP) in 2040. The modified Phase 2 Project would generate approximately 7.73 MTCO<sub>2</sub>e/year/SP in 2040. This level of emissions is greater than 2.12 MTCO<sub>2</sub>e/year/SP; however, the efficiency metric under the modified Phase 2 Project would be less than what would have occurred under the approved Phase 2 Project. Nonetheless, because the modified Phase 2 Project would generate GHG emissions in exceedance of the 2.12 MTCO<sub>2</sub>e/year/SP efficiency metric developed for the project as a significance threshold, this impact would be potentially significant. This impact would, however, not be more severe, and in fact would be less than would have occurred with the approved Phase 2 Project.

Implementation of New Mitigation Measures 4.19-a(1) and 4.19-a(2) would help ensure that the modified Phase 2 Project would reach the 2040 2.12 MTCO<sub>2</sub>e/year/SP target through the application of all feasible, on-site GHG reduction measures and purchase of carbon offsets, which would demonstrate consistency with the state's long-term climate change goals. If these measures are feasible, the modified Phase 2 Project would not conflict with the California Air Resources Board's 2017 Scoping Plan or any established statewide GHG reduction targets (i.e., Executive Order S-3-05). However, it cannot be assured, at this time, that all mitigation is feasible. For instance, the cost or availability of offsets that meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional is unknown. Thus, the modified Phase 2 Project's contribution to climate change, while it may be reduced to a less-than-significant level, is considered **significant and unavoidable** due to these uncertainties.

## 7.1.5 Cumulative Impacts

### Noise (Increases in Existing Traffic Noise Levels)

Traffic noise increases under future cumulative scenarios were analyzed under Impact 4.6-c. The analysis is based on cumulative traffic generation; therefore, the results inherently reflect the results of a cumulative impact. Significant noise increases are expected along nearly all of the roadway segments analyzed in this assessment. As seen in Table 4.6-14 in Section 4.6, "Noise and Vibration," traffic noise increases resulting from the project alone under the Existing Plus Proposed Project scenario would constitute a substantial portion of the overall future cumulative noise increase along most roadway segments. Therefore, the modified Phase 2 Project would make a substantial contribution to a significant cumulative traffic noise impact. As described in New Mitigation Measure 4.6-c, implementation of traffic noise mitigation policies would not be feasible or sufficient to reduce project-generated traffic noise to a less-than-significant level. Therefore, the modified Phase 2 Project would make a substantial contribution to a cumulative impact related to traffic noise increases that is **significant and unavoidable**.

### Agricultural Resources (Conversion of Important Farmland)

The loss of an estimated 3,620 acres of Prime Farmland and Farmland of Statewide Importance on the River Islands Project site would be a significant cumulative impact when considered with past farmland conversions and planned future development proposed in the City of Lathrop, surrounding cities, and the County as a whole. As required by Modified Mitigation Measure 4.13-a, the project applicant would participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) by contributing fees, on a per-acre basis, for agricultural lands that are developed. The San Joaquin Council of Government (SJCOG) would use these fees, in part, to purchase conservation easements on agricultural lands, providing greater protection to these farmlands in the County. However, these measures cannot fully mitigate the project's cumulative contribution to the loss of agricultural land in San Joaquin County. As a result, the project's contribution to cumulative impacts would be cumulatively considerable. Therefore, cumulative impacts related to agricultural resources would remain **significant and unavoidable** as identified in the 2003 SEIR.

### Greenhouse Gas Emissions and Climate Change (Project-Generated GHG Emissions)

GHG emissions generated by project construction and operation, discussed under Impact 4.19-a of this SEIR, are inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions. The modified Phase 2 Project would generate GHG emissions greater than 2.12 MTCO<sub>2</sub>e/year/SP, which was used a threshold for determining significance. As such, mitigation was recommended. Through the application of New Mitigation Measures 4.19-a(1) and 4.19-a(2), the modified Phase 2 Project would reduce its emissions to the 2.12 MTCO<sub>2</sub>e/year/SP threshold of significance but there is uncertainty regarding the feasibility of these measures; therefore, the project **would result in a considerable contribution** to a significant cumulative GHG impact.

## 7.2 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the project. Specifically, the State CEQA Guidelines Section 15126.2(c) states:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The modified Phase 2 Project would result in the irreversible and irretrievable commitment of energy and material resources during construction and operation, including the following:

- ▶ construction materials, including such resources as soil, rocks, wood, concrete, glass, roof shingles, and steel;
- ▶ land area committed to new project facilities;
- ▶ water supply for project construction and operation; and
- ▶ energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for project construction and operation.

The use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs within the region. Mitigation measures identified in this SEIR to reduce greenhouse gas (GHG) emissions would also reduce petroleum consumed during construction. As discussed in Section 4.18, "Energy," construction activities would not result in inefficient use of energy or natural resources. Also, mitigation measures identified in this SEIR to reduce operations-related GHG emissions require efficient use of energy during project construction and operation, including requirements for providing onsite renewable energy generation (during operation) (see New Mitigation Measures 4.19-a[1] and 4.19-a[2]). Therefore, long-term project operation would not result in substantial long-term consumption of energy and natural resources. Irreversible changes associated with accidental spills of hazardous materials near resources (such as waterways) are also addressed in the SEIR. As discussed in Section 4.9, "Hazardous Materials and Public Health," all construction and operational activities would be subject to local, state, and federal regulations concerning the use, transportation, storage, and disposal of hazardous materials. Compliance with all local, state, and federal regulations related to the transport, use, disposal, and accidental release of hazardous materials during construction and operation would reduce the risk of significant hazards to the public and protected resources. Therefore, accidental spills during construction would not result in irreversible changes to natural resources.

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## 8 ALTERNATIVES ANALYSIS

### 8.1 INTRODUCTION

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe "... a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "...shall also identify an environmentally superior alternative among the other alternatives." (CCR Section 15126[e][2]).

In defining "feasibility" (e.g., "... feasibly attain most of the basic objectives of the project ..."), CCR Section 15126.6(f) (1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In identifying the alternatives that should be evaluated in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the City of Lathrop City Council. (See PRC Sections 21081.5, 21081[a] [3].)



## 8.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

### 8.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the project (CCR Section 15126.6[a]). Chapter 3, "Description of the Proposed Project," articulated the project objectives, including the overall objective of the River Islands Project to orderly and systematically develop an integrated, mixed-use community in the City of Lathrop generally consistent with goals and policies of the City's adopted General Plan and the West Lathrop Specific Plan (WLSP). The following is a list of objectives for the modified Phase 2 Project, which borrow from and update the objectives originally identified in the 2003 SEIR (repeated from Chapter 3, "Description of the Proposed Project"):

- ▶ Provide to Lathrop (and the surrounding region) long-term community benefits, including generation of substantial permanent employment opportunities.
- ▶ Reinforce and enhance the City's positive image.
- ▶ Contribute a new variety of mixed-use/commercial land uses that could become a citywide and regional focal point.
- ▶ Continue to create a community that is consistent with many of the original goals of the Lathrop General Plan and WLSP including employment generation.
- ▶ Develop a well-integrated and harmonious pattern of resident-oriented and visitor-oriented land uses in West Lathrop that provides local jobs, homes, and revenue-generating uses that complement other Lathrop development.
- ▶ Arrange phases of development to allow ongoing agricultural operations in the plan area to continue as long as feasible while allowing initial phases to act as catalysts for subsequent development.
- ▶ Incorporate water in its many forms throughout the project area to reinforce the area's Delta setting.
- ▶ Phase the provision of habitat preservation areas with overall development phases.
- ▶ Provide a wide range of housing types that could accommodate most income levels.
- ▶ Provide a variety of recreational opportunities focused on outdoor uses.
- ▶ Provide a high-density Transit Oriented Development in the vicinity of the planned Valley Link commuter rail station on the project site.

### 8.2.2 Environmental Impacts of the Modified Phase 2 Project

Sections 4.2 through 4.20 of this Draft SEIR address the environmental impacts of implementation of the modified Phase 2 Project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant, and potentially significant, adverse impacts of the project, as identified in Chapter 4 of this Draft SEIR and summarized below. If an environmental issue area analyzed in this Draft SEIR is not addressed below, it is because no significant impacts were identified for that issue area. In summary, the significant impacts of the project are:

- ▶ **Traffic and Transportation:** Construction of the modified Phase 2 Project could result in temporary roadway, bikeway, and sidewalk closures; degraded roadway pavement conditions; and increased potential for conflicts between construction vehicles and bicyclists and pedestrians. After implementation of mitigation measures, these impacts would be **less than significant**.
- ▶ **Air Quality:** Construction of the modified Phase 2 Project would exceed the San Joaquin Valley Air Pollution Control District's (SJVAPCD) annual mass emissions threshold for PM<sub>10</sub> in some early construction years, and under a worst-case scenario, could generate emissions in exceedance of SJVAPCD's daily mass emissions

screening criteria, which could result in an exceedance of an ambient air quality standard. Implementation of the project could expose sensitive receptors to substantial diesel PM emissions from diesel-fueled delivery trucks associated with development of commercial- and industrial-related land uses and generate emissions of criteria air pollutants (reactive organic gases [ROG], oxides of nitrogen [NO<sub>x</sub>], carbon monoxide [CO], respirable particulate matter with an aerodynamic diameter of 10 microns or less [PM<sub>10</sub>], and fine particulate matter with an aerodynamic diameter of 2.5 or less [PM<sub>2.5</sub>]) in exceedance of SJVAPCD's operational thresholds of significance. While impacts to air quality from construction activities and from the exposure of sensitive receptors to substantial diesel PM emissions would be reduced to a less-than-significant level after mitigation measures, emissions of criteria air pollutants would remain **significant and unavoidable** as identified in the 2003 SEIR.

- ▶ **Noise and Vibration:** The proposed Phase 2 modifications would increase the amount and density of residential development and, therefore, would increase traffic noise levels and exceed the significance thresholds along multiple roadways. Despite mitigation, this impact would be significant and unavoidable. Additionally, the future Valley Link and Union Pacific Railroad (UPRR) operations would have the potential to result in noise levels that exceed land use compatibility standards for the proposed uses and could result in interior peak hour noise levels to exceed thresholds. Mitigation would reduce impacts associated with interior noise levels; however, exterior noise levels in some locations would still be anticipated to exceed General Plan land use compatibility noise standards and, thus, this impact would be significant and unavoidable. Overall, the modified Phase 2 Project would result in a **significant and unavoidable** impact related to noise.
- ▶ **Geology, Soils, and Mineral Resources:** Implementation of the modified Phase 2 Project would expose people or structures to potential substantial adverse impacts, including the risk of loss, injury, or death, through seismic ground shaking, liquefaction, the shrinking and swelling of soils, and corrosive soils. Mitigation measures would reduce these impacts to **less-than-significant** levels.
- ▶ **Hydrology and Water Quality:** Construction of the modified Phase 2 Project could result in significant impacts to water quality. Water pumped and discharged from the River Islands Project area could be of poorer quality than the agricultural return flow due to fuels and equipment lubricants; earth-moving activities in or adjacent to water bodies and construction of in-water project features such as bridges and docks would impact hydrology and water quality due to sedimentation or pollutant discharge; excavation activities could intersect shallow groundwater and result in sediments or contaminants entering the groundwater. Mitigation measures would reduce these impacts to **less-than-significant** levels.
- ▶ **Hazardous Materials and Public Health:** The modified Phase 2 Project involves development of land previously used for agricultural and farming activities; it is possible that soil and/or groundwater contamination could be present on the site. Construction traffic could obstruct emergency vehicles attempting to access the site. These impacts would be significant. After mitigation impacts related to hazardous materials and public health would be **less than significant**.
- ▶ **Public Services:** Ongoing construction activities could necessitate temporary lane closures, increased truck traffic, and other roadway effects that could slow or stop emergency vehicles, adversely affecting emergency response times; this would result in a significant impact. Implementation of the modified Phase 2 Project would result in an increased demand for fire and police protection facilities and services, require adequate fire flow needed for emergency fire suppression, increase the demand for animal control facilities and services, and increase demand for elementary and high schools. These impacts would be significant. After mitigation, public services impacts would be **less than significant**.
- ▶ **Public Utilities:** Implementation of the modified Phase 2 Project would result in an overall increase in the demand for water, would require the expansion of wastewater treatment facilities, and would increase project-generated recycled water such that the project site would not have sufficient area to dispose of additional recycled water. Mitigation measures would reduce these impacts to a **less-than-significant** level.
- ▶ **Agricultural Resources:** Implementation of the modified Phase 2 Project would require conversion of nearly 2,065 acres of Important Farmland (Prime Farmland, Farmland of Statewide or Local Importance, or Unique Farmland) to nonagricultural use. This impact would be significant. Mitigation measures would require compensatory

farmland to be preserved. However, the mitigation measure would not replace the farmland that is converted with new farmland in another location; therefore, this impact would remain significant and unavoidable. Overall, the modified Phase 2 Project would result in a **significant and unavoidable** impact related to agricultural resources as identified in the 2003 SEIR.

- ▶ **Terrestrial Biology:** Construction of the modified Phase 2 Project would require the conversion of over two thousand acres of agricultural and ruderal areas which would have potentially adverse effects on terrestrial biology. This would include potentially significant impacts related to the loss of aquatic and riparian habitats where special-status species may occur; the loss of active nests of northern harrier, short-eared owl, and yellow-headed blackbird due to direct or indirect disturbance; the loss of loggerhead shrike nests; the potential for loss of Cooper's hawk and white-tailed kite nests; and impacts from offsite facilities proposed for the Phase 2 modifications. Significant impacts would occur related to the loss of elderberry shrub habitat for valley elderberry longhorn beetles; potential loss of habitat and potential loss of individual giant garter snakes; loss of western pond turtles and habitat; loss of foraging habitats and active Swainson's hawk nests; loss of foraging habitat and the potential loss of active burrows for burrowing owls; the loss of common tree-nesting raptor nests; loss of riparian brush rabbit habitat and the potential loss of individuals; and the dredge or fill of waters of the United States, and temporary removal of approximately 40 acres of riparian scrub within Paradise Cut. After mitigation, terrestrial biological impacts would be **less than significant**.
- ▶ **Fisheries:** Construction of the modified Phase 2 Project would have potentially adverse effects on fisheries. Construction of bridges on the San Joaquin River could result in stream bed and riverbank disturbance, sediment input, and contaminant input, all of which could substantially adversely affect fish species in the immediate area. The construction of the Golden Valley Parkway Bridge within Paradise Cut would result in sediment and contaminant runoff entering the Paradise Cut canal. After mitigation impacts to fisheries would be **less than significant**.
- ▶ **Cultural and Tribal Cultural Resources:** Because the Phase 2 area could contain unrecorded cultural sites, implementation of the modified Phase 2 Project could result in a significant impact related to cultural resources if such a resource exists and damage to or destruction of the resource occurred. After implementation of mitigation measures, these impacts would be **less than significant**.
- ▶ **Aesthetics:** Implementation of the modified Phase 2 Project could expose adjacent residential areas to intrusive levels of light and glare due to proposed openings in walls adjacent to arterial roads, resulting in a significant impact. After mitigation, aesthetics impacts would be **less than significant**.
- ▶ **Greenhouse Gas Emissions and Climate Change:** Implementation of the modified Phase 2 Project would emit emissions greater than the target of 2.12 metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e) per year per service population (MTCO<sub>2</sub>e/year/SP) in 2040. Mitigation measures would help ensure that the modified Phase 2 Project would reach the 2040 target; however, it cannot be assured, at this time, that all mitigation is feasible. For instance, the cost or availability of offsets that meet the criteria of being real, quantifiable, permanent, verifiable, enforceable, and additional is unknown. Thus, the modified Phase 2 Project's contribution to climate change, while it may be reduced to a less-than-significant level, is considered **significant and unavoidable**.
- ▶ **Wildfire:** Construction activities for the modified Phase 2 Project could interfere with or slow down emergency vehicle access and services during wildfires; this impact would be potentially significant. After mitigation, impacts related to obstruction of roadways during construction would be **less than significant**.

## 8.3 ALTERNATIVE ANALYSIS UNDER THE 2003 SEIR

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165-1167.)

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-maker(s). (See PRC Section 21081[a][3].) At the time of action on the project, the decision-maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision-maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decision-maker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 998.) The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

As discussed in Chapter 3, "Description of the Proposed Project," the certified 2003 SEIR for the River Islands at Lathrop Project (State Clearinghouse No. 1993112027) evaluated Phase 2 of the River Islands Project. The 2003 SEIR included an analysis of project alternatives that could feasibly attain most of the basic objectives of the project while reducing or eliminating any significant environmental impacts of the proposed project. The analysis of the alternatives from the 2003 SEIR is summarized below. As explained in Section 1.9, "Incorporation by Reference," in accordance with Section 15150 of the State CEQA Guidelines, this Draft SEIR incorporates by reference the 2003 SEIR and the six adopted addenda. Therefore, the full alternatives analysis from the 2003 SEIR is considered to be part of the text of this SEIR. In addition, as indicated in Section 15162 of the State CEQA Guidelines, an SEIR is considered a revision to the original certified EIR that the SEIR is "subsequent" to. The 2003 SEIR, and the six adopted addenda, are all part of the overall record of proceedings for the project, as evidenced by the same State Clearinghouse Number continuing to be used for each CEQA document (State Clearinghouse No. 1993112027). This SEIR is the next document in that overall CEQA record for the project. Therefore, the past CEQA documents are part of the overall CEQA analysis for the project, and the analysis of alternatives from the 2003 SEIR is part of the "range of reasonable alternatives" to be considered per State CEQA Guidelines Section 15126.6(a).

### 8.3.1 2003 SEIR - Alternatives Considered but not Evaluated Further

The following provides a summary of 2003 SEIR Section 8.2, "Alternatives Considered and Removed from Further Consideration."

- ▶ **Offsite Alternative.** To satisfy the River Islands at Lathrop Project objectives a large undeveloped site in the City of Lathrop would be needed. The project site represents the only available major undeveloped land area in Lathrop that is capable of providing the substantial job opportunities, mix of uses, and water-oriented development that would attain the basic project objectives. In addition, there are no known sites of substantial size in the region upon which development would not result in similar impacts (traffic, air quality, noise, agriculture) as the project proposed in the 2003 SEIR. Given the above, there are no feasible sites that can meet the River Islands Project objectives and the WLSP objectives and there are no known alternative sites that would reduce the significant impacts of the project. For this reason, an offsite alternative was not evaluated further in the 2003 SEIR.
- ▶ **Alternatives Evaluated in the WLSP EIR.** Two on-site alternatives (other than the "No Project" alternative) were evaluated in 1995 WLSP EIR. The first was a "Reducing the Area of Urban Expansion" Alternative where a 26 percent reduction of population growth would result from the elimination of 2,500 housing units and approximately 50 percent of the recreation-oriented commercial and open space uses in the WLSP area. The other alternative, "Enlarging the Area of Urban Expansion" Alternative, would expand the development area of the WLSP, but the land uses designated for the project site would be largely the same. The River Islands Project proposed in the 2003 SEIR differed in several respects from the theme park centered WLSP project and these two

alternatives. Consequently, the use of these alternatives in the 2003 SEIR would not allow a true comparative evaluation of the merits of each alternative.

- ▶ **Other Alternatives.** Other alternatives considered but removed from further consideration in the 2003 SEIR focused on alterations to specific project features:
  - A modified flood control approach consisting of leaving Paradise Cut in its current configuration was considered. This approach, which would minimize earth-moving activities and not lower the bench near Paradise Weir, would avoid disturbance of riparian brush rabbit habitat, but it was rejected from further consideration because it would allow post-project increases in downstream flood elevations on the San Joaquin River.
  - Alternative utility routes were examined but were discounted either because the source line did not have capacity sufficient to support the proposed project or because the routes would increase environmental effects.
  - A no-habitat-restoration option was considered to minimize potential conflicts between riparian vegetation and high water flows during flood events; however, it was rejected because habitat restoration would be necessary to minimize and compensate for impacts on biological resources.
  - Lake management regimes that would not require pumping of water between the central lake and the surrounding waterways were evaluated to attempt to minimize potential fisheries, hydrology, and water quality impacts; however, implementing any of these management practices would result in unacceptable fluctuations in lake levels and would limit the capacity to maintain desired water quality in the lake.

### 8.3.2 2003 SEIR - Description and Analysis of Alternatives

In the 2003 SEIR, the following alternatives for the River Islands Project were fully described and a qualitative analysis was provided for each environmental issue area evaluated in the 2003 SEIR. The analysis was comparative, identifying whether the alternative would result in a "greater," "less," or "similar" impact to the proposed River Islands Project. The following is a summary of 2003 SEIR Section 8.3, "Description and Analysis of Alternatives."

#### NO PROJECT (NO DEVELOPMENT) ALTERNATIVE

As evaluated in the 2003 SEIR, no actions would have been taken at the project site under this alternative. No development of the project site would occur and existing agricultural use of the site would continue. However, the site had been approved for development in the City of Lathrop General Plan and the WLSP; therefore, it was expected that new development applications would be submitted for the property in the future. The project site is located in an area of the City covered by the WLSP, and, at the time, entitlements were actively being sought for development in the vicinity of the project site and infrastructure planning was also occurring for the area. The No Project (No Development) Alternative would not meet any of the project objectives. This alternative also would not be consistent with the intent of the WLSP, which calls for development of the project site with theme park-related uses and commercial and residential uses, and would not be consistent with the utility plans for the area, which assume buildout of the project site as described in the WLSP Master Plan.

The No Project (No Development) Alternative would have resulted in greater impacts than the River Islands at Lathrop Project in four issue areas (geology, soils, and mineral resources; hydrology and water quality; recreation; fisheries), less impacts in ten (population, employment, and housing; traffic; air quality; noise; hazards and hazardous materials; public services; public utilities; agricultural resources; terrestrial biology; cultural resources; aesthetic resources), and similar impacts in one (land use). Significant unavoidable impacts related to traffic, air quality, noise, and agricultural resources associated with the River Islands at Lathrop Project would not have occurred under this alternative.

## NO PROJECT (WLSP) ALTERNATIVE

As evaluated in the 2003 SEIR, under the No Project (WLSP) Alternative, the project site would have been developed in accordance with the adopted WLSP; no changes to the Lathrop General Plan would have been required. The WLSP envisioned an entertainment-oriented development at the project site that includes four theme parks, 5,000 hotel rooms, a regional retail mall, and other associated entertainment-oriented uses, and up to 8,500 housing units. Other components included two fire stations, a police station as well as a security facility in the theme park complex, and four joint use elementary schools/parks. Development would have occurred in four phases over a 30-year period. The theme park development was found to no longer be economically feasible at the project site, and Measure D, approved by the City in 2000, eliminated the WLSP's "theme park first" requirement. However, the theme park development was the designated development scenario prescribed by the City land use plan at the time.

The No Project (WLSP) Alternative would have resulted in greater impacts than the River Islands at Lathrop Project in eight issue areas (aesthetic resources; fisheries; terrestrial biology; public utilities; public services; hydrology and water quality; air quality; traffic), less impacts in four (cultural resources; recreation; population, employment, and housing; land use), and similar impacts in four (agricultural resources; hazards and hazardous materials; geology, soils, and mineral resources; noise). Significant unavoidable impacts related to traffic, air quality, noise, and agricultural resources associated with the River Islands at Lathrop Project would have also occurred under this alternative. An additional significant impact resulting from domestic water demand exceeding supply might have also occurred under this alternative.

## ENVIRONMENTAL CONSTRAINTS (50% DEVELOPMENT) ALTERNATIVE

As evaluated in the 2003 SEIR, this alternative assumes that 50 percent of the facilities described as part of the River Islands at Lathrop Project would be constructed and substantially less land would be converted to urban uses. The Environmental Constraints (50% Development) Alternative was included to allow comparisons between the River Islands at Lathrop Project and a mid-range development scenario. A mid-range alternative was selected to determine whether a substantial reduction in the size of project development would avoid some of the significant and unavoidable impacts that had been identified for the River Islands at Lathrop Project. Given the large scale of the River Islands at Lathrop Project and the extensive infrastructure needed to support the project (levees, wet utilities, roads, bridges) it is unknown whether this substantially reduced development scenario would be financially feasible or could be effectively integrated into the City's planning goals. Further, it is uncertain if this alternative could attain most of the basic project objectives, including providing substantial employment opportunities and a harmonious mix of land uses. However, this alternative was evaluated to allow the impact comparisons described above.

Under the Environmental Constraints (50% Development) Alternative, all development in the RID Area would have been reduced by 50 percent (residential, retail/commercial, Employment Center, central lake, backbays, schools, parks, etc.). The two proposed golf courses would have been reduced to one. All proposed habitat restoration/enhancement would also have been cut in half. Reductions in dwelling unit numbers would have been spread evenly among all housing types (single-family, multifamily, active adult, homes on high-ground corridors). The approximately 1,962 acres of remaining land in the RID Area that would not have been developed would be retained in agricultural production.

The Environmental Constraints (50% Development) Alternative would have resulted in greater impacts than the River Islands at Lathrop Project in one issue areas (recreation), less impacts in eleven (aesthetic resources; cultural resources; terrestrial biology; agricultural resources; public utilities; public services; hazards and hazardous materials; geology, soils, and mineral resources; noise; air quality; traffic; population, employment, and housing), and similar impacts in three (fisheries; hydrology and water quality; land use). Significant unavoidable impacts related to traffic, air quality, noise, and agricultural resources associated with the River Islands at Lathrop Project would have also occurred under this alternative. Although this alternative included substantially less development than the River Islands at Lathrop Project, these significant unavoidable impacts would still have occurred.

## 8.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS IN THIS SEIR

As stated above, the analysis of alternatives from the 2003 SEIR is part of the “range of reasonable alternatives” to be considered per State CEQA Guidelines Section 15126.6(a). In addition to the alternatives evaluated under the 2003 SEIR, the following alternatives are evaluated in this Draft SEIR:

- ▶ **No Project—No Development Alternative**, which assumes no new development occurs on the project site beyond the Phase 1 Project, which is in progress; and
- ▶ **No Project—WLSP Development Alternative**, which assumes that the proposed Phase 2 modifications are not approved and that development occurs consistent with the approved WSLP as described in the 2003 SEIR (as amended), with up to 11,000 residences at buildout.

Further details on these alternatives, and an evaluation of environmental effects relative to the project, are provided below. The analysis of these alternatives adds to the overall range of alternatives considered for the River Islands Project as well as satisfying the State CEQA Guidelines requirements that the “no project” alternative be considered (CCR Section 15126.6[e]). The modified Phase 2 Project itself is an alternative approach to implementing the River Islands Project and the analysis of environmental effects provided in Chapter 4, “Affected Environment, Environmental Consequences, and Mitigation Measures,” provides a detailed comparison of impacts under this “alternative” vs. the project approved in 2003 (including the six addenda). Therefore, the analysis of the modified Phase 2 Project provided in Chapter 4 of this SEIR can be considered part of the overall evaluation of alternatives for the River Islands Project.

### 8.4.1 No Project—No Development Alternative

A No Project—No Development Alternative for the current modified Phase 2 Project, based on existing conditions, is evaluated here. The 2003 SEIR evaluated a No Project (No Development) Alternative. However, the analysis in the 2003 SEIR considered both the Phase 1 and Phase 2 portions of the River Islands Project on Stewart Tract and was based on existing conditions on Stewart Tract at that time. Much of the Phase 1 portion of the Project has now been developed, and only the Phase 2 portion of the project area is evaluated in this SEIR. In addition, existing conditions in the Phase 2 area have changed since the 2003 SEIR; for example, new levees have been constructed in the Phase 2 Area providing flood protection up to a 1-in-200 Annual Exceedance Probability (AEP) event (i.e., the levees can withstand water levels with a 0.5 percent chance of being exceeded in any particular year).

Under the No Project—No Development Alternative evaluated here, no actions would be taken by the City or applicant and the project site would remain unchanged from current conditions; development of the Phase 1 area would continue as planned, but the Phase 2 area would not be developed. Although the City has approved development of the Phase 2 Project, as described in the 2003 SEIR and subsequent addenda, this analysis uses existing conditions as the “no project” scenario to allow consideration of a full range of alternatives. Under this alternative, no development of the Phase 2 area would occur and existing uses on the site would continue. Although this alternative is evaluated herein, it is an unlikely long-term alternative for the project site. This is because the WLSP and the *City of Lathrop General Plan* identify the Phase 2 area as an area that would be ultimately developed with a mix of uses, including Neighborhood Commercial, Regional Commercial, Resource Conservation, Residential High Density, Residential Low Density, and Residential Medium Density. Further, the City approved development of the Phase 2 area as part of the approval of the overall River Islands Project in 2003.

Given the WLSP and the *City of Lathrop General Plan* designations for mixed use development, the existing approval for such development, and the large interest in continued development of the River Islands Project, future development of the project site is extremely likely. The regional population will continue to increase as a result of ongoing development, and the associated growth in residential demand will increase the development pressure on the project site. Therefore, it is unreasonable to assume that the site would remain in its current condition on a long-term basis.

Consistent with CEQA, the No Project—No Development Alternative is nevertheless evaluated in this Draft SEIR. This alternative would not meet any of the project objectives, nor would it be consistent with the goals and objectives of the WLSP and the *City of Lathrop General Plan*, which each call for development of the project site.

Although it is acknowledged that with the No Project—No Development Alternative, there would be no discretionary action by the City, and thus no impact, for purposes of comparison with the other action alternatives, conclusions for each resource area are characterized as “impacts” that are greater, similar, or less, to describe conditions that are worse than, similar to, or better than those of the modified Phase 2 Project.

## LAND USE

This alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the WLSP, the *City of Lathrop General Plan*, or City of Lathrop Zoning Ordinance). Compatibility with adjacent land uses would not change and this alternative would not alter the present or planned land use of an area. However, no significant land use impacts were identified for the modified Phase 2 Project (nor for the project evaluated in the 2003 SEIR); therefore, this alternative would not reduce or avoid any significant land use impacts associated with the project. (*Similar*)

## POPULATION, EMPLOYMENT, AND HOUSING

The No Project—No Development Alternative would not generate any new residents, jobs, or homes on the project site. Hence, there would be no potential for unplanned population growth, increased demand for new housing, or displacement of existing housing. In comparison, the modified Phase 2 Project would result in limited population growth associated with construction activities; permanent population growth from new housing; increased housing demand due to project related jobs exceeding anticipated employable residents; and displacement of three farm-related residences. No significant impacts related to population, employment, and housing were identified for the modified Phase 2 Project (nor for the project evaluated in the 2003 SEIR). Thus, this alternative would not reduce or avoid any significant land use impacts associated with the project. However, impacts are still considered less because displacement of existing housing would not occur under this alternative. (*Less*)

## TRAFFIC AND TRANSPORTATION

This alternative would not result in the development of residences, schools, employment, or retail uses that would generate vehicle travel. Vehicle trips and vehicle miles traveled would not increase above existing levels and impacts under this alternative would be less than those that would occur with the project. (*Less*)

## AIR QUALITY

The No Project—No Development Alternative would not include any new development, and thus would not generate new construction or operations-related air emissions. By comparison, the modified Phase 2 Project would include new construction and operational activities resulting in significant and potentially significant impacts before mitigation related to construction emissions, increases in mobile source toxic air contaminants (TACs), and long-term regional emissions. After mitigation, residual significant air quality impacts would remain related to mobile source TAC emissions and long-term regional emissions. Implementation of the No Project—No Development Alternative would not result in these significant unavoidable air quality impacts; therefore, this alternative would result in less air quality impacts than the modified Phase 2 Project. (*Less*)



## NOISE AND VIBRATION

Under the No Project—No Development Alternative, no new construction activities would occur, no new noise generating land uses or sensitive noise receptors would be developed, and no additional traffic would be generated. Therefore, there would be no increase in potential noise conflicts under this alternative. By comparison, the modified Phase 2 Project would include temporary noise generated by construction activities; development of various noise generating land uses; small, increases in traffic noise; and development of sensitive receptors that would be exposed to existing or project generated noise levels exceeding City standards. Several of these actions would result in significant noise impacts before mitigation. After mitigation, residual significant noise impacts would remain related to traffic noise levels as well as incompatibility between some land uses and projected on-site noise levels. Implementation of the No Project—No Development Alternative would not result in this significant unavoidable noise impact; therefore, this alternative would result in less noise impacts than the modified Phase 2 Project. (*Less*)

## GEOLOGY, SOILS, AND MINERAL RESOURCES

The No Project—No Development Alternative would not include any new construction activities and existing buildings, levees, and other facilities would remain in their current state on the project site. Therefore, there would be no construction-related erosion potential and no potential increase in risk of exposure to injury or property damage due to a seismic event. By comparison, the modified Phase 2 Project would result in significant impacts related to seismic hazards, such as ground shaking, liquefaction, and lateral spreading; shrink-swell soils; and corrosive soils. However, all impacts would be reduced to less-than-significant levels after mitigation. Overall, the No Project—No Development Alternative would result in less geology, soils, and mineral resources impacts compared to the modified Phase 2 Project. (*Less*)

## HYDROLOGY AND WATER QUALITY

Under the No Project—No Development Alternative no new construction would occur; therefore, there would be no potential construction related releases of sediment and contaminants into surface waters and groundwater. Because the project site would not be developed under this alternative, there would not be a need to replace the existing storm drain system with the proposed system of parks, paseos, water treatment wetlands, and the Central Lake. Agricultural diversions and discharges would continue under the current timing and volume regime. Demands on domestic water supplies (groundwater and surface water) would remain the same because there would be no new residents on the project site.

Under the modified Phase 2 Project, potentially significant and significant impacts would occur related to releases of sediment and contaminants to groundwater and surface water during construction, and earth moving and construction of project features (e.g., bridges) in waterways. These impacts would be reduced to less-than-significant levels after mitigation.

Impacts under the modified Phase 2 Project related to Delta hydrology and water quality from stormwater discharges to the Delta were considered less than significant because overall discharge volumes would be reduced, annual loading in post-project discharges would be less for 12 of 18 water quality parameters, of the six parameters where annual loading would increase (nitrate, total copper, dissolved lead, total lead, total nickel, and total zinc) concentrations would remain well within the allowable limits, and the timing of discharges would be shifted to the winter and spring months when water quality and water volumes (dilution potential) in the Delta is higher. Increases in downstream flood elevations resulting from the modified Phase 2 Project were also considered less than significant because they would be small (fractions of a foot), infrequent (only occurring at approximately the 1-in-100 Annual Exceedence Probability (AEP) flood event or greater) and would not increase modeled incidents of levee failures. Other less-than-significant impacts include effects on non-flood hydrology in surrounding waterways, groundwater quality and supply, and water supplies for other users.

Overall, the No Project—No Development Alternative would result in less hydrology and water quality impacts compared to the modified Phase 2 Project. (*Less*)

## HAZARDOUS MATERIALS AND PUBLIC HEALTH

Under the No Project—No Development Alternative no new development would occur; therefore, no new facilities that use hazardous materials (e.g., dry cleaners, gas stations) would be located on the project site, and no new residents, workers, or visitors would have the potential be exposed to existing or new sources of hazardous materials on the site. The use of hazardous substances (e.g. herbicides and pesticides) by the existing agricultural operations would continue; however, it is assumed that during the use of these materials existing application, storage, and disposal regulations would continue to be followed. Because no additional wastewater would be generated under the No Project—No Development Alternative it is assumed that no recycled water would be applied on the project site; although the City would possibly consider the project site for land disposal of recycled water generated by other development in the City. If this were to occur, recycled water applications on the project site would need to comply with all applicable local, state, and federal regulations which would prevent any potential conflicts with public health.

In comparison, the modified Phase 2 Project would result in increased storage, use, and transport of hazardous materials during construction and operation of project facilities. There would be increased potential for construction workers, residents, and visitors to be exposed to hazardous materials at existing contaminated areas on the project site. There is also potential for potential public health impacts through the use of recycled water to irrigate public landscaped areas. However, all these effects are considered less than significant either before or after mitigation through adherence with applicable regulations and appropriate testing and clean-up of potentially contaminated sites. Because no significant impacts related to hazardous materials and public health were identified for the modified Phase 2 Project, the No Project—No Development Alternative would not reduce or avoid any significant impacts related to this issue area. However, because there are fewer overall opportunities for workers and residents to be exposed to hazardous materials under the No Project—No Development Alternative, impacts are considered slightly less than those associated with the modified Phase 2 Project. (*Less*)

## PUBLIC SERVICES

The No Project—No Development Alternative would not include any new development. Therefore, this alternative would not generate increased demand for fire, police, school or solid waste disposal services; and would not potentially obstruct access by emergency vehicles due to construction activities. By contrast, the modified Phase 2 Project would include thousands of new dwelling units and residents. This would create significant demands for fire, police, and school services and facilities and potentially result in significant roadway obstructions to emergency vehicles during construction. Increased demand for solid waste disposal services was not considered significant because the receiving landfill has ample capacity to support the project. The significant public services impacts associated with the modified Phase 2 Project would be reduced to less-than-significant levels through implementation of recommended mitigation measures.

Because the modified Phase 2 Project would not result in any significant public services impacts after mitigation, the No Project—No Development Alternative would not reduce or avoid any significant impacts related to this issue. However, the modified Phase 2 Project would create an incremental increase in service demand that would not occur under the No Project—No Development Alternative. (*Less*)

## PUBLIC UTILITIES

Under the No Project—No Development Alternative, no new development would be constructed or operated at the project site. Therefore, there would be no additional demand for water, wastewater treatment, recycled water disposal, stormwater conveyance, electricity, or natural gas; and no need for new facilities and infrastructure to support additional demand. By comparison, the modified Phase 2 Project would create significant demand for potable water, wastewater treatment capacity, and recycled water storage and disposal. All of these impacts would be reduced to less-than-significant levels with mitigation. Several utility impacts would be less than significant prior to mitigation: stormwater/surface runoff management, and demand for electricity and natural gas. In addition, the

modified Phase 2 Project would contribute to the generation of less-than-significant environmental impacts associated with the development of planned improvements to City wells (Well 21 and Well 21 WTF).

Because the modified Phase 2 Project would not result in direct residual significant utilities impacts after mitigation, the No Project—No Development Alternative would not avoid any such impacts. However, this alternative would substantially reduce the demand for potable water, wastewater treatment, and recycled water storage and disposal capacity in the City; therefore, overall utilities impacts associated with this alternative are considered less than under the modified Phase 2 Project. (*Less*)

## RECREATION

Under this alternative, no new development would be constructed, and existing onsite agricultural operations in the Phase 2 area would continue. Therefore, this alternative would have no impact associated with demand for parks and recreation facilities. By comparison, the modified Phase 2 Project would increase the demand for parks and, thus, would include the construction of parklands, trails, open space, waterways, and other recreational features. These recreation resources would not be developed under this alternative. Overall, the No Project—No Development Alternative would result in less impacts compared to the modified Phase 2 Project but would also not provide the potential benefits of the modified Phase 2 Project. (*Less, but would not provide benefits*)

## AGRICULTURAL RESOURCES

Under this alternative, no new development would be constructed, and existing onsite agricultural operations in the Phase 2 area would continue. Important Farmland in the Phase 2 area would not be converted to non-agricultural use, as would occur under the modified Phase 2 Project, resulting in a significant and unavoidable impact of the project. Impacts related to cancellation of Williamson Act contracts would also be less than the modified Phase 2 Project because there are no longer any Williamson Act contracts in effect in the Phase 2 area. Conflicts between existing agricultural lands and adjacent land uses would be similar to the modified Phase 2 Project because development in the Phase 1 area would still have the potential to conflict with agricultural operations in the Phase 2 area. Overall, the No Project—No Development Alternative would result in less impacts compared to the modified Phase 2 Project. (*Less, would avoid significant and unavoidable impacts*)

## TERRESTRIAL BIOLOGY

The No Project—No Development Alternative would not result in any new ground disturbance in the Phase 2 area. Therefore, potentially significant impacts related to the loss of aquatic and riparian habitats where special-status species may occur; the loss of active nests of northern harrier, short-eared owl, and yellow-headed blackbird due to direct or indirect disturbance; the loss of loggerhead shrike nests; the potential for loss of Cooper's hawk and white-tailed kite nests; and impacts from offsite facilities proposed for the Phase 2 modifications would not occur. Significant impacts related to the loss of elderberry shrub habitat for valley elderberry longhorn beetles; loss of habitat and loss of individual giant garter snakes; loss of western pond turtles and habitat; loss of foraging habitats and active Swainson's hawk nests; loss of foraging habitat and the potential loss of active burrows for burrowing owls; the loss of common tree-nesting raptor nests; loss of brush rabbit habitat and the potential loss of individuals; and the dredge or fill of waters of the United States, and temporary removal of approximately 40 acres of riparian scrub within Paradise Cut would not occur. However, these impacts would all be reduced to less-than-significant levels after mitigation.

Because the modified Phase 2 Project would not result in any significant terrestrial biology impacts after mitigation, the No Project—No Development Alternative would not avoid any significant impacts of the modified Phase 2 Project. However, the No Project—No Development Alternative would retain, at least for the time being, farmland, wetlands, and other habitats currently used, or potentially used, by sensitive species, which would be eliminated under the modified Phase 2 Project. Overall, impacts under this alternative would be less than those that would occur with the modified Phase 2 Project. (*Less*)

## FISHERIES

Under the No Project—No Development Alternative, no in-water or ground-disturbing activities that could have adverse effects on fisheries would occur. This includes construction of bridges or utility crossing on the San Joaquin River that could result in stream bed and riverbank disturbance, sediment input, or contaminant input, all of which could substantially adversely affect fish species in the immediate area, although mitigation is available to reduce these impacts to less-than-significant levels. However, the habitat enhancements that are proposed for the modified Phase 2 Project would not be constructed and therefore there would be no beneficial impact related to fish habitat. There would be no beneficial impact related to fish entrainment in project pumps because the pumps in Paradise Cut would not be removed and screens would not be added to the pumps that remain in operation. *(Less, but would not provide benefits)*

## CULTURAL AND TRIBAL CULTURAL RESOURCES

The No Project—No Development Alternative would not require any construction activities, thereby avoiding impacts related to the disturbance, destruction, and physical or visual alteration of any known or as yet undiscovered/unrecorded cultural resource sites. Under the modified Phase 2 Project, ground disturbance and development of new structures would occur resulting in significant and potentially significant impacts related to the alteration of the visual context surrounding a listed California Historic Landmark and other historic structures and the potential disturbance of undiscovered/unrecorded subsurface archeological sites, human remains, and tribal cultural resources (TCRs). These impacts would be reduced to less-than-significant levels after mitigation. However, because the No Project—No Development Alternative does not include any new development or ground disturbance, it has a lesser potential to result in the disturbance of as yet undiscovered subsurface archeological resources, human remains, or TCRs. Therefore, cultural resources impacts would be slightly less under this alternative. *(Less)*

## AESTHETICS

Under the No Project—No Development Alternative, no new development would occur; as such, there would be no alteration of the visual character of the project site, views of the project site from surrounding vantage points would not change, and no new sources of light and glare would be created. By comparison, under the modified Phase 2 Project, views of the project site from surrounding lands, Interstate 5 (I-5), the I-5/I-205/State Route (SR) 120 merge segment, and surrounding waterways would be altered; new sources of nighttime lighting would be created; the visual context of the nearby historic grain silos and the Union Pacific Railroad (UPRR) bridge would be altered; and potential onsite conflicts between proposed residential uses and arterial roadways would occur. However, these impacts are all considered less than significant, or less than significant after mitigation. The modified Phase 2 Project would not result in any significant aesthetic resource impacts after mitigation, and thus the No Project—No Development Alternative would not avoid any significant impacts of the modified Phase 2 Project. However, because the overall visual character of the project site would not be altered under the No Project—No Development Alternative, impacts are considered less than the modified Phase 2 Project. *(Less)*

## ENERGY

Under the No Project—No Development Alternative, the Phase 2 area would not be developed. Energy use would remain at existing levels. Implementation of the modified Phase 2 Project would result in the consumption of additional energy supplies during construction and operation. However, this energy consumption would not be wasteful, unnecessary, or inefficient as it would be required to comply with the most recent iteration of the California Energy Code as it becomes more stringent over time and it would serve to meet the City of Lathrop's housing demand. Further, implementation of the modified Phase 2 Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Because the modified Phase 2 Project would not result in any significant energy impacts after mitigation, the No Project—No Development Alternative would not avoid any significant impacts of the modified Phase 2 Project. However, because the No Project—No Development Alternative

would use less energy in comparison to the modified Phase 2 Project, impacts are considered less than the modified Phase 2 Project. (*Less*)

## GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Under the No Project—No Development Alternative, the Phase 2 area would not be developed. Construction emissions of greenhouse gases (GHG) would not be generated and would remain at existing levels. In comparison, the modified Phase 2 Project would emit emissions greater than the target of 2.12 MTCO<sub>2</sub>e/year/SP in 2040. Implementation of mitigation measures would require the application of all feasible, on-site GHG reduction measures and purchase of carbon offsets, which would demonstrate consistency with the state's long-term climate change goals. However, it cannot be assured, at this time, that all mitigation is feasible and, thus, this impact would be significant and unavoidable for the modified Phase 2 Project. Implementation of the No Project—No Development Alternative would not result in this significant unavoidable GHG impact; therefore, this alternative would result in less GHG emissions than the modified Phase 2 Project. (*Less*)

## WILDFIRE

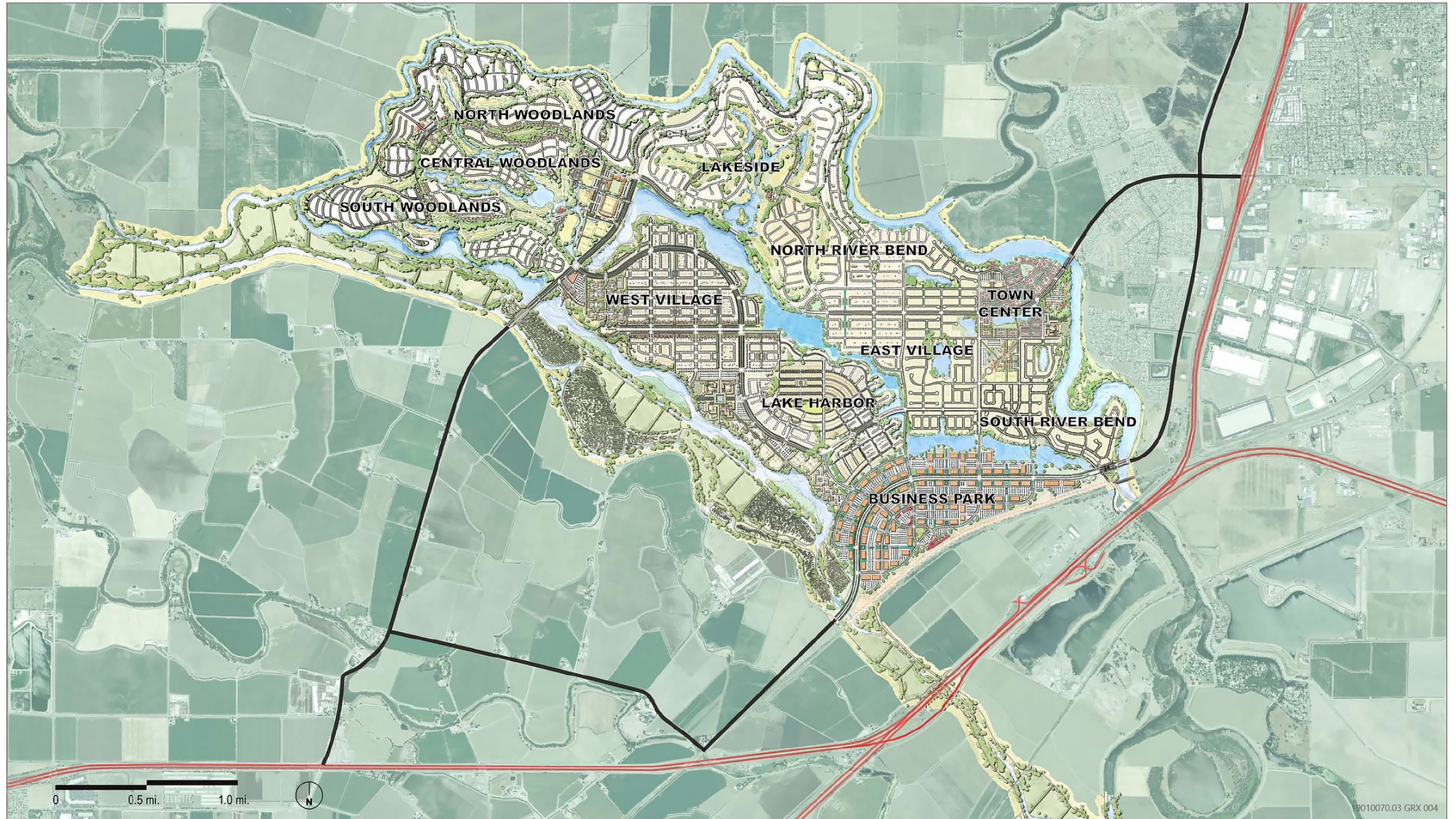
Under the No Project—No Development Alternative, the Phase 2 area would not be developed. The existing wildfire environment within the Phase 2 area (described in Section 4.20.2) would not change from existing conditions. Further, this alternative would continue to follow the adopted emergency response and evacuation plans currently in place. However, because there would be no construction-related activities, this alternative would not interfere with or slow down emergency vehicle access and services during wildfires. In comparison, construction activities associated with the modified Phase 2 Project could result in temporary lane closures, increased traffic, and other roadway conditions that could interfere with or slow down emergency vehicle access and services; this impact would be reduced to a less-than-significant level with mitigation. Because the modified Phase 2 Project would not result in any significant wildfire impacts after mitigation, the No Project—No Development Alternative would not avoid any significant impacts of the modified Phase 2 Project. However, because the No Project—No Development Alternative would not result in increased wildfire-related risks compared to the modified Phase 2 Project, impacts are considered less. (*Less*)

### 8.4.2 No Project—WLSP Development Alternative

The 2003 SEIR evaluated a No Project (WLSP) Alternative. However, because the analysis for the River Islands Project consisted of both the Phase 1 and Phase 2 portions on Stewart Tract and the Phase 1 portion has now been developed, a No Project—WLSP Development Alternative for the current modified Phase 2 Project based on existing conditions is evaluated here.

This alternative includes a likely development scenario, consistent with the approved WLSP, representing another version of the CEQA No Project Alternative (i.e., what would happen with the project site if built out under the current WLSP rather than the proposed modified WLSP). This alternative assumes that development occurs consistent with the approved WSLP as described in the 2003 SEIR (and as amended by subsequent addenda), with up to 11,000 residences for the entire River Islands Project comprised of Phases 1 and 2 at buildout.

Figure 8-1 shows a concept plan for this alternative at buildout (with both Phases 1 and 2 shown). Table 8-1 presents a comparison between development of the Phase 2 area under this alternative and the modified Phase 2 Project.



Source: City of Lathrop 2018

Figure 8-1 River Islands at Lathrop Conceptual Plan (as of 2018 and Reflecting Addenda to the 2003 SEIR)

**Table 8-1 Summary Comparison of No Project—WLSP Development Alternative and the Modified Phase 2 Project**

General Plan Designation/Land Use		Approved Phase 2 Project			Modified Phase 2 Project			Difference		
		Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)	Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)	Acres <sup>1</sup>	Dwelling Units <sup>4</sup>	Non-Res. Floor Area (s.f.)
MU-RI	Mixed Use - (Paradise Cut Village Center)	0.0	0	0	154.8	2,439	360,000	154.8	2,439	360,000
CR-RI	Regional Commercial - (Employment Center)	125.0	0	1,800,000	61.9	0	1,035,000	(63.1)	0	(765,000)
TOD-RI	Transit Oriented Development <sup>2</sup>	0.0	0	0	120.9	1,821	442,500	120.9	1,821	442,500
CN-RI	Neighborhood Commercial	17.7	0	180,000	0	0	0	(17.7)	0	(180,000)
RL-RI	Residential - Low	1,486.3	4,916	0	789.6	4,003	0	(696.7)	(913)	0
RM-RI	Residential - Medium	70.4	1,200	0	172.2	1,895	0	101.8	695	0
RH-RI	Residential - High	34.9	600	0	36.4	568	0	1.5	(32)	0
RCO/ OS-RI	Resource Conservation - Open Space	703.8	0	0	703.8	0	0	0.0	0	0
—	Parks	155.4	0	0	234.2	0	0	78.8	0	0
—	Lakes	235.0	0	0	195.5	0	0	(39.5)	0	0
—	Schools	106.4	0	0	108.6	0	0	2.2	0	0
—	Streets	382.3	0	0	198.6	0	0	(183.7)	0	0
—	Other Open Space/ Public Uses <sup>3</sup>	127.7	0	0	657.6	0	0	529.9	0	0
Total Land Use Parcels		3,444.9	6,716	1,980,000	3,434.1	10,726	1,837,500	(10.8)	4,010	(142,500)

Notes: Non-Res. = non-residential; s.f. = square feet

<sup>1</sup> The acreage shown includes Paradise Cut and adjacent waterways that may not be evaluated in the SEIR.

<sup>2</sup> This area was identified as "transit village" in the 2003 SEIR project description. The new title as shown should be used to be consistent with the Valley Link Transit Project.

<sup>3</sup> The acreage estimated includes public uses such as fire stations and other City facilities, as well as open space areas not included with other land use designations.

<sup>4</sup> Dwelling units tabulated are shown as per the City's existing and proposed land use categories and not in their physical location (e.g., districts).

Source: Provided by River Islands in 2021

As shown in Table 8-1, this alternative includes 4,010 fewer dwelling units than the modified Phase 2 Project. As for commercial development, this alternative would include 142,500 more square feet of non-residential floor area than the modified Phase 2 Project. Table 8-1 shows the No Project—WLSP Development Alternative covering approximately 207 more acres than the modified Phase 2 Project. This is due primarily to differences in the amount of waterway (e.g., San Joaquin River, Old River) attributed to each alternative. The overall area allocated to development under each alternative does not appreciably differ.

This alternative would not include the mixed-use Transit Oriented Development that is proposed under the modified Phase 2 Project to complement the future planned Valley Link transit station. It would also not necessitate any changes in the circulation pattern, which are part of the modified Phase 2 Project. Specifically, River Islands Parkway, Lakeside Drive, and Paradise Road would remain in their currently planned locations. Golden Valley Parkway would still serve its purpose as a regional alternative roadway as proposed in the current plan.

This alternative would meet all of the project objectives, except this alternative would not meet the project objective to “[p]rovide a high-density Transit Oriented Development in the vicinity of the planned Valley Link commuter rail station on the project site” because this alternative does not include this type of development that would be developed under the modified Phase 2 Project. This alternative would be consistent with the goals and objectives of the WLSP and the *City of Lathrop General Plan*, which each call for development of the project site. Thus, consistent with CEQA requirements, this No Project—WLSP Development Alternative is evaluated in this Draft SEIR because it is a more likely development scenario (compared with the No Project—No Development Alternative) if the modified Phase 2 Project were not implemented.

## LAND USE

The No Project—WLSP Development Alternative would not divide an established community, nor would it conflict with plans adopted for the purpose of avoiding or mitigating a significant effect (including the WLSP, the *City of Lathrop General Plan*, or City of Lathrop Zoning Ordinance). Compatibility with adjacent land uses would not change and this alternative would not alter the present or planned land use of an area. However, no significant land use impacts were identified for the modified Phase 2 Project (nor for the project evaluated in the 2003 SEIR); therefore, this alternative would not reduce or avoid any significant land use impacts associated with the project. Although this alternative would not require the amendments to the Lathrop General Plan and the WLSP that the project requires, the land use and zoning revisions themselves are not considered environmental impacts. Overall, impacts under this alternative would be similar to those that would occur with the modified Phase 2 Project. (*Similar*)

## POPULATION, EMPLOYMENT, AND HOUSING

The No Project—WLSP Development Alternative is not as dense as the modified Phase 2 Project and would contain 4,010 fewer dwelling units and 12,910 fewer residents. This would result in a smaller temporary increase in construction-related employment and less population growth than the modified Phase 2 Project. Because the No Project—WLSP Development Alternative has fewer dwelling units, this alternative is considered to be more job-rich and could generate greater demand for new housing in the region compared to the modified Phase 2 Project. Construction of this alternative would disrupt the same land and therefore would displace the same number of houses as the project. Both the modified Phase 2 Project and the No Project—WLSP Development Alternative are generally consistent with the applicable General Plan housing policies. No significant impacts related to population, employment, and housing were identified for the modified Phase 2 Project (nor for the project evaluated in the 2003 SEIR). Thus, this alternative would not reduce or avoid any significant land use impacts associated with the project. Overall, impacts under this alternative would be similar to those that would occur with the modified Phase 2 Project. (*Similar*)

## TRAFFIC AND TRANSPORTATION

Compared to the modified Phase 2 Project, the No Project—WLSP Development Alternative does not provide the same level of complementary uses to residential and employment uses, such as the “town center” mixed-use area at Paradise Road, or the mixed-use Transit Oriented Development area to complement the future planned Valley Link transit station. The lack of complementary land uses would decrease internal trip capture within the RID area and increase vehicle miles travelled (VMT) when compared to the modified Phase 2 Project. As a result, VMT modelling for the No Project—WLSP Development Alternative indicates that this alternative will result in vehicle travel that exhibits higher VMT characteristics. For example, the No Project—WLSP Development Alternative generates 83.2 VMT per household and the modified Phase 2 Project generates 78.1 VMT per household. Office uses under the No Project—WLSP Development Alternative generate 52.5 VMT per employee and the modified Phase 2 Project generates 49.1 VMT per employee. Both the No Project—WLSP Development Alternative and the modified Phase 2 Project would be designed as to not interfere with the implementation of a plan related to bicycle facilities, pedestrian facilities, or transit service/facilities; not result in a geometric design feature that is inconsistent with applicable City of Lathrop design standards; and not create roadway and transportation facilities that impede access



for emergency response vehicles. Construction of the modified Phase 2 Project could result in temporary roadway, bikeway, and sidewalk closures; degraded roadway pavement conditions; temporary degradation in traffic operations; and increased potential for conflicts between construction vehicles and bicyclists and pedestrians. However, feasible mitigation measures are available to reduce these impacts to a less-than-significant level. Overall, because of the increased VMT associated with this alternative, impacts would be greater when compared to the modified Phase 2 Project. (*Greater*)

## AIR QUALITY

Because the area of impact would be similar under the No Project—WLS Development Alternative compared to the project, both would have the same potential for adverse increases in odorous emissions due to the site's proximity to nearby existing agricultural uses. The No Project—WLS Development Alternative proposes an Employment Center approximately 60 acres larger than for the modified Phase 2 Project; as such, potential TAC emissions would be somewhat greater due to an increase in potential TAC-generating activity. Both the project and the No Project—WLS Development Alternative would result in similar levels of mobile source CO concentrations and would be consistent with the emissions inventories used for air quality planning purposes. Construction of the No Project—WLS Development Alternative would entail similar types of construction activities over a similarly sized site as the modified Phase 2 Project; therefore, both the modified Phase 2 Project and this alternative would have similar potential to result in construction-related exceedances of SJVAPCD's annual mass emissions threshold for PM<sub>10</sub> and exceedances of SJVAPCD's daily mass emissions screening criteria. Both the modified Phase 2 Project and this alternative would have the same potential to result in emission of criteria air pollutants ROG, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> in exceedance of SJVAPCD's operational thresholds of significance. This alternative would generate more VMT and, therefore, it would have greater mobile source emissions than the modified Phase 2 Project. Residential development under the No Project—WLS Development Alternative would be less intense than under the modified Phase 2 Project, thereby somewhat reducing the potential exposure of sensitive receptors to substantial diesel PM emissions. While impacts to air quality from construction activities and from the exposure of sensitive receptors to substantial diesel PM emissions could be reduced to a less-than-significant level after mitigation measures, emissions of criteria air pollutants would remain significant and unavoidable. Overall, impacts under this alternative would be similar to those that would occur with the modified Phase 2 Project. (*Similar*)

## NOISE AND VIBRATION

Both the modified Phase 2 Project and the No Project—WLS Development Alternative would result in temporary noise generated by construction activities, development of noise generating land uses, and development of sensitive receptors that would be exposed to existing or projected noise and vibration levels exceeding City standards. A majority of these impacts would be reduced to less-than-significant levels after mitigation under both development scenarios. However, the proposed Phase 2 modifications would increase the amount and density of residential development and, therefore, would increase traffic noise levels compared to this alternative. The modified Phase 2 Project would result in traffic noise increases exceeding the significance thresholds along multiple roadways including Golden Valley Parkway, Lakeside Drive, Louise Avenue, MacArthur Drive, Manthey Road, Paradise Road, River Islands Parkway, and Somerston Parkway. Despite mitigation, this impact would be significant and unavoidable for the modified Phase 2 Project, but would be mitigated to a less-than-significant level for the No Project—WLS Development Alternative.

Both development scenarios would have the potential to result in noise levels that exceed land use compatibility standards for the proposed uses and could result in interior peak hour noise levels exceeding thresholds. Mitigation would reduce impacts associated with interior noise levels; however, exterior noise levels in some locations would still be anticipated to exceed General Plan land use compatibility noise standards and, thus, this impact would be significant and unavoidable for both development scenarios. Additionally, construction-related groundborne vibration would be greater (but mitigable) under the modified Phase 2 Project because partial buildout of the River Islands Project has occurred and residences are now located along the eastern property line of the Phase 2 area, which places them in

closer proximity to construction-related vibration impacts. Because of the significant and unavoidable traffic noise impact associated with the modified Phase 2 Project, overall noise impacts for this alternative would be less when compared to the modified Phase 2 Project. (*Less*)

## GEOLOGY, SOILS, AND MINERAL RESOURCES

Because the area of impact would be similar under the No Project—WLSP Development Alternative compared to the project, both would have the same potential to affect geologic and soil conditions and mineral resources. Both development scenarios would result in less-than-significant impacts related to erosion and the loss of topsoil during construction as well as seismic hazards related to ground lurching and soil settlement. Neither development scenario would affect access to mineral resources because the Phase 2 area is not located within an area where known mineral resources are located. Both development scenarios would result in significant impacts related to seismic hazards, such as ground shaking, liquefaction, and lateral spreading; shrink-swell soils; and corrosive soils. However, feasible mitigation measures would minimize these potential impacts to less-than-significant levels. No significant impacts related to geology, soils, and mineral resources were identified for the modified Phase 2 Project after mitigation; therefore, the No Project—WLSP Development Alternative would not reduce or avoid any significant earth resources impacts of the modified Phase 2 Project. Overall, the impacts are considered similar between the two development scenarios. (*Similar*)

## HYDROLOGY AND WATER QUALITY

Construction of this alternative would disrupt the same land, include the same types of in-water work, and include the same construction of bridges and docks as the modified Phase 2 Project. Therefore, construction in or adjacent to water bodies and construction of in-water project features such as bridges and docks would result in similar hydrology and water quality impacts under both development scenarios due to sedimentation or pollutant discharge during construction, and earth moving and construction of project features (e.g., bridges) in waterways. These impacts would be reduced to less-than-significant levels after mitigation.

Impacts related to Delta hydrology and water quality from stormwater discharges to the Delta would be similar under both development scenarios and less than significant because overall discharge volumes would be reduced, annual loading in post-project discharges would be less for 12 of 18 water quality parameters, of the six parameters where annual loading would increase (nitrate, total copper, dissolved lead, total lead, total nickel, and total zinc) concentrations would remain well within the allowable limits, and the timing of discharges would be shifted to the winter and spring months when water quality and water volumes (dilution potential) in the Delta is higher. Increases in downstream flood elevations resulting from both development scenarios would also be less than significant because they would be small (fractions of a foot), infrequent (only occurring at approximately the 1-in-100 Annual Exceedence Probability (AEP) flood event or greater) and would not increase modeled incidents of levee failures. Other less-than-significant impacts include effects on non-flood hydrology in surrounding waterways, groundwater quality and supply, and water supplies for other users; these would be similar under both development scenarios.

No significant impacts related to hydrology and water quality were identified for the modified Phase 2 Project after mitigation; therefore, the No Project—WLSP Development Alternative would not reduce or avoid any significant hydrology and water quality impacts of the modified Phase 2 Project. Overall, the impacts are considered similar between the two development scenarios. (*Similar*)

## HAZARDOUS MATERIALS AND PUBLIC HEALTH

The construction area under the No Project—WLSP Development Alternative and the modified Phase 2 Project would be similar, and thus both development scenarios would result in similar impacts related to the use of hazardous materials during construction and the potential exposure of construction workers to existing hazardous materials on the project site. Under both scenarios, new facilities that use hazardous materials would be developed on the project site; and residents, workers, and visitors would have similar potential to be exposed to hazardous materials. Also,

under both scenarios, recycled water may be applied to public landscaping, resulting in similar potential health risks. All these impacts would be considered less than significant due to compliance with existing laws and regulations and/or implementation of appropriate mitigation measures. Because the modified Phase 2 Project and the No Project—WLSP Development Alternative would result in similar exposure mechanisms and risks associated with hazardous materials and public health, impacts from the two development scenarios are also considered similar. *(Similar)*

## PUBLIC SERVICES

Residential development under the No Project—WLSP Development Alternative would be less intense than under the modified Phase 2 Project, thereby reducing the demand on public services. As shown in Table 8-1, this alternative includes 4,010 fewer dwelling units than the modified Phase 2 Project and 142,500 more square feet of non-residential floor area (commercial development) than the modified Phase 2 Project. Both development scenarios would have the same potential to obstruct roadways during construction, which could obstruct or slow emergency vehicles attempting to access the area. The demand for water-related emergency services and facilities would remain the same under the No Project—WLSP Development Alternative because interior and exterior water features authorized by current entitlements would not be modified by the Phase 2 Project. Also, because this alternative would include similar types of development as the project, it would have the same requirement for adequate fire flow for emergency fire suppression. Although both the modified Phase 2 Project and the No Project—WLSP Development Alternative would include the construction of a new fire station, this alternative would require 16 fewer firefighters than the project due to the reduced number of dwelling units compared to the modified Phase 2 Project. This alternative would also require fewer sworn police officers, result in a decreased demand for animal control facilities and services, generate fewer students, and result in less solid waste due to the reduced number of dwelling units compared to the modified Phase 2 Project. All public services impacts described for the No Project—WLSP Development Alternative and the modified Phase 2 Project would be less than significant, or less than significant after mitigation. Overall demand for public services would be less for this alternative due to the reduced number of dwelling units compared to the modified Phase 2 Project. *(Less)*

## PUBLIC UTILITIES

Residential development under the No Project—WLSP Development Alternative would be less intense than under the project (with 4,010 fewer dwelling units than the modified Phase 2 Project), thereby reducing overall residential water demand, need for wastewater treatment capacity, need for recycled water storage and disposal capacity, and demand for electricity and natural gas. However, as shown in Table 8-1, this alternative includes 142,500 more square feet of non-residential floor area (commercial development) than the modified Phase 2 Project, thereby generating more jobs than the modified Phase 2 Project. Retail and office uses typically result in less demand for public utilities compared to residential uses. Impacts related to the development of new city wells and the expansion of wastewater treatment facilities would be the same under the No Project—WLSP Development Alternative and the modified Phase 2 Project. No significant impacts related to public utilities were identified for the modified Phase 2 Project after mitigation; therefore, the No Project—WLSP Development Alternative would not reduce or avoid any significant impacts related to public utilities resulting from the modified Phase 2 Project. Because both the modified Phase 2 Project and the No Project—WLSP Development Alternative were found to provide sufficient utilities for their respective developments, the impacts are considered similar between the two development scenarios. *(Similar)*

## RECREATION

Increased demand for parkland, open space, and boating opportunities, would occur under both the modified Phase 2 Project and the No Project—WLSP Development Alternative. Implementation of either development scenario would increase demands for recreational facilities and opportunities; however, these impacts were determined to be less than significant because sufficient recreational facilities to meet demand would be provided under both development

scenarios. Nonetheless, under this alternative, residential development would be less intense than under the modified Phase 2 Project, thereby reducing the demand on recreational facilities. (*Less*)

## AGRICULTURAL RESOURCES

Both the No Project—WLSP Development and the modified Phase 2 Project would result in the conversion of agricultural land and the loss of Important Farmland, which would be a significant and unavoidable impact under either development scenario. Impacts related to cancellation of Williamson Act contracts would be similar because there are no longer any Williamson Act contracts in effect in the Phase 2 area. Conflicts between existing agricultural lands and adjacent land uses would be similar (and mitigable) because development in the Phase 1 area would still have the potential to conflict with agricultural operations in the Phase 2 area. Overall, agricultural resources impacts are considered similar for the No Project—WLSP Development Alternative and the modified Phase 2 Project. (*Similar*)

## TERRESTRIAL BIOLOGY

Both the No Project—WLSP Development Alternative and the modified Phase 2 Project would develop most of the RID Area with urban uses, resulting in similar significant and potentially significant impacts to northern harrier, short-eared owl, yellow-headed blackbird, loggerhead shrike, Cooper's hawk, white-tailed kite, valley elderberry longhorn beetles, giant garter snakes, western pond turtles, Swainson's hawk, burrowing owls, common tree-nesting raptor nests, brush rabbit, waters of the United States, riparian, ruderal, and agricultural habitat. These impacts would be mitigated to less-than-significant levels. Additionally, both development scenarios would result in preservation of natural habitats and agricultural land in Paradise Cut and elsewhere in the County via participation in the SJMSCP, and the SJMSCP would be used to assist in mitigating biological resources impacts. Overall, terrestrial biological resources impacts are considered similar for the No Project—WLSP Development Alternative and the modified Phase 2 Project because of the similar development area. (*Similar*)

## FISHERIES

Construction and operation of this alternative would disrupt the same land and include the same construction of bridges and utility crossings as the modified Phase 2 Project. Therefore, stream bed and riverbank disturbance, sediment input, and contaminant input, all of which could substantially adversely affect fish species, would be similar under both development scenarios and mitigation is available to reduce these impacts to less-than-significant levels. (*Similar*)

## CULTURAL AND TRIBAL CULTURAL RESOURCES

Earth-moving activities within the project site have the potential to disturb archaeological resources or result in accidental discovery of human remains. Under the modified Phase 2 Project and the No Project—WLSP Development Alternative, there would be ground-disturbing activities (e.g., grading, excavation) that could result in discovery of archaeological resources or human remains; however, feasible mitigation measures would reduce these impacts to a less-than-significant level. Overall, cultural resources impacts are considered similar for the No Project—WLSP Development Alternative and the modified Phase 2 Project because of the similar development area. (*Similar*)

## AESTHETICS

Compared to the modified Phase 2 Project, the No Project—WLSP Development Alternative would decrease the amount and density of residential development but would not change the maximum building height. Views of the project site would remain consistent with surrounding views of residential and commercial development as compared to the project. Similarly, views of adjacent historic structures would not be obscured. Because the same area would be developed, the No Project—WLSP Development Alternative would have the same potential for gaps and openings along arterial roadways to intrude on residential areas. This alternative would decrease the number of dwelling units

and density of residential development and would not include a mixed-use Village Center or Transit Oriented Development; this could incrementally decrease the amount of nighttime light in the project area because lighting associated with commercial and higher density residential development requires a higher level of foot-candles than low density residential. However, compliance with the River Islands Urban Design Concept lighting guidelines would minimize light and glare impacts to nighttime views. *(Similar)*

## ENERGY

Both development scenarios would result in the consumption of additional energy supplies during construction and operation. However, residential development under the No Project—WLSP Development Alternative would be less intense than under the modified Phase 2 Project, and does not include transit-oriented development or mixed-use and high-density development. This would result in an increase in VMT per service population (i.e., 17,431 VMT per service population under the modified Phase 2 Project and 24,478 VMT per service population under this alternative) and increased transportation-related energy consumption under both development scenarios, with a greater increase for this alternative. Regarding operational energy use, different types of buildings and facilities use different types of energy. Estimating operational energy consumption would be speculative. However, both development scenarios would be required to follow the same building code and energy conservation standards. This energy consumption would not be wasteful, unnecessary, or inefficient as it would be required to comply with the most recent iteration of the California Energy Code as it becomes more stringent over time and it would serve to meet the City of Lathrop's housing demand. Further, development would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency under either development scenario. Because the modified Phase 2 Project would not result in any significant energy impacts after mitigation, the No Project—WLSP Development Alternative would not avoid any significant impacts of the modified Phase 2 Project. However, because the No Project—WLSP Development Alternative would use more mobile source energy in comparison to the modified Phase 2 Project, impacts are considered greater than the modified Phase 2 Project. *(Greater)*

## GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Operational GHG emissions generally correlate to the size and intensity of a project and the associated energy consumed and VMT. The modified Phase 2 Project proposes an additional 4,010 dwelling units and 12,694 residents beyond the No Project—WLSP Development Alternative. However, the No Project—WLSP Development Alternative does not include transit-oriented development or mixed-use and high-density development which would minimize the need to travel via automobile. Because of these factors, even though the No Project—WLSP Development Alternative is a less intense development, it would result in 10.67 MTCO<sub>2</sub>/year/SP as compared to 7.73 MTCO<sub>2</sub>e/year/SP for the project. *(Greater)*

## WILDFIRE

Construction and operation of this alternative would disrupt the same development area as the Phase 2 Project. Therefore, wildfire impacts would be similar between the two development scenarios. The existing wildfire environment within the Phase 2 area (described in Section 4.20.2) would not change from existing conditions. Under both development scenarios, the adopted emergency response and evacuation plans currently in place would continue to be followed. During construction, the potential to interfere with or slow down emergency vehicle access and services during wildfires would be similar under either development scenario; this impact would be reduced to a less-than-significant level with mitigation. Because the modified Phase 2 Project would not result in any significant wildfire impacts after mitigation, the No Project—WLSP Development Alternative would not avoid any significant impacts of the modified Phase 2 Project. However, because the No Project—WLSP Development Alternative would result in similar wildfire-related risks compared to the modified Phase 2 Project, impacts are considered similar. *(Similar)*

## 8.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As identified above in Section 8.3, “Alternative Analysis Under The 2003 SEIR,” the CEQA documents prepared for the River Islands Project prior to this SEIR (i.e., 2003 SEIR and six addenda) are part of the overall CEQA analysis for the project, and the analysis of alternatives from the 2003 SEIR is part of the “range of reasonable alternatives” to be considered per State CEQA Guidelines Section 15126.6(a). Therefore, the alternatives considered in the 2003 SEIR, as part of the overall alternatives analysis, continue to be considered in the identification of the environmentally superior alternative.

As evaluated in the 2003 SEIR, the Environmental Constraints (50% Development) Alternative (described above in Section 8.3.3) would have greater impacts than the River Islands Project in one issue areas, less impacts in twelve, and similar impacts in three. It would reduce but not avoid any of the significant unavoidable impacts of the modified Phase 2 Project. By comparison, the Environmental Constraints (50% Development) Alternative would reduce, but not avoid, any of the significant unavoidable impacts of the River Islands Project, while the No Project (No Development) Alternative would avoid all of the significant unavoidable impacts (with the exception of the significant cumulative impacts which would occur regardless of implementation of the River Islands Project). When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126[d][2]) require selection of an environmentally superior alternative from among the other action alternatives evaluated. Therefore, given that the Environmental Constraints (50% Development) Alternative would have the highest ratio of less to greater impacts among the alternatives and has lesser impacts than the River Islands Project, it was identified as the environmentally superior alternative.

For the modified Phase 2 Project, the No Project–No Development Alternative (described above in Section 8.4.1) would avoid all adverse impacts resulting from construction and operation of the modified Phase 2 Project analyzed in Chapter 4; therefore, it is the environmentally superior alternative. However, the No Project–No Development Alternative would not meet the project objectives as presented above in Section 8.2 and as previously stated, when the No Project Alternative is the environmentally superior alternative, another action alternative must be selected. As illustrated in Table 8-2, the No Project–WLSP Development Alternative does not avoid or even reduce significant and unavoidable impacts. The No Project–WLSP Development Alternative would have greater impacts than the modified Phase 2 Project in three issue areas, less impacts in three issue areas, and similar impacts in 13 issue areas.

Although the Phase 1 Project is being developed consistent with the currently approved WLSP, if the principles of the Environmental Constraints (50% Development) Alternative were applied to the remaining Phase 2 area, the same types of reductions in impacts would be expected. Therefore, similar to what was identified in the 2003 SEIR, the Environmental Constraints (50% Development) Alternative would remain the environmentally superior alternative because it would have the highest ratio of less to greater impacts among the alternatives and would have lesser impacts than the modified Phase 2 Project. However, as discussed in the 2003 SEIR, the Environmental Constraints (50% Development) Alternative would result in significant unavoidable impacts related to traffic, air quality, noise, and agricultural resources. Although this alternative includes substantially less development than the modified Phase 2 Project, these significant unavoidable impacts would still occur. Further, given the large scale of the modified Phase 2 Project and the extensive infrastructure needed to support the project, it is unknown whether this substantially reduced development scenario would be financially feasible or could be effectively integrated into the City's planning goals. Also, it is uncertain if this alternative could attain most of the basic project objectives, including providing substantial employment opportunities and a harmonious mix of land uses. However, as mentioned above, CEQA does not permit the identification of the No Project Alternative as the environmentally superior alternative. Therefore, the Environmental Constraints (50% Development) Alternative is identified as the environmentally superior alternative.

**Table 8-2 Summary of Environmental Effects of the Alternatives Relative to the Modified Phase 2 Project**

Environmental Topic	Modified Phase 2 Project	No Project—No Development Alternative	No Project—WLSP Development Alternative
Land Use	LTS	Similar	Similar
Population, Employment, and Housing	LTS	Less	Similar
Traffic and Transportation	LTS/M	Less	Greater
Air Quality	SU	Less	Similar
Noise and Vibration	SU	Less	Less
Geology, Soils, and Mineral Resources	LTS/M	Less	Similar
Hydrology and Water Quality	LTS/M	Less	Similar
Hazardous Materials and Public Health	LTS/M	Less	Similar
Public Services	LTS/M	Less	Less
Public Utilities	LTS/M	Less	Similar
Recreation	LTS	Less	Less
Agricultural Resources	SU	Less	Similar
Terrestrial Biology	LTS/M	Less	Similar
Fisheries	LTS/M	Less	Similar
Cultural and Tribal Cultural Resources	LTS/M	Less	Similar
Aesthetics	LTS/M	Less	Similar
Energy	LTS	Less	Greater
Greenhouse Gas Emissions and Climate Change	SU	Less	Greater
Wildfire	LTS/M	Less	Similar

Notes: LTS = less than significant; LTS/M = less than significant with mitigation; SU = significant and unavoidable

Source: Data compiled by Ascent Environmental in 2020

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## 9 REFERENCES

### Chapter 1, Introduction

- City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- . 2003 (January 22). *Final Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- . 2005 (July 1). *Addendum to the Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- . 2007 (February). *Second Addendum to the Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW | AECOM, Sacramento, CA.
- . 2012 (March). *Third Addendum to the Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by AECOM, Sacramento, CA.
- . 2014 (April). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.
- . 2015 (May). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum V*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.
- . 2018 (March). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum VI*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.

### Chapter 2, Executive Summary

- California Department of Transportation. 2012 (November). *Project Study Report (Project Development Support) PSR (PDS) to Request Approval of a Locally Funded Project to Proceed to Project Approval and Environmental Document (PA&ED)*. Tracy, CA.
- EKI Environment & Water. 2019a (December). *Water System Master Plan, City of Lathrop, Integrated Water Resources Master Plan Update*. Burlingame, CA. Prepared for City of Lathrop, Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/com-dev/page/integrated-water-resources-master-plan-iwrmp>. Accessed June 2020.
- . 2019b (December). *Wastewater System Master Plan, City of Lathrop, Integrated Water Resources Master Plan Update*. Burlingame, CA. Prepared for City of Lathrop, Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/com-dev/page/integrated-water-resources-master-plan-iwrmp>. Accessed June 2020.
- . 2019c (December). *Recycled Water System Master Plan, City of Lathrop, Integrated Water Resources Master Plan Update*. Burlingame, CA. Prepared for City of Lathrop, Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/com-dev/page/integrated-water-resources-master-plan-iwrmp>. Accessed June 2020.
- River Islands. 2020 (December). *River Islands Phase 2 Parks and Open Space Master Plan*. Prepared by O'Dell Engineering, Modesto, CA.

### Chapter 3, Description of the Proposed Project

- California Department of Transportation. 2012 (November). *Project Study Report (Project Development Support) PSR (PDS) to Request Approval of a Locally Funded Project to Proceed to Project Approval and Environmental Document (PA&ED)*. Tracy, CA.

Caltrans. See California Department of Transportation.

- City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Sacramento, CA.
- . 2003 (January 22). *Final Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Sacramento, CA.
- . 2014 (April). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV*. Lathrop, CA. Prepared by Ascent Environmental, Inc. Sacramento, CA.
- . 2018 (March). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum VI*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Sacramento, CA.
- EKI Environment & Water. 2019a (December). *Water System Master Plan, City of Lathrop, Integrated Water Resources Master Plan Update*. Burlingame, CA. Prepared for City of Lathrop, Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/com-dev/page/integrated-water-resources-master-plan-iwrmp>. Accessed June 2020.
- . 2019b (December). *Wastewater System Master Plan, City of Lathrop, Integrated Water Resources Master Plan Update*. Burlingame, CA. Prepared for City of Lathrop, Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/com-dev/page/integrated-water-resources-master-plan-iwrmp>. Accessed June 2020.
- . 2019c (December). *Recycled Water System Master Plan, City of Lathrop, Integrated Water Resources Master Plan Update*. Burlingame, CA. Prepared for City of Lathrop, Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/com-dev/page/integrated-water-resources-master-plan-iwrmp>. Accessed June 2020.
- River Islands. 2020 (December). *River Islands Phase 2 Parks and Open Space Master Plan*. Prepared by O'Dell Engineering, Modesto, CA.
- San Joaquin County Department of Public Works. 2016. *Improvement Standards*. Adopted November 2014; reflects amendments through July 2016. Available: <https://www.sjgov.org/departments/pwk/permits>. Accessed June 2020.

## Chapter 4, Environmental Impacts and Mitigation Measures

### Section 4.1, Approach to the Environmental Analysis

No references cited in this section.

### Section 4.2, Land Use

Boyd, Laurel. Assistant Habitat Planner. SJCOG, Inc. Stockton, CA. May 14-20, 2019—email correspondence with Ramon Batista of River Islands regarding Phase 2 Project coverage under the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.

City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA.

San Joaquin County. 2000 (November 14). *San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)*.

### Section 4.3, Population, Employment, and Housing

California Department of Finance. 2020a (May). E-1 Population Estimates for Cities, Counties, and the State – January 1, 2019 and 2020. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/>. Accessed September 2020.

- . 2020b (May). E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>. Accessed September 2020.
- City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed March 2020.
- . 2016 (April). *Lathrop Municipal Service Review and Sphere of Influence Plan*. Approved by San Joaquin LAFCo on April 14, 2016. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/community\\_development/page/5556/msr\\_approved\\_4-14-16.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/community_development/page/5556/msr_approved_4-14-16.pdf). Accessed September 2020.
- . 2019 (December). *City of Lathrop General Plan Update Final Housing Element*. Adopted December 9, 2019. Lathrop, CA. Prepared by De Novo Planning Group. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5271/final\\_housing\\_element\\_adopted\\_12.09.19.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5271/final_housing_element_adopted_12.09.19.pdf). Accessed September 2020.
- DOF. See California Department of Finance.
- Eberhardt School of Business. 2016. Center for Business & Policy Research. *San Joaquin County Forecast Summary*. Available: [https://www.sjcog.org/DocumentCenter/View/1354/San-Joaquin-2016-Forecast-Summary\\_Final](https://www.sjcog.org/DocumentCenter/View/1354/San-Joaquin-2016-Forecast-Summary_Final). Accessed July 14, 2020.
- EDD. See State of California, Employment Development Department.
- Gebhardt, Glenn. City Engineer. City of Lathrop, Lathrop, CA. April 28, 2020—email to Stephen Salvatore of the City of Lathrop and Susan Dell’Osso of River Islands regarding the agreement to use an average of 3.0 persons per house (PPH) for the CEQA analysis of the modified Phase 2 Project.
- San Joaquin Council of Governments. 2014. *2014-2023 Regional Housing Needs Plan (RHNP)*. Adopted August 28, 2014. Available: <https://www.sjcog.org/113/Regional-Housing-Needs-Allocation>. Accessed July 2020.
- . 2020a. Population Forecast (2015-2060). Available: <https://www.sjcog.org/383/Population>. Accessed July 2020.
- . 2020b. San Joaquin County Total Employment Forecast. Available: <https://www.sjcog.org/248/Employment>. Accessed July 2020.
- SJCOG. See San Joaquin Council of Governments.
- State of California, Employment Development Department. 2020. Labor Market Information Resources and Data: Local Area Profile. Available: <https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSResults.asp?selectedarea=&selectedindex=&menuChoice=localAreaPro&state=true&geogArea=0604000077&submit1=View+the+Local+Area+Profile>. Accessed March 2020.
- U.S. Census Bureau. 2012 (August). 2010 Census of Population and Housing, Population and Housing Unit Counts, CPH-2-6, California U.S. Government Printing Office, Washington, DC. Available: <https://www.census.gov/prod/cen2010/cph-2-6.pdf>. Accessed March 2020.
- . 2020. QuickFacts, San Joaquin County, California. Available: <https://www.census.gov/quickfacts/sanjoaquincountycalifornia>. Accessed April 2020.

## Section 4.4, Traffic and Transportation

- California Department of Transportation. 2010a (February). *Smart Mobility 2010: A Call to Action for the New Decade*. Available: <https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/smart-mobility-active-transportation/smart-mobility-framework>. Accessed September 2020.

- . 2010b (February 1). *Complete Streets Implementation Action Plan*. Implementation of Deputy Directive 64-R1: Complete Streets – Integrating the Transportation System. Available: [https://www.ca-ilg.org/sites/main/files/file-attachments/completestreets\\_ip03-10-10.pdf?1443564712](https://www.ca-ilg.org/sites/main/files/file-attachments/completestreets_ip03-10-10.pdf?1443564712). Accessed September 2020.
- . 2016 (June). *California's Transportation Plan 2040*. Sacramento, CA. Available: [https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/f0004899\\_ctp2040\\_a11y.pdf](https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/f0004899_ctp2040_a11y.pdf). Accessed September 2020.
- . 2019a. *Strategic Management Plan 2015-2020 – 2019 Update*. Available: <https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/2019-csm-plan-update-a11y.pdf>. Accessed September 2020.
- . 2019b (May 16). *2019 State Highway System Management Plan*. Available: <https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/f0019647-shsmp-a11y.pdf>. Accessed September 2020.

Caltrans. See California Department of Transportation.

City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA.

———. 2019 (January). *City of Lathrop Department of Public Works Design & Construction Standards*. Available: <https://www.ci.lathrop.ca.us/publicworks/page/design-construction-standards>. Accessed September 2020.

———. 2020 (September 14). City Council Resolution No. 20-4784: A Resolution of the City Council of The City of Lathrop to Find The Action Exempt From The California Environmental Quality Act ("CEQA"), Adopt The Proposed Thresholds of Significance and Screening Criteria for The Purpose of Analyzing Transportation Impacts Under CEQA Related to Vehicle Miles Traveled ("VMT").

Transportation Research Board. 2016. *Highway Capacity Manual – 6<sup>th</sup> Edition*.

## Section 4.5, Air Quality

California Air Resources Board. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available: <https://ww3.arb.ca.gov/ch/handbook.pdf>. Accessed July 24, 2020.

———. 2013. *California Almanac of Emissions and Air Quality – 2013 Edition*. Available: <https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac>. Accessed August 31, 2020.

———. 2016. *California Ambient Air Quality Standards Homepage*. Available: [https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?\\_ga=2.91544986.1670022999.1581444055-2135472955.1568052658](https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.91544986.1670022999.1581444055-2135472955.1568052658). Accessed February 11, 2020.

———. 2019a. *EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One*. Published November 20, 2019. Available: [https://ww3.arb.ca.gov/msei/emfac\\_off\\_model\\_adjustment\\_factors\\_final\\_draft.pdf](https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf). Accessed November 18, 2020.

———. 2019b. *Air Quality Standards and Area Attainment Designations*.

———. 2020. *Overview: Diesel Exhaust and Health webpage*. Available: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed November 20, 2020.

California Air Pollution Control Officers Association. 2010. *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*. Available: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>. Accessed July 24, 2020.

———. 2017. *California Emissions Estimator Model User's Guide Version 2016.3.2, Last Updated November 2017*. Available: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4). Accessed July 24, 2020.

- CARB. See California Air Resources Board.
- CAPCOA. See California Air Pollution Control Officers Association.
- City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed August 2020.
- EPA. See U.S. Environmental Protection Agency.
- Governor's Office of Planning and Research. 2017. State of California General Plan 2017 Guidelines. Available: [http://opr.ca.gov/docs/OPR\\_COMPLETE\\_7.31.17.pdf](http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf). Accessed February 12, 2020.
- National Highway Safety Transportation Administration. 2018. Safer Affordable Fuel Efficient (SAFE) Vehicles Proposed Rule for Model Years 2021-2026. Last updated September 27, 2018. Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-proposed>. Accessed February 11, 2020.
- NHSTA. See National Highway Safety Transportation Administration.
- OPR. See Governor's Office of Planning and Research.
- San Joaquin Valley Air Pollution Control District. 2015a. *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts*. Available: <https://www.valleyair.org/transportation/GAMAQI-2015/FINAL-DRAFT-GAMAQI.PDF>. Accessed August 7, 2020.
- . 2015b. Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. Dated April 2, 2015. Available: <https://www.courts.ca.gov/documents/7-s219783-ac-san-joaquin-valley-unified-air-pollution-control-dist-041315.pdf>. Accessed March 4, 2020.
- Seinfeld, J. H., and S. N. Pandis. 1996. *Atmospheric Chemistry and Physics: From Air Pollution to Climate Change*. John Wiley & Sons, Inc. Hoboken, NJ.
- SJVAPCD. See San Joaquin Valley Air Pollution Control District.
- South Coast Air Quality Management District. 2015. Dated April 3, 2015. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and [Proposed] Brief of Amicus Curiae. Available: <https://www.courts.ca.gov/documents/9-s219783-ac-south-coast-air-quality-mgt-dist-041315.pdf>. Accessed March 4, 2020.
- U.S. Environmental Protection Agency. 2016. National Ambient Air Quality Standards Table. Available: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>. Accessed February 11, 2020.
- . 2018. Criteria Air Pollutants Homepage. Available: <https://www.epa.gov/criteria-air-pollutants>. Accessed February 12, 2020.
- . 2020. Greenbook: 8-Hour Ozone (2015) Designated Area by State/Area/County Report. Data is current as of February 29, 2020. Available: <https://www3.epa.gov/airquality/greenbook/jbcs.html#CA>. Accessed March 3, 2020.
- Western Regional Climate Center. 2002. Prevailing Wind Direction. Available: [https://wrcc.dri.edu/Climate/comp\\_table\\_show.php?stype=wind\\_dir\\_avg](https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg). Accessed February 12, 2020.
- . 2016. Period of Record Monthly Climate Summary: Tracy Pumping Plant, California (049001). Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9001>. Accessed February 12, 2020.
- WRCC. See Western Regional Climate Center.

## Section 4.6, Noise and Vibration

California Building Standards Commission. 2019 (July). *2019 California Green Building Standards Code*. Sacramento, CA.

- California Department of Transportation. 2013a (September). *Transportation and Construction Vibration Guidance Manual*. Sacramento, CA: Noise, Division of Environmental Analysis. Sacramento, CA.
- . 2013b (September). *Technical Noise Supplement*. California Department of Transportation Division of Environmental Analysis. Sacramento, CA. Prepared by ICF Jones & Stokes.
- Caltrans. See California Department of Transportation.
- City of Lathrop. 2004 (November). *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed August 26, 2020.
- . 2020 (May). City of Lathrop Municipal Code. Available: <https://qcode.us/codes/lathrop/>. Accessed August 26, 2020.
- EPA. See U.S. Environmental Protection Agency.
- Federal Highway Administration. 2004. Traffic Noise Model, Version 2.5. Available for download at [https://www.fhwa.dot.gov/environment/noise/traffic\\_noise\\_model/purchasing\\_tnm/](https://www.fhwa.dot.gov/environment/noise/traffic_noise_model/purchasing_tnm/). Accessed April 4, 2017.
- Federal Transit Administration. 2018 (September). *Transit Noise and Vibration Impact Assessment Manual*. Washington, D.C. Available: [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf). Accessed October 2020.
- FHWA. See Federal Highway Administration.
- FTA. See Federal Transit Administration.
- Governor's Office of Planning and Research. 2017 (July). *State of California General Plan Guidelines*. Sacramento, CA. Available: [https://opr.ca.gov/docs/OPR\\_COMPLETE\\_7.31.17.pdf](https://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf). Accessed October 2020.
- Illingworth & Rodkin. 2010 (June). *Lynbrook High School Field Improvements and Lighting Project Environmental Noise Assessment*. San Jose, CA.
- . 2013a (September). *Santa Teresa High School Stadium Lighting Project, Environmental Noise Assessment*. San Jose, CA.
- . 2013b (September). *Silver Creek High School Sports Lighting Project Environmental Noise Assessment*. Los Altos, CA.
- National Cooperative Highway Research Program. 2018 (October). *Project 25-49 Data*. Washington, D.C. Available: <https://apps.trb.org/cmsfeed/trbnetprojectdisplay.asp?projectid=3889>
- NCHRP. See National Cooperative Highway Research Program.
- OPR. See Governor's Office of Planning and Research.
- U.S. Environmental Protection Agency. 1973. *Legal Compilation on Noise, Vol. 1*, p. 2-104.

## Section 4.7, Geology and Soils

- Bryant, W.A. and E.W. Hart. 2007. Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps. (Special Publication 42 Interim Revision 2007). Sacramento, California: California Division of Mines and Geology.
- City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. Lathrop, CA. State Clearinghouse No. 1993112027. Prepared by EDAW, Sacramento, CA.
- . 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed March 2020.

- ENGEO. 2002a. *Baseline Geotechnical Assessment: River Islands, Lathrop, California*. Cited in City of Lathrop 2002.
- \_\_\_\_\_. 2002b. *Preliminary Levee Evaluation: River Islands, Lathrop, California*. Cited in City of Lathrop 2002.
- \_\_\_\_\_. 2018a (December 14). *Site-Specific Evaluation of Seismic Liquefaction and Settlement: River Islands, Lathrop, California*. Prepared for River Islands Development LLC, Lathrop, CA.
- \_\_\_\_\_. 2018b (December 17). *Geotechnical Exploration: River Islands, Phase 2, Lathrop, California*. Prepared for River Islands Development LLC, Lathrop, CA.
- Natural Resources Conservation Service. 2019 (July). Web Soil Survey National Cooperative Soil Survey. Available: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed June 4, 2020.
- U.S. Geological Survey. 1991. National Geologic Map Database. Geologic map of the San Francisco-San Jose quadrangle, California, 1:250,000. Available: [https://ngmdb.usgs.gov/Prodesc/proddesc\\_519.htm](https://ngmdb.usgs.gov/Prodesc/proddesc_519.htm). Accessed March 19, 2020.
- U.S. Geological Survey, Geologic Names Committee. 2010. Divisions of Geologic Time—Major Chronostratigraphic and Geochronologic Units: U.S. Geological Survey Fact Sheet 2010–3059. Available: <http://pubs.usgs.gov/fs/2010/3059/pdf/FS10-3059.pdf>. Accessed March 19, 2020.
- ### Section 4.8, Hydrology and Water Quality
- California Department of Water Resources. 2012 (June). *2012 Central Valley Flood Protection Plan*. Prepared for the Central Valley Flood Protection Board. Available: <https://cawaterlibrary.net/document/central-valley-flood-protection-plan-2012/>. Accessed August 2020.
- \_\_\_\_\_. 2020. South Delta Temporary Barriers Project. Available: <https://water.ca.gov/Programs/Bay-Delta/Water-Quality-And-Supply/South-Delta-Temporary-Barriers-Project>. Accessed August 10, 2020.
- City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. Lathrop, CA. State Clearinghouse No. 1993112027. Prepared by EDAW, Sacramento, CA.
- \_\_\_\_\_. 2004 (November). *Comprehensive General Plan for the City of Lathrop*. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5251/general\\_plan\\_11-9-04\\_-\\_entire\\_doc.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5251/general_plan_11-9-04_-_entire_doc.pdf). Accessed March 4, 2020.
- \_\_\_\_\_. 2019 (July). *Draft Environmental Impact Report for the Lathrop Integrated Water Resources Master Plan*. Lathrop, CA. SCH#2019029106). Prepared by DeNovo Planning Group, El Dorado Hills, CA.
- \_\_\_\_\_. 2020 (April). *Sustainable Groundwater Management*. Available: <https://www.ci.lathrop.ca.us/publicworks/page/sustainable-groundwater-management>. Accessed March 4, 2020.
- California Office of Environmental Health Hazard Assessment. 2007 (March). *Health Advisory: Draft Safe Eating Guidelines for Fish and Shellfish from the San Joaquin River and South Delta (Contra Costa, San Joaquin, Stanislaus, Merced, Madera, and Fresno Counties)*.
- \_\_\_\_\_. 2018 (September 21). *Fish Advisories, Delta, Central and South*. Available: <https://oehha.ca.gov/fish/advisories/delta-central-and-south-0>. Accessed August 10, 2020.
- CCWD. See Contra Cost Water District.
- Contra Costa Water District. 1998 (September 3). *Future Water Supply Implementation Draft Environmental Impact Report*. State Clearinghouse No. 97072064. Prepared by EDAW, Sacramento, CA. Cited in City of Lathrop 2002.
- DWR. See California Department of Water Resources.
- EDAW, Inc. 2001. *Environmental Impact Report for the Lathrop Water, Wastewater, and Recycled Water Master Plan*. Sacramento, California. Prepared for City of Lathrop, California. Cited in City of Lathrop 2002.

- ENGEO. 2020. River Islands Groundwater Elevation Study and Surface Water Quality Analysis. Quarterly monitoring results. Quarterly reports available for review on request.
- EPA. See U.S. Environmental Protection Agency.
- GEI Consultants, Inc. 2020. *Managing Groundwater in the Tracy Subbasin*. Available: [tracysubbasin.org](http://tracysubbasin.org). Accessed March 4, 2020.
- Larry Walker Associates. 2015 (June). *Multi-Agency Post Construction Stormwater Standards Manual*. Available: <https://www.lodi.gov/DocumentCenter/View/808/Post-Construction-Standards-Manual-PDF>. Accessed March 4, 2020.
- OEHHA. See California Office of Environmental Health Hazard Assessment.
- PACE. 2020 (November). Stormwater Analysis Report – River Islands Phase 2 Stormwater Mitigation – Revision 2. Prepared for River Islands.
- State Water Resources Control Board. 1995 (May). *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*. Available: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/wq\\_control\\_plans/1995wqcp/docs/1995wqcpb.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/wq_control_plans/1995wqcp/docs/1995wqcpb.pdf). Accessed March 3, 2020.
- . 1999. *Environmental Report for Implementation of the 1995 Bay/Delta Water Quality Control Plan*. Sacramento, CA.
- . 2019 (March). *Bay-Delta Plan Update: Amendments and Substitute Environmental Document (SED) for Lower San Joaquin River and Southern Delta*. Available: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/bay\\_delta/bay\\_delta\\_plan/water\\_quality\\_control\\_planning/2018\\_sed/](https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/2018_sed/). Accessed March 3, 2020.
- Woodard & Curran. 2020 (September). *River Islands Phase 2 Development Water Supply Assessment*.

## Section 4.9, Hazardous Materials and Public Health

- City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. Lathrop, CA. SCH No. 1993112027. Prepared by EDAW, Sacramento, CA.
- . 2004 (November). *Comprehensive General Plan for the City of Lathrop*. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5251/general\\_plan\\_11-9-04\\_-\\_entire\\_doc.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5251/general_plan_11-9-04_-_entire_doc.pdf). Accessed March 4, 2020.
- Department of Toxic Substance Control. 2020. EnviroStor. Available: <https://www.envirostor.dtsc.ca.gov/public/search?basic=True>. Accessed June 12, 2020.
- DTSC. See Department of Toxic Substance Control.
- ENGEO. 2020 (March). Phase I Environmental Site Assessment, River Islands Phase 2, Lathrop, California. Prepared for Califia LLC, Lathrop, CA.
- San Joaquin County Office of Emergency Services. 2019. San Joaquin County Evacuation Maps. Available: <http://www.sjmap.org/evacmaps/> Last updated April 5, 2019. Accessed March 10, 2020.
- State Water Resources Control Board. 2020. GeoTrack. Available: <https://geotracker.waterboards.ca.gov/>. Accessed June 12, 2020.
- SWRCB. See State Water Resources Control Board.

## Section 4.10, Public Services

- California Department of Education. 2020a. NextGeneration STEAM Enrollment Multi-Year Summary by Ethnicity. <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39684860131789&agglevel=School&year=2019-20&ro=y>. Accessed April 14, 2020.



- . 2020b. Banta Elementary School Enrollment Multi-Year Summary by Ethnicity. Available: <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39684866041750&aggllevel=school&year=2019-20>. Accessed April 14, 2020.
- . 2020c. Duncan-Russell Continuation High School Enrollment Multi-Year Summary by Ethnicity. Available: <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39754993937976&aggllevel=School&year=2019-20&ro=y>. Accessed July 24, 2020.
- . 2020d. George & Evelyn Stein Continuation High School Enrollment Multi-Year Summary by Ethnicity. Available: <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39754990114140&aggllevel=School&year=2019-20&ro=y>. Accessed July 24, 2020.
- . 2020e. John C. Kimball High School Enrollment Multi-Year Summary by Ethnicity. Available: <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39754990119040&aggllevel=School&year=2019-20&ro=y>. Accessed April 14, 2020.
- . 2020f. Tracy High School Enrollment Multi-Year Summary by Ethnicity. <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39754993938008&aggllevel=School&year=2019-20&ro=y>. Accessed April 14, 2020.
- . 2020g. Merrill F. West High School Enrollment Multi-Year Summary by Ethnicity. <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39754993930302&aggllevel=School&year=2019-20&ro=y>. Accessed April 14, 2020.
- . 2020h. River Islands Technology Academy Enrollment Multi-Year Summary by Ethnicity. <https://dq.cde.ca.gov/dataquest/dqcensus/EnrEthYears.aspx?cds=39103970127134&aggllevel=school&year=2019-20>. Accessed November 19, 2020.
- California Department of Education, EdSource, and the Fiscal Crisis and Management Assistance Team/California School Information Services. 2021. Ed-Data for Banta Elementary School District. Available: <http://www.ed-data.org/district/San-Joaquin/Banta-Elementary>. Accessed January 2021.
- California Department of Resources Recycling and Recovery. 2020. SWIS Facility Detail, Foothill Sanitary Landfill (39-AA-0004). Available: <https://www2.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0004/Detail/>. Accessed April 16, 2020.
- California Highway Patrol. 2020. Nearest CHP Offices. Available: <https://www.chp.ca.gov/find-an-office>. Accessed July 2020.
- California Integrated Waste Management Board. 2020. Jurisdiction Diversion Disposal Rate Summary San Joaquin County. Available: <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006>. Accessed April 16, 2020.
- CalRecycle. See California Department of Resources Recycling and Recovery.
- CHP. See California Highway Patrol.
- CIWMB. See California Integrated Waste Management Board.
- City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed March 14, 2020.
- . 2020a. Adopted Budget Fiscal Years 2019-2020. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/finance/page/5573/fy\\_2019\\_2021\\_adopted\\_budget\\_web.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/finance/page/5573/fy_2019_2021_adopted_budget_web.pdf). Accessed March 18, 2020.
- . 2020b. Police Staffing. Available: <https://www.ci.lathrop.ca.us/police/page/staffing>. Accessed March 25, 2020.

- . 2020c. Animal Services Department. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/animal\\_services/page/2421/animal\\_control\\_brochure.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/animal_services/page/2421/animal_control_brochure.pdf). Accessed April 1, 2020.
- Lathrop-Manteca Fire Protection District. 2020a. Fiscal Year 2019/2020 Annual Budget and Operation. Available: <http://nebula.wsimg.com/4cf5b42c8edd163bb18fe80c5c5745ee?AccessKeyId=1ED1E39597A74FF23EFF&disposition=0&alloworigin=1>. Accessed March 14, 2020.
- . 2020b. Incident and Training Report. Available: <http://nebula.wsimg.com/dd9e134596d02af1d7c43fd4bec70824?AccessKeyId=1ED1E39597A74FF23EFF&disposition=0&alloworigin=1>. Accessed March 14, 2020.
- LMFD. See Lathrop-Manteca Fire Protection District.
- San Joaquin County Solid Waste Division. 2020. Foothill Sanitary Landfill. Available: <https://www.sjgov.org/solidwaste/dynamic?id=22997>. Accessed April 14, 2020.
- Tracy Unified School District. 2018. Development School Fee Justification Study. Prepared by Cooperative Strategies. Available: [https://resources.finalsite.net/images/v1565056373/tracyk12caus/ndpqkduhruecqsdxo40/\\_031318RECREPORTDEVFEEESTUDIESATCH2sepcover101112111413sepcover.pdf](https://resources.finalsite.net/images/v1565056373/tracyk12caus/ndpqkduhruecqsdxo40/_031318RECREPORTDEVFEEESTUDIESATCH2sepcover101112111413sepcover.pdf). Accessed April 15, 2020.
- . 2020. Schools. Available: <https://www.tracy.k12.ca.us/schools>. Retrieved March 18, 2020.
- TUSD. See Tracy Unified School District.

#### Section 4.11, Public Utilities

- California Energy Commission. 2017. Clean Energy and Pollution Reduction Act Overview. Available: <http://www.energy.ca.gov/sb350/index.html>. Accessed March 1, 2017.
- . 2018 (June). *2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings*. Available: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>. Accessed February 13, 2020.
- . 2019 (February). *2019 Integrated Energy Policy Report Update, Executive Summary*. Available: <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2020-integrated-energy-policy-report-update>. Accessed February 13, 2020.
- California Public Utilities Commission. 2008. *2008 Energy Efficiency Strategic Plan Fact Sheet*. Available: <http://www.cpuc.ca.gov/General.aspx?id=4125>. Accessed February 13, 2019.
- City of Lathrop. 2014 (April). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum IV*. Lathrop, CA. Prepared by Ascent Environmental, Inc. Sacramento, CA.
- . 2019a (December). *Water System Master Plan, Final-December 2019*. Lathrop, CA. Prepared by EKI Environment & Water, Inc. Burlingame, CA.
- . 2019b (December). *Wastewater System Master Plan, Final-December 2019*. Lathrop, CA. Prepared by EKI Environment & Water, Inc. Burlingame, CA.
- . 2019c (December). *Recycled Water System Master Plan, Final-December 2019*. Lathrop, CA. Prepared by EKI Environment & Water, Inc. Burlingame, CA.
- . 2020 (April). *Sustainable Groundwater Management*. Available: <https://www.ci.lathrop.ca.us/publicworks/page/sustainable-groundwater-management>. Accessed March 4, 2020.
- ENGEO. 2020. River Islands Groundwater Elevation Study and Surface Water Quality Analysis. Quarterly monitoring results. Quarterly reports available for review on request.

- GEI Consultants, Inc. 2020. *Managing Groundwater in the Tracy Subbasin*. Available: [tracysubbasin.org](http://tracysubbasin.org). Accessed March 4, 2020.
- Lathrop Irrigation District. 2020. Lathrop Irrigation District website. Available: <https://www.lathropirrigation.com/>. Accessed July 2020.
- PACE. See Pacific Advanced Civil Engineering, Inc.
- Pacific Advanced Civil Engineering, Inc. 2020a (November). *River Islands at Lathrop Phase 2 Sewer Technical Report – Revision 1*. Prepared for River Islands.
- . 2020b (November). *Stormwater Analysis Report – River Islands Phase 2 Stormwater Mitigation – Revision 2*. Prepared for River Islands.
- . 2021a (January). *River Islands at Lathrop Potable Water Technical Report – Revision 3*. Prepared for River Islands.
- . 2021b (January). *River Islands at Lathrop Final Non-Potable Water Technical Report – Revision 2*. Prepared for River Islands.
- Power Systems Design. 2020 (July 27). Letter to Ramon Batista of River Islands at Lathrop providing an evaluation of electricity and natural gas demands and system capabilities. Walnut Creek, CA.
- PSD. See Power Systems Design.
- San Joaquin County Department of Public Works. 2016. *Improvement Standards*. Adopted November 2014; reflects amendments through July 2016. Available: <https://www.sjgov.org/departments/pwk/permits>. Accessed July 2020.
- Woodward & Curran, Inc. 2020 (September). *River Islands Phase 2 Development Water Supply Assessment*.

## Section 4.12, Recreation

- City of Lathrop. 1995. *City of Lathrop Bicycle Transportation Plan*. Adopted August 9, 1995. Available: [http://www.ci.lathrop.ca.us/sites/default/files/fileattachments/community\\_development/page/5556/bicycle\\_transportation\\_plan\\_adopted\\_8-9-95.pdf](http://www.ci.lathrop.ca.us/sites/default/files/fileattachments/community_development/page/5556/bicycle_transportation_plan_adopted_8-9-95.pdf). Prepared by RMM Design Group, San Luis Obispo / Modesto, CA.
- . 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed March 2020.
- . 2019 (June 7). *Request for Proposals, Development of Inaugural Parks and Recreation Master Plan*. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/parks\\_and\\_recreation/page/6183/city\\_of\\_lathrop\\_comprehensive\\_inaugural\\_parks\\_facilities\\_and\\_recreation.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/parks_and_recreation/page/6183/city_of_lathrop_comprehensive_inaugural_parks_facilities_and_recreation.pdf). Accessed March 2020.
- Jones, Zach. Director, Department of Parks and Recreation. City of Lathrop, Lathrop, CA. March 31, 2020—email to Sarah Henningsen of Ascent Environmental regarding the City of Lathrop's existing parks acreage.
- River Islands. 2020 (December). *River Islands Phase 2 Parks and Open Space Master Plan*. Prepared by O'Dell Engineering, Modesto, CA.
- U.S. Census Bureau. 2020. QuickFacts, Lathrop city, California. Population estimate for 2018. Available: <https://www.census.gov/quickfacts/lathropcitycalifornia>. Accessed March 16, 2020.

## Section 4.13, Agricultural Resources

- California Department of Conservation. 2020. Farmland Security Zones. Available: <https://www.conservation.ca.gov/dlrp/wa/Pages/Farmland-Security-Zones.aspx>. Accessed July 2020.
- City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed March 2020.

DOC. See California Department of Conservation.

San Joaquin Council of Governments. 2000 (November 14). *San Joaquin County Multiple-Species Habitat Conservation and Open Space Plan (SJMSCP)*. Prepared by a consortium of local, state and federal agencies. <https://www.sjcog.org/DocumentCenter/View/5/Habitat-Planpdf?bidId=>. Accessed March 2020.

———. 2020. Farmland and Urbanization. San Joaquin County Land Conversion, 1990-2016. Available: <https://www.sjcog.org/257/Farmland-and-Urbanization>. Accessed March 2020.

SJGOG. See San Joaquin Council of Governments.

San Joaquin County. 2020. District Viewer. Available: <http://sjmap.org/DistrictViewer/>. Accessed July 15, 2020.

#### Section 4.14, Terrestrial Biology

Ascent Environmental and Roberson-Bryan. 2016. River Islands at Lathrop Project Biological Assessment. Prepared for the U.S. Army Corps of Engineers, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. On behalf of River Islands at Lathrop. May 2016.

California Department of Fish and Wildlife. 2012. Staff Report on Burrowing Owl Mitigation. Sacramento, California.

———. 2019 (April). Evaluation of the Petition from the Xerces Society, Defenders of Wildlife, and the Center for Food Safety to List Four Species of Bumble Bees as Endangered Under the California Endangered Species Act.

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants (online edition, v8-02). Sacramento, CA. Available: <http://www.rareplants.cnps.org>. Accessed March 2020.

California Natural Diversity Database. 2020. Rarefind 5. Commercial Version. Results of online record search. California Natural Heritage Division, California Department of Fish and Wildlife. Sacramento, CA. Accessed March 2020.

California Wildlife Habitat Relationship System. 2008. Life History Account for Yellow Headed Blackbird (*Xanthocephalus xanthocephalus*).

CDFW. See California Department of Fish and Wildlife.

City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed August 2020.

CNDDDB. See California Natural Diversity Database.

CNPS. See California Native Plant Society.

CWHR. See California Wildlife Habitat Relationship System.

San Joaquin Council of Governments. 2000a (November 14). *San Joaquin County Multiple-Species Habitat Conservation and Open Space Plan (SJMSCP)*. Prepared by a consortium of local, state and federal agencies. <https://www.sjcog.org/DocumentCenter/View/5/Habitat-Planpdf?bidId=>. Accessed March 2020.

———. 2000b (November 15). *Final EIR/EIS San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)*. State Clearinghouse No. 97012055.

SJGOG. See San Joaquin Council of Governments.

#### Section 4.15, Fisheries

Anadromous Fish Restoration Program Core Group. 1995. *Working Paper on Restoration Needs: Habitat Restoration Actions to Double Natural Production of Anadromous Fish in the Central Valley of California*. Prepared for U.S. Fish and Wildlife Service, Sacramento, California.

- Ascent Environmental and Robertson-Bryan. 2016 (May). River Islands at Lathrop Project Biological Assessment. Prepared for the U.S. Army Corps of Engineers, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. On behalf of River Islands at Lathrop.
- Baxter, Randy. Associate fisheries biologist. California Department of Fish and Game, Stockton, California. January 14-20, 1994—telephone conversations. Cited in City of Lathrop 2003.
- California Department of Fish and Wildlife. 2019. Winter-Run Chinook Salmon. Available: <https://www.wildlife.ca.gov/Conservation/Fishes/Chinook-Salmon/Winter-run>.
- City of Lathrop. 2003 (January 22). *Final Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Inc., Sacramento, CA.
- \_\_\_\_\_. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5251/general\\_plan\\_11-9-04\\_-\\_entire\\_doc.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5251/general_plan_11-9-04_-_entire_doc.pdf). Accessed March 3, 2020.
- Damon, L. J., S. B. Slater, R. D. Baxter, and R. W. Fujimura. 2016. Fecundity and Reproductive Potential of Wild Female Delta Smelt in the Upper San Francisco Estuary, California. *California Fish and Game* 102:188–210.
- Dubois, J., M. D. Harris, J. Mauldin. 2014. *2013 Sturgeon Report Card: Preliminary Data Report*. Prepared for California Department of Fish and Wildlife. May 8, 2014.
- Dubois, J., M. D. Harris. 2015. *2014 Sturgeon Fishing Report Card: Preliminary Data Report*. February 10, 2015. Available: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentId=93524>
- \_\_\_\_\_. 2016. *2015 Sturgeon Report Card: Preliminary Data Report*. Prepared for California Department of Fish and Wildlife. March 16, 2016.
- Dubois, J., A. Danos. 2017. *2016 Sturgeon Report Card: Preliminary Data Report*. Prepared for California Department of Fish and Wildlife. March 22, 2017.
- \_\_\_\_\_. 2018. *2017 Sturgeon Report Card: Preliminary Data Report*. Prepared for California Department of Fish and Wildlife. April 13, 2018.
- EDAW, Inc. 1998. Future Water Supply Implementation Project Environmental Impact Report. Sacramento, California. Prepared for Contra Costa Water District, Concord, California. Cited in City of Lathrop 2003.
- ENGEO. 2020. River Islands Groundwater Elevation Study and Surface Water Quality Analysis. Quarterly monitoring results. Quarterly reports available for review on request.
- Hanni J., B. Poytress, and H. Blaylock-Herod. 2006. *Spatial and Temporal Distribution Patterns of Pacific and River Lamprey in the Sacramento and San Joaquin Rivers and Delta*. American Fisheries Society, 40th annual meeting of the American Fisheries Society California-Nevada Chapter. 3/30-4/1/2006. San Luis Obispo, CA.
- Kimmerer, W. J. 2008. *Losses of Sacramento River Chinook Salmon and Delta Smelt to Entrainment in Water Diversions in the Sacramento–San Joaquin Delta*. *San Francisco Estuary and Watershed Science* 6.
- McEwan, D. and T.A. Jackson. 1996. Steelhead restoration and management plan for California. California Department of Fish and Game. 234 p.
- Meng, L., and P. B. Moyle. 1995. Status of Splittail in the Sacramento-San Joaquin Estuary. *Transactions of the American Fisheries Society* 124(4):538–549.
- Moyle, P., J. E. Williams, and E. D. Wikramanayake. 1989. Fish Species of Special Concern of California. Department of Wildlife and Fisheries Biology, University of California, Davis. Davis California.

- Moyle, P., R. M. Yoshiyama, J. E. Williams, and E. D. Wikramanayake. 1995. *Fish Species of Special Concern of California*, Second Edition. Department of Wildlife and Fisheries Biology, University of California, Davis. Davis California.
- Moyle, P. 2002. *Inland Fishes of California*. Berkeley and Los Angeles, CA: University of California Press.
- Moyle, P.B., R.M. Quinones, J.V. Katz, and J. Weaver. 2015. *Fish Species of Special Concern in California*. Third Edition. California Department of Fish and Wildlife. Sacramento, California.
- National Marine Fisheries Service. 2010 (December). *Federal Recovery Outline North American Green Sturgeon Southern Distinct Population*. Southwest Region.
- \_\_\_\_\_. 2014 (July). *Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-Run Chinook Salmon and Central Valley Spring-Run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead*. West Coast Region. Sacramento, CA.
- National Oceanic and Atmospheric Administration - Fisheries. 2019. First Reintroduced Salmon Return to California Rivers in a Critical Step to Recovery. [Web Article]. Available: [https://archive.fisheries.noaa.gov/wcr/stories/2019/12\\_07122019-first-cal-salmon-returns.html](https://archive.fisheries.noaa.gov/wcr/stories/2019/12_07122019-first-cal-salmon-returns.html). Accessed March 2020.
- NMFS. See National Marine Fisheries Service.
- NOAA. See National Oceanic and Atmospheric Administration – Fisheries.
- Nobriga, M. L., T. R. Sommer, F. Feyrer, and K. Fleming. 2008. Long-Term Trends in Summertime Habitat Suitability for Delta Smelt. *San Francisco Estuary and Watershed Science* 6.
- PACE. 2020 (November). Stormwater Analysis Report – River Islands Phase 2 Stormwater Mitigation – Revision 2. Prepared for River Islands.
- San Joaquin Council of Governments. 2000 (November 14). *San Joaquin County Multiple-Species Habitat Conservation and Open Space Plan (SJMSCP)*. Prepared by a consortium of local, state and federal agencies. <https://www.sjcog.org/DocumentCenter/View/5/Habitat-Planpdf?bidId=>. Accessed March 2020.
- SJGOG. See San Joaquin Council of Governments.
- State Water Resources Control Board and U.S. Army Corps of Engineers. 1995. *Draft Environmental Impact Report and Environmental Impact Statement: Delta Wetlands Project*. Volume 2: Appendices. Sacramento, California. Prepared by Jones & Stokes Associates, Inc., Sacramento, California. Cited in City of Lathrop 2003.
- Stuart, Jeff. Fishery Biologist NOAA Fisheries West Coast Region. Sacramento, CA. June 11, 2020—email to Keith Whitener of Robertson-Bryan, Inc. regarding the temporal occurrence of steelhead in the Delta/San Joaquin River.
- Sweetnam, D. 1997. Delta smelt investigations. Interagency Ecological Program for the Sacramento-San Joaquin Estuary Newsletter 10: 32-34.
- SWRCB and USACE. See State Water Resources Control Board and U.S. Army Corps of Engineers.
- USFWS. See U.S. Fish and Wildlife Service.
- U.S. Fish and Wildlife Service. 1997. Abundance and Survival of Juvenile Chinook Salmon in the Sacramento-San Joaquin Estuary. 1994 Annual Progress Report: Sacramento-San Joaquin Estuary Fishery Resource Office. Stockton, California.
- \_\_\_\_\_. 2011 (January). Juvenile Fish Monitoring and Abundance and Survival of Chinook Salmon in the Sacramento-San Joaquin Estuary. 2006 Annual Progress Report. Stockton Fish and Wildlife Office. Stockton, CA.

- \_\_\_\_\_. 2018. Confirmed in Stanislaus River for the First Time, A Green Sturgeon Highlights Benefits of Longtime Research and Restoration Efforts. [Web Article] Available: [https://www.fws.gov/cno/newsroom/highlights/2018/green\\_sturgeon/](https://www.fws.gov/cno/newsroom/highlights/2018/green_sturgeon/). Accessed: March 2020.
- \_\_\_\_\_. 2019 (October). *Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the Central Valley Project and State Water Project*.
- Wang, J. C. S. and R. L. Brown. 1993. Observations of Early Life Stages of Delta Smelt (*Hypomesus transpacificus*) in the Sacramento-San Joaquin Estuary in 1991, with a Review of the Ecological Status in 1988 to 1990. (FSI BIO-IATR/93-35, Technical Report No. 35, Interagency Ecological Studies Program for the Sacramento-San Joaquin Estuary.) California Department of Water Resources. Sacramento, California. Cited in City of Lathrop 2003.
- Waples, R. S. 1991. *Definition of "Species" under the Endangered Species Act: Application to Pacific Salmon*. U.S. Department of Commerce, NOAA Tech Memo. NMFS F/NWC-194.
- Woodard & Curran. 2020 (September). *River Islands Phase 2 Development Water Supply Assessment*.

#### Section 4.16, Cultural and Tribal Cultural Resources

- City of Lathrop. 2002 (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by EDAW, Sacramento, CA.
- \_\_\_\_\_. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed March 14, 2020.
- Dolan, Christy, M.A. 2002. *Historical Architecture Assessment for the River Islands at Lathrop Project*. Prepared for City of Lathrop. Prepared by EDAW, Inc. Cited in City of Lathrop 2002.
- Gross, Charlane, M.A. 2002. *Cultural Resources Assessment for the River Islands at Lathrop Project*. Prepared for City of Lathrop. Prepared by EDAW, Inc. Cited in City of Lathrop 2002. [confidential]

#### Section 4.17, Aesthetics

- City of Lathrop. 2002a (October 16). *Draft Subsequent Environmental Impact Report for the River Islands at Lathrop Project*. Lathrop, CA. SCH No. 1993112027. Prepared by EDAW, Sacramento, CA.
- \_\_\_\_\_. 2002b (October). *River Islands at Lathrop Urban Design Concept*. Available: [http://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5550/river\\_islands\\_urban\\_design\\_concept\\_chapters\\_1-4.pdf](http://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5550/river_islands_urban_design_concept_chapters_1-4.pdf). Accessed March 5, 2020.
- \_\_\_\_\_. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5251/general\\_plan\\_11-9-04\\_-\\_entire\\_doc.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5251/general_plan_11-9-04_-_entire_doc.pdf). Accessed March 3, 2020.

#### Section 4.18, Energy

- Batista, Ramon. Director of Planning and Entitlements. River Islands, Lathrop, CA. October 6, 2020—email to Sarah Henningsen of Ascent Environmental regarding Lathrop Irrigation District's forecasts for meeting the state's renewable energy requirements.
- California Air Pollution Control Officers Association. 2017. CalEEMod Users Guide. Available: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4). Accessed August 28, 2020.
- California Department of Transportation. 2008. 2007 *California Motor Vehicle Stock, Travel and Fuel Forecast*. Available: <https://ww2.energy.ca.gov/2008publications/CALTRANS-1000-2008-036/CALTRANS-1000-2008-036.PDF>. Accessed November 4, 2019.

- California Energy Commission. 2018a. (March). 2019 Building Energy Efficiency Standards: Frequently Asked Questions PDF.
- . 2018b. 2018 Total System Electric Generation in Gigawatt Hours. Available: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2018-total-system-electric-generation>. Accessed August 28, 2020.
- . 2020a. *Final 2019 Integrated Energy Policy Report – Clean Version*. Submission date: January 31, 2020. Available: [https://ww2.energy.ca.gov/2019\\_energypolicy/#:~:text=The%20California%20Energy%20Commission%20adopts,an%20update%20every%20other%20year.&text=19%2DIEPR%2D06%20%2D%20Energy,IEPR%2D08%20%2D%20Natural%20Gas%20Assessment](https://ww2.energy.ca.gov/2019_energypolicy/#:~:text=The%20California%20Energy%20Commission%20adopts,an%20update%20every%20other%20year.&text=19%2DIEPR%2D06%20%2D%20Energy,IEPR%2D08%20%2D%20Natural%20Gas%20Assessment). Accessed February 27, 2020.
- . 2020b. California Annual Retail Fuel Outlet Report Results (CEC-A15) Spreadsheets. Available at: <https://www.energy.ca.gov/media/3874>. Accessed August 27, 2020.
- California Energy Commission and California Air Resources Board. 2003. *Reducing California's Petroleum Dependence*. Available: <https://ww3.arb.ca.gov/fuels/carefinery/ab2076final.pdf>. Accessed August 28, 2020.
- Caltrans. See California Department of Transportation.
- CAPCOA. See California Air Pollution Control Officers Association.
- CEC. See California Energy Commission.
- CEC and CARB. See California Energy Commission and California Air Resources Board.
- EIA. See U.S. Energy Information Administration.
- Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency. 2018. *California's Fourth Climate Change Assessment*. Available: <https://www.energy.ca.gov/sites/default/files/2019-07/Statewide%20Reports-%20SUM-CCCA4-2018-013%20Statewide%20Summary%20Report.pdf>. Accessed November 4, 2019.
- Intergovernmental Panel on Climate Change. 2014. *Climate Change 2014 Synthesis Report Summary for Policymakers*. Available: [https://www.ipcc.ch/site/assets/uploads/2018/02/AR5\\_SYR\\_FINAL\\_SPM.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf). Accessed November 4, 2019.
- IPCC. See Intergovernmental Panel on Climate Change.
- Lathrop, City of. 1991. Comprehensive General Plan for the City of Lathrop. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5251/general\\_plan\\_11-9-04\\_-\\_entire\\_doc.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5251/general_plan_11-9-04_-_entire_doc.pdf). Accessed February 27, 2020.
- . 2019. City of Lathrop General Plan Update Final Housing Element. Adopted December 9, 2019. Available: [https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning\\_division/page/5271/final\\_housing\\_element\\_adopted\\_12.09.19.pdf](https://www.ci.lathrop.ca.us/sites/default/files/fileattachments/planning_division/page/5271/final_housing_element_adopted_12.09.19.pdf). Accessed July 27, 2020.
- OPR, CEC, and CNRA. See Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency.
- U.S. Energy Information Administration. 2018. California Energy Consumption by End-Use Sector, 2017. Last Updated November 15, 2018. Available: <https://www.eia.gov/state/?sid=CA#tabs-2>. Accessed November 4, 2019.

## Section 4.19, Greenhouse Gas Emissions and Climate Change

- California Air Pollution Control Officers Association. 2016. California Emissions Estimator Model Users Guide. Available: [https://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01\\_user-39-s-guide2016-3-1.pdf?sfvrsn=2](https://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01_user-39-s-guide2016-3-1.pdf?sfvrsn=2). Accessed February 13, 2020.



- California Air Resources Board. 2016. Facts about the Advanced Clean Cars Program. Available: [https://www.arb.ca.gov/msprog/zevprog/factsheets/advanced\\_clean\\_cars\\_eng.pdf](https://www.arb.ca.gov/msprog/zevprog/factsheets/advanced_clean_cars_eng.pdf). Accessed February 13, 2020.
- . 2017 (November). *California's 2017 Climate Change Scoping Plan*. Available: [https://ww3.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf). Accessed February 13, 2020.
- . 2018a. *2018 ZEV Action Plan*. Available: <https://static.business.ca.gov/wp-content/uploads/2019/12/2018-ZEV-Action-Plan-Priorities-Update.pdf>. Accessed February 13, 2020.
- . 2018b. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. Approved by the California Air Resources Board March 22, 2018. Available: <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>. Accessed February 13, 2020.
- . 2019a. EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One. Published November 20, 2019. Available: [https://ww3.arb.ca.gov/msei/emfac\\_off\\_model\\_adjustment\\_factors\\_final\\_draft.pdf](https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf). Accessed November 18, 2020.
- . 2019b (July 11). California Greenhouse Gas Emission Inventory for 2000 to 2017. Available: [https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000\\_2017/ghg\\_inventory\\_trends\\_00-17.pdf](https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf). Accessed February 13, 2020.
- California Department of Finance. 2020. Total Population by County Excel Sheet. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Projections/>. Accessed August 27, 2020.
- California Department of Resources Recycling and Recovery. 2019. Jurisdiction Diversion/Disposal Rate Summary: Sacramento Jurisdiction. Available: <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006>. Accessed February 13, 2020.
- California Energy Commission. 2018 (March). 2019 Building Energy Efficiency Standards: Frequently Asked Questions. Available: [http://www.energy.ca.gov/title24/2019standards/documents/2018\\_Title\\_24\\_2019\\_Building\\_Standards\\_FAQ.pdf](http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf). Accessed February 13, 2020.
- California Environmental Protection Agency, California Natural Resources Agency, California Department of Food and Agriculture, California Air Resources Board, and California Strategic Growth Council. 2019 (January). *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*. Available: <https://ww3.arb.ca.gov/cc/natandworkinglands/draft-nwl-ip-1.3.19.pdf>. Accessed February 13, 2020.
- California Natural Resources Agency. 2018. *Safeguarding California Plan: 2018 Update*. Available: <http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed February 13, 2020.
- CAPCOA. See California Air Pollution Control Officers Association.
- CARB. See California Air Resources Board.
- CEC. See California Energy Commission.
- CNRA. See California Natural Resources Agency.
- City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA. Available: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan-document>. Accessed February 27, 2020.
- Employment Development Department. 2020. Employment Industry Data: Historical Monthly Data Excel Sheet. Available: <https://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html>. Accessed August 27, 2020.

- European Commission Joint Research Centre. 2018 (March 16). Climate Change Promotes the Spread of Mosquito and Tick-Borne Viruses. Available: <https://www.sciencedaily.com/releases/2018/03/180316111311.htm>. Accessed February 13, 2020.
- EPA. See U.S. Environmental Protection Agency.
- Governor's Office of Planning and Research. 2017. Technical Advisory on Evaluation Transportation Impacts in CEQA. Available: [http://opr.ca.gov/docs/20180416-743\\_Technical\\_Advisory\\_4.16.18.pdf](http://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf). Accessed February 13, 2020.
- Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency. 2018 (August 27). *California's Changing Climate: A Summary of Key Findings from California's Fourth Climate Change Assessment*. Available: <https://www.energy.ca.gov/sites/default/files/2019-07/Statewide%20Reports-%20SUM-CCCA4-2018-013%20Statewide%20Summary%20Report.pdf>. Accessed February 13, 2020.
- Intergovernmental Panel on Climate Change. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Available: [http://www.climatechange2013.org/images/report/WG1AR5\\_ALL\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf). Accessed February 13, 2020.
- . 2014. Fifth Assessment Report. Available: [https://www.ipcc.ch/site/assets/uploads/2018/02/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf). Accessed February 13, 2020.
- IPCC. See Intergovernmental Panel on Climate Change.
- Lister, Bradford C. and Andres Garcia. 2018. Climate-Driven Declines in Arthropod Abundance Restructure a Rainforest Food Web. Available: <https://www.pnas.org/content/pnas/115/44/E10397.full.pdf>. Accessed February 13, 2020.
- National Highway Traffic and Safety Administration. 2020 (March 31). NHTSA and EPA Finalize CAFE and Carbon Dioxide Standards for Model Years 2021 – 2026. Available: <https://www.nhtsa.gov/corporate-average-fuel-economy/safe>. Accessed July 28, 2020.
- NHTSA. See National Highway Transportation Safety Administration.
- National Oceanic and Atmospheric Administration. 2019 (February 6). 2018 Fourth Warmest Year in Continued Warming Trend, According to NASA, NOAA. <https://climate.nasa.gov/news/2841/2018-fourth-warmest-year-in-continued-warming-trend-according-to-nasa-noaa/>. Accessed February 13, 2020.
- NOAA. See National Oceanic and Atmospheric Administration.
- OPR. See Governor's Office of Planning and Research.
- San Joaquin Council of Governments. 2018. 2018 Regional Transportation Plan/Sustainable Communities Strategy. Adopted June 2018. Available: <https://www.sjcog.org/DocumentCenter/View/4156/Final-Compiled-RTPSCS-2018>. Accessed February 12, 2020.
- SJCOG. See San Joaquin Council of Governments.
- United Nations. 2015. Paris Agreement. Available: [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf). Accessed February 13, 2020.
- U.S. Environmental Protection Agency. 2019a. Affordable Clean Energy Rule. Available: <https://www.epa.gov/stationary-sources-air-pollution/affordable-clean-energy-rule>. Last updated July 19, 2019. Accessed February 13, 2020.
- . 2019b. Trump Administration Announces One National Program Rule on Federal Preemption of State Fuel Economy Standards. Available: <https://www.epa.gov/newsreleases/trump-administration-announces-one-national-program-rule-federal-preemption-state-fuel>. Last updated September 19, 2019. Accessed February 13, 2020.

Wade, Samuel. Branch chief. Transportation Fuels Branch, Industrial Strategies Division, California Air Resources Board, Sacramento, CA. June 30, 2017—e-mail to Austin Kerr of Ascent Environmental regarding whether the Low Carbon Fuel Standard applies to fuels used by off-road construction equipment.

## Section 4.20, Wildlife

Abatzoglou, J.T. and A.P. Williams. 2016 (October 18). Impact of anthropogenic climate change on wildfire across western U.S. forests. *Proceedings of the National Academy of Sciences* 113(42):11770-11775.

Balch, J. K., B. A. Bradley, J. T. Abatzoglou, R. C. Nagy, E. J. Fusco, and A. L. Mahood. 2017 (March 14). Human-started wildfires expand the fire niche across the United States. *Proceedings of the National Academy of Sciences* 114(11):2946-2951.

CAL FIRE. See California Department of Forestry and Fire Protection.

California Board of Forestry and Fire Protection and California Department of Forestry and Fire Protection. 2018 (August 22). *2018 Strategic Fire Plan for California*. Available: <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf>. Accessed March 23, 2020.

California Department of Forestry and Fire Protection. 2007. *San Joaquin County Draft Fire Hazard Severity Zones in LRA*. Available: [https://osfm.fire.ca.gov/media/6794/fhszl06\\_1\\_map39.pdf](https://osfm.fire.ca.gov/media/6794/fhszl06_1_map39.pdf). Accessed March 24, 2020.

California Governor's Office of Emergency Services. 2017 (October). *State of California Emergency Plan*. Available: [https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/California\\_State\\_Emergency\\_Plan\\_2017.pdf](https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/California_State_Emergency_Plan_2017.pdf). Accessed July 2020.

City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA.

———. 2019. *City of Lathrop General Plan Existing Conditions Report*. Available: [https://static1.squarespace.com/static/5a26dc6564b05f670d0bf079/t/5cf93ffacf33b000014925b9/1559838753359/Lathrop\\_ECR\\_2019.pdf](https://static1.squarespace.com/static/5a26dc6564b05f670d0bf079/t/5cf93ffacf33b000014925b9/1559838753359/Lathrop_ECR_2019.pdf). Accessed March 2020.

San Joaquin County OES. See San Joaquin County Office of Emergency Services.

San Joaquin County Office of Emergency Services. 2019a (December 23). *ESF-04 Fire and Rescue Annex*. Available: <https://www.sjgov.org/department/oes/plans>. Accessed July 2020.

———. 2019b. San Joaquin County Evacuation Maps. River Islands Evacuation Sector, Lathrop, California. Available: <http://www.sjmap.org/evacmaps/>. Last updated July 17, 2019. Accessed July 2020.

———. 2020 (April 23). Draft San Joaquin County Evacuation Map. RD 2062, 2107 – Stewart Mossdale Tract – Evacuation Map.

Schoennagel, T., J.K. Balch, H. Brenkert-Smith, P. E. Dennison, B.J. Harvey, M.A. Krawchuck, N. Mietkiewicz, P. Morgan, M. A. Moritz, R. Rasker, M.G. Turner, and C. Whitlock. 2017 (May 2). Adapt to more wildfire in western North American forests as climate changes. *Proceedings of the National Academy of Sciences* 114(18):4582-4590.

Westerling, A.L., H.G. Hidalgo, D.R. Cayan, and T.W. Swetnam. 2006 (August 18). Warming and earlier spring increase western U.S. forest wildfire activity. *Science* 313(5789):940-943.

## Chapter 5, Cumulative Impacts

CAL FIRE. See California Department of Forestry and Fire Protection.

California Department of Finance. 2019. Population Projections (Baseline 2019). P-1: State Population Projections (2010-2060). San Joaquin County. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Projections/>. Accessed March 2020.

California Department of Forestry and Fire Protection. 2007. San Joaquin County Draft Fire Hazard Severity Zones in LRA. Available: [https://osfm.fire.ca.gov/media/6794/fhszl06\\_1\\_map39.pdf](https://osfm.fire.ca.gov/media/6794/fhszl06_1_map39.pdf). Accessed March 24, 2020.

California Department of Resources Recycling and Recovery. 2020. SWIS Facility Detail, Foothill Sanitary Landfill (39-AA-0004). Available: <https://www2.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0004/Detail/>. Accessed April 16, 2020.

DOF. See California Department of Finance.

San Joaquin Council of Governments. 2000a (November 14). *San Joaquin County Multiple-Species Habitat Conservation and Open Space Plan (SJMSCP)*. Prepared by a consortium of local, state and federal agencies. <https://www.sjcog.org/DocumentCenter/View/5/Habitat-Planpdf?bidId=>. Accessed March 2020.

———. 2000b (November 15). *Final EIR/EIS San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)*. State Clearinghouse No. 97012055.

———. 2020. Farmland and Urbanization. San Joaquin County Land Conversion, 1990-2016. Available: <https://www.sjcog.org/257/Farmland-and-Urbanization>. Accessed March 2020.

San Joaquin County. 2014 (October). *San Joaquin County 2035 General Plan Draft EIR*. Prepared by ESA, San Francisco, CA. Available: <https://www.sjgov.org/commdev/cgi-bin/cdyn.exe/file/Planning/Environmental%20Impact%20Reports/GENERAL%20PLAN%202035%20%20DRAFT%20EIR.pdf>. Accessed March 2020.

SJGOG. See San Joaquin Council of Governments.

## Chapter 6, Growth-Inducing Impacts

City of Lathrop. 2004. *Comprehensive General Plan for the City of Lathrop, California*. Adopted December 17, 1991; reflects amendments through November 9, 2004. Lathrop, CA.

Employment Development Department. 2020 (March). San Joaquin County Profile. Employment by Industry (Not Seasonally Adjusted). Available: <https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSResults.asp?selectedarea=San+Joaquin+County&selectedindex=39&menuChoice=localAreaPro&state=true&geogArea=0604000077&countyName=>. Accessed April 2020.

## Chapter 7, Significant and Unavoidable Impacts

San Joaquin Council of Governments. 2020. Farmland and Urbanization. San Joaquin County Land Conversion, 1990-2016. Available: <https://www.sjcog.org/257/Farmland-and-Urbanization>. Accessed March 2020.

## Chapter 8, Alternatives Analysis

City of Lathrop. 2018 (March). *River Islands at Lathrop Project Subsequent Environmental Impact Report Addendum VI*. State Clearinghouse No. 1993112027. Lathrop, CA. Prepared by Ascent Environmental, Inc., Sacramento, CA.

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