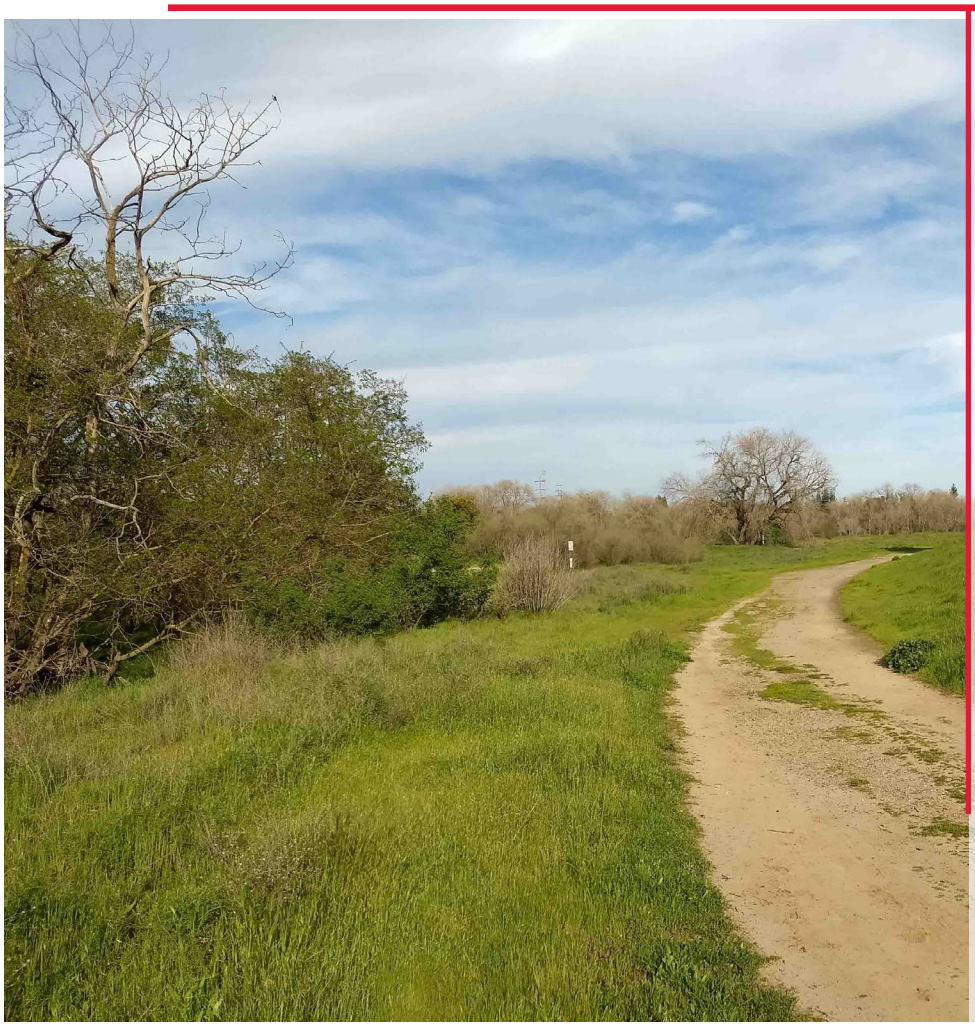
Two Rivers Trail (Phase II)
Initial Study/Proposed Mitigated Negative Declaration



Prepared for:

City of SACRAMENTO

October 2018

Prepared by:

GEI Consultants

Consulting Engineers and Scientists

Two Rivers Trail (Phase II) Initial Study/Proposed Mitigated Negative Declaration

K15125000

Prepared for:

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October 23, 2018

Project No. 1610789

TABLE OF CONTENTS

Tables

Figures

Appendices

ABBREVIATIONS AND ACRONYMS

ADA	Americans with Disabilities Act
ARFCD	American River Flood Control District
ARPP	American River Parkway Plan
BACT	Best Available Control Technology
BMPs	Best Management Practices
BSA	Biological Study Area
Buena Vista	Buena Vista Rancheria of Me-Wuk Indians
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish & Wildlife
CEQA	California Environmental Quality Act
CGS	California Geological Survey
City	City of Sacramento
CNDDB	CDFW Natural Diversity Database
CNPS	California Native Plant Society's
CO	carbon monoxide
CPRR	Central Pacific Railroad
CSUS	California State University at Sacramento
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GPS	global positioning system
HSC	Health and Safety Code
IPAC	Information, Planning, and Conservation System
ITE	Institute of Transportation Engineers
LOS	level of service
MLD	Most Likely Descendant
MRZ-2	
NAHC	Native American Heritage Commission
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NO_2	nitrogen dioxide
OHWM	ordinary high water mark

Parkway	American River Parkway
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas & Electric Company
PM	particulate matter
PRC	Public Resources Code
ROG	reactive organic gases
SASD	Sacramento Area Sewer District
Shingle Springs	Shingle Springs Band of Miwok Indians
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SR	State Route
SRCSD	Sacramento Regional County Sanitation District
SRFCP	Sacramento River Flood Control Project
SRWTP	Sacramento Regional Wastewater Treatment Plant
SVAB	Sacramento Valley Air Basin
SWA	Solid Waste Authority
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
U.S. EPA	United States Environmental Protection Agency
UAIC	United Auburn Indian Community of the Auburn Rancheria
UBC	Uniform Building Code
ULDC	Urban Levee Design Criteria
ULE	Urban Levee Evaluation
UPRR	Union Pacific Rail Road
USACE	U.S. Army Corps of Engineers
UWMP	Urban Water Management Plan
V/C ratio	volume to capacity ratio
VELB	valley elderberry longhorn beetles
WEAP	cultural resources and tribal cultural resources sensitivity and awareness training program
Wilton	Wilton Rancheria
WPCP	Water Pollution Control Plan
WTP	water treatment plants

PROPOSED MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this proposed Mitigated Negative Declaration for the following described project:

Two Rivers Trail (Phase II) [CML-5002(155)] - The proposed project would create 3.4 miles of new Class 1 bicycle and pedestrian trail primarily along the waterside levee toe west from Sutter's Landing Regional Park to the Sacramento Northern Bikeway Trail at North 18th Street, and east from the eastern terminus of Sutter's Landing Regional Park to the H Street Bridge. The proposed multi-use trail would meet California Department of Transportation (Caltrans) Class 1 bikeway design criteria, would be compliant with the Americans with Disabilities Act, and would also be based on the State Water Code Title 23 standards for recreation trails on levees and the American River Flood Control District (ARFCD) Recreational Trails Policy (ARFCD 2002). The trail would generally consist of an 8-foot-wide paved path with a 2-foot-wide compacted shoulder on the inner side and a similar 4- to 6-foot-wide shoulder on the waterside.

Where the trail would cross under active railway lines, fencing may be constructed to prevent trail users from accessing the Union Pacific Rail Road (UPRR) right-of-way, and protective covers may be installed to protect trail users from falling debris. The protective covers would likely consist of a free-standing canopy supported on a cantilever structure that would extend up to 30 feet out perpendicular to each side of the railroad structure with 3 feet of clearance below the railroad structure to allow for UPRR access and inspection.

Access to the Phase II portion of the Two Rivers Trail would be provided at the intersection with the Sacramento Northern Bikeway Trail and North 18th Street, at 28th Street near the entrance to Sutter's Landing Regional Park, at Glenn Hall Park, and at the H Street Bridge.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, with mitigation measures as identified in the attached Initial Study, will have a significant effect on the environment. This proposed Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required.

This proposed Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892), and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m.

Environmental Services Manager, City of Sacramento, California, a Charter City and Municipal Corporation

By: Justin Johns for Tom Buford

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City of SACRAMENTO

TWO RIVERS TRAIL (PHASE II) [CML-5002(155)]

INITIAL STUDY

This Initial Study has been prepared for the Two Rivers Trail (Phase II) Project by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

Organization of the Initial Study

This Initial Study is organized into the following sections:

SECTION I - BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

SECTION II - PROJECT DESCRIPTION: Includes a detailed description of the proposed project.

SECTION III - ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews proposed project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2035 General Plan.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

SECTION V - DETERMINATION: States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

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SECTION I - BACKGROUND

Project Name and File Number:	Two Rivers Trail (Phase II), (K15125000)
Project Location:	Along the south bank of the American River west from Sutter's Landing Regional Park to the Sacramento Northern Bikeway Trail at North 18th Street, and east from the eastern terminus of Sutter's Landing Regional Park to the H Street Bridge.
Project Applicant:	City of Sacramento
Project Manager:	Adam Randolph City of Sacramento Department of Public Works New City Hall 915 I Street, Room 2000 Sacramento, CA 95814 ARandolph@cityofsacramento.org
Environmental Planner:	Tom Buford, Principal Planner Community Development Department 300 Richards Boulevard, 3rd Floor Sacramento, CA 95811 TBuford@cityofsacramento.org
Date Initial Study Completed:	October 23, 2018

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 1500 *et seq*.). The Lead Agency is the City of Sacramento.

The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master Environmental Impact Report (EIR) and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2035 General Plan. See CEQA Guidelines Section 15176 (b) and (d).

The City has prepared the attached Initial Study to review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2035 General Plan Master EIR to determine their adequacy for the project (see CEQA Guidelines Section 15178(b),(c)) and identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (CEQA Guidelines Section 15177(d)) Policies included in the 2035 General Plan that reduce significant impacts identified in the Master EIR are identified and discussed. See also the Master EIR for the 2035 General Plan. The mitigation monitoring plan for the 2035 General Plan, which provides references to applicable general plan policies that reduce the environmental effects of development that may occur consistent with the general plan, is included in the adopting resolution for the Master EIR. See City Council Resolution No. 2015-0060, beginning on page 60. The resolution is available at:

http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx.

This analysis incorporates by reference the general discussion portions of the 2035 General Plan Master EIR. (CEQA Guidelines Section 15150(a)). The Master EIR is available for public review at the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, and on the City's web site at:

http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Written comments should be sent at the earliest possible date, but no later than 4:00 p.m. on November 30, 2018.

Please send written responses to:

Tom Buford, Principal Planner
Community Development Department
City of Sacramento
300 Richards Boulevard, Third Floor
Sacramento, CA 95811
Direct Line: (916) 808-7931
FAX (916) 808-1077
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SECTION II - PROJECT DESCRIPTION

This chapter describes the proposed Two Rivers Trail Phase II Project (proposed project). The project background and location are described along with project objectives, project characteristics, construction activities, project maintenance, and discretionary actions and approvals that may be required.

BACKGROUND AND PROJECT LOCATION

Two Rivers Trail is a planned Class 1 bicycle and pedestrian trail along the south bank of the American River that extends from Tiscornia Park at Jibboom Street to the H Street Bridge in Sacramento, California (**Figure 1**). Phase I of this trail includes the segment from Tiscornia Park to the intersection of North 12th Street and State Route (SR) 160. Phase II includes the section from the Sacramento Northern Bikeway Trail at North 18th Street through Sutter's Landing Regional Park to the H Street bridge. Phase I of the trail is complete and the City of Sacramento (City) recently completed a small section of the Phase II Trail within Sutter's Landing Regional Park, which was determined by the City in July 2018 to be exempt from review under CEQA (CEQA Guidelines §15304 and §15333). The proposed project would construct the remainder of Phase II by extending the Class 1 trail west from Sutter's Landing Regional Park to the Sacramento Northern Bikeway Trail at North 18th Street, and east from the eastern terminus of Sutter's Landing Regional Park to the H Street Bridge (see **Figure 1**). This would result in a nearly continuous southern trail alignment that links the downtown area of Sacramento to the residential neighborhoods and California State University at Sacramento (CSUS) near the eastern boundary of the City.

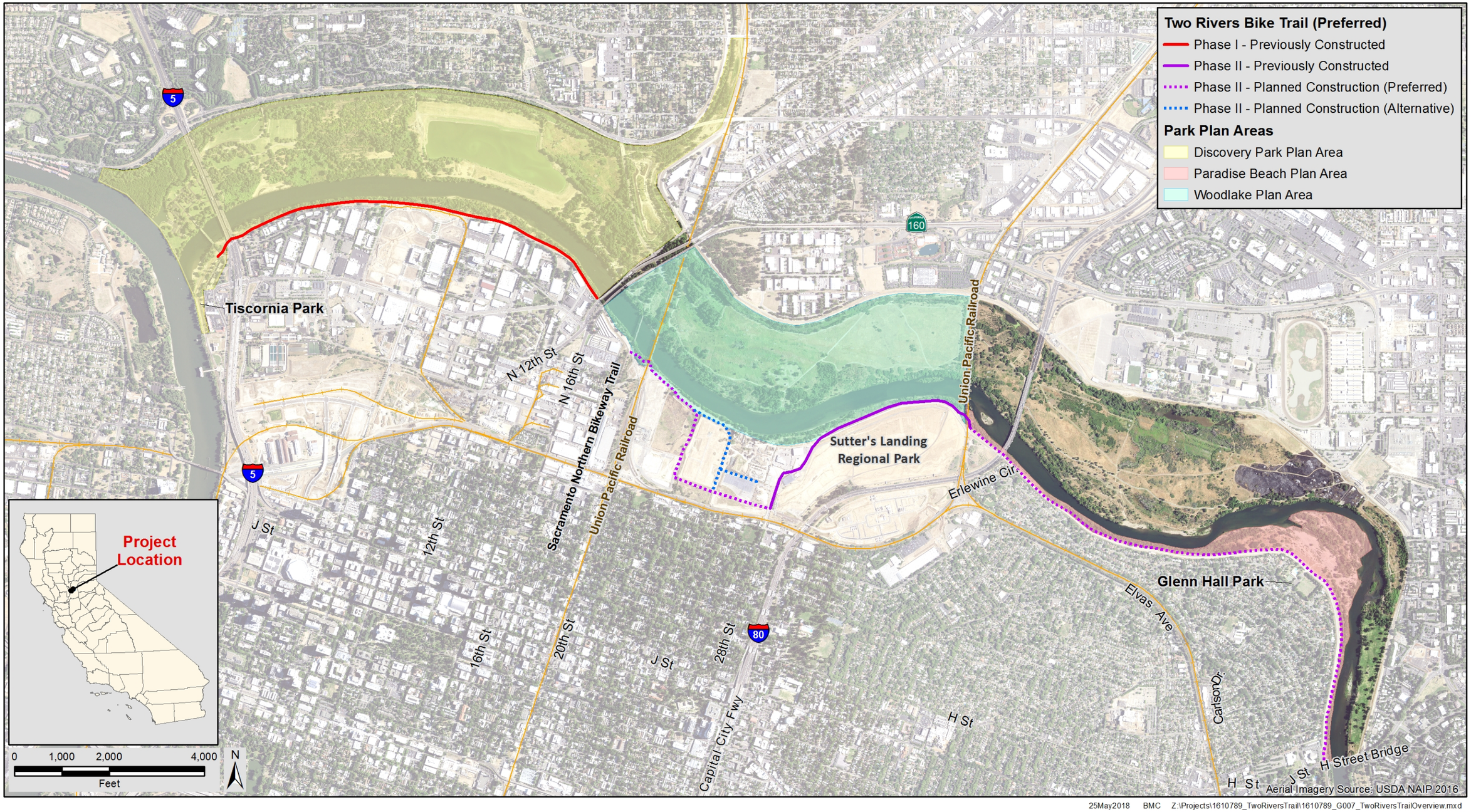
The proposed project lies entirely within the City and the planning areas of the American River Parkway Plan (ARPP), which was adopted by the City Council on March 25, 1986 and updated by the County of Sacramento in 2008 (Sacramento County, 2008). The ARPP is a policy and implementation guide developed to promote the preservation of the American River's natural environment while providing limited development for human enjoyment of the parkway. The American River Parkway (Parkway) is an open space greenbelt approximately 29 miles long extending west/southwest along the north and south sides of the Lower American River from Folsom Dam to its confluence with the Sacramento River. The ARPP divides the Parkway into smaller area plans that include specific guidelines and descriptions for individual segments of the Parkway. The proposed project is located within the Woodlake and Paradise Beach ARPP areas (see **Figure 1**). These areas are predominately designated as Protected Areas under the ARPP, with habitat preservation and recreation-related activities being the primary uses. The proposed trail is consistent with the ARPP.

In addition to the plans and policies of the ARPP, the Two Rivers Trail Concept Plan Report (Concept Plan Report) was prepared to provide specific guidance on development of the multiuse trail (Jones & Stokes 2001). This concept plan documented existing conditions, the purpose of the Two Rivers Trail project, and the steps and costs needed to implement the project. The Concept Plan Report discussed the development of a paved trail along the top of the American River south levee, including access to the landside street system and connections to other existing and proposed trails, which would minimize environmental impacts to the Parkway. However, in response to agency concerns regarding geotechnical stability of the levee and potential conflicts between trail users and levee maintenance equipment along with neighborhood concerns for homeowner privacy and visibility to the residences in the River Park neighborhood, a lower bench[a] alignment mostly along the waterside toe of the easterly segment of the levee is now proposed. This alignment would separate the trail users from levee maintenance operations, limit visibility to neighboring residences on the landside of the levee and have little or no effect on levee stability. A mid-height bench alignment along the waterside levee slope of the entire length of the proposed trail segments was more recently considered in an attempt to minimize habitat impacts along the waterside toe of the levee and address concerns raised by residents of the River Park neighborhood. However, because the U.S. Army Corps of Engineers (USACE) considered placement of the trail on a mid-height bench on the waterside levee slope to be a risk to levee performance and would potentially

[a] A long, relatively narrow strip of relatively level or gently inclined land that is bounded by distinctly steeper slopes above and below it.

increase the cost of levee operations and maintenance costs; the mid-levee alignment was determined to be infeasible where adequate space along the levee toe to accommodate the trail was present (James, Pers. Comm. 2018).

Figure 1. Project Location Map



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Source: County of Sacramento 2008, adapted by GEI Consultants, Inc. in 2017; Reference: County of Sacramento. 2008. American River Parkway Plan 2008. Sacramento, CA.

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PROJECT OBJECTIVES

The objectives of the proposed project are to:

- Provide a vital recreation link between the Jedediah Smith Trail on the north side of the Parkway, the Sacramento River Parkway, the Sacramento Northern Bikeway Trail, the future Ueda Parkway trails, and the 20th Street bike connection to the Central City;
- Provide alternative transportation access for commuters and residents in the eastern part of the City, CSUS, Central City, North Sacramento, East Sacramento, and Richards Boulevard area;
- Provide opportunities for educating trail users through interpretive signage, establishing a connection to the river, and the Parkway;
- Provide an acceptable project to all authoritative agencies;
- Complete the project in a manner that minimizes environmental impacts to the Parkway, given the proposed project's location within the environmentally sensitive Parkway; and
- Where feasible, design trail access points to comply with the requirements of the Americans with Disabilities Act (ADA).

PROPOSED PROJECT

Trail Alignment

The proposed project would create approximately 3.4 miles of new Class 1 bicycle and pedestrian trail comprising 6 segments (**Figures 2** and **3**).

Segment 1 is approximately 0.4 miles long. It begins at the existing Sacramento Northern Bikeway Trail at North 18th Street and ends 0.3 miles west of Sutter's Landing Park (see **Figure 2**). At North 18th Street, the trail would run along the toe of the levee crossing under the Union Pacific Railroad (UPRR) and continue for another 0.3 miles.

Segment 2 is approximately 0.6 miles long. This segment begins at the eastern terminus of Segment 1 and continues to Sutter's Landing Regional Park (see **Figure 2**). Two trail alignments are under consideration for Segment 2. The preferred trail alignment, Alternative 1, which is approximately 0.7 miles in length, would diverge from the levee immediately at the end of the first segment and extend south for approximately 0.3 mile and then turn southeast and extend another approximately 0.4 mile to 28th Street at the entrance to Sutter's Landing Regional Park across the street from McKinley Village Way. The other alignment for Segment 2 (Alternative 2) is approximately 0.55 miles in length. It would extend east from the end of the first segment for another approximately 0.15 mile before diverging from the levee to the south. This leg of Segment 2 would then continue south approximately 0.25 mile, until it intersected with the preferred alignment, or would turn southeast 0.1 mile sooner and follow the north side of an existing solar array for approximately 0.15 mile before terminating in the parking lot adjacent to the dog park and across the street from the existing trail within Sutter's Landing Regional Park.

Segment 3 is approximately 0.3 miles long and begins on the east side of Sutter's Landing Park at the end of the recently completed trail segment. From here, the trail would run along an existing bench at the toe of the levee, first crossing under another portion of the UPRR and eventually under the Capital City Freeway (SR 80) where Segment 4 begins (see **Figure 3**).

Segment 4 is also approximately 0.25 miles long (see **Figure 3**). There is no defined bench on the water side of the levee in this segment. Consequently, to both avoid the potential for trail users to interfere with vehicles using the patrol road on the levee crown to perform levee maintenance and inspection activities,

and limit the ability of trail users to see into the yards of residences located directly adjacent to the land side of the levee, this trail segment would be constructed on the water side slope on an artificial bench offset from the top of the levee with a reduced path width to limit impacts. The trail segment would also include a small retaining wall along the inner edge of the trail to maintain the width of the levee crown for levee maintenance and patrol vehicle use. **Figure 4** provides a comparison of this proposed "bench" or mid levee cross section and the toe of typical levee cross section proposed for segments 3, 5, and 6.

Segment 5 is 1.4 miles long and passes Paradise Beach and Glenn Hall Park (see **Figure 3**). This trail segment has a bench all along the waterside toe where the trail would be aligned, but bench width varies such that this segment has been subdivided into three subsegments (to accommodate topographic conditions). Subsegment 5A is approximately 2,900 feet in length, and the waterside bench, although well-defined, is narrower in this area than in Subsegment 5B. Subsegment 5B is approximately 4,300 feet in length and has a well-defined, much wider and flatter, bench to accommodate the trail.

Subsegment 5C is approximately 500 feet in length and its waterside bench characteristics are similar to Subsegment 5A.

Segment 6 begins at the east end of Subsegment 5C along the levee toe, is approximately 0.3 miles long, and includes a transition back to the levee crown where the trail would connect to the existing paved trail near the H Street Bridge (see **Figure 3**). While there is a bench along the toe in this segment, the bench is much narrower than in other locations requiring a reduced path width to limit impacts.

Trail Design

The proposed multi-use trail design would meet California Department of Transportation (Caltrans) Class 1 bikeway design criteria and would also be based on the State Water Code Title 23 standards for recreation trails on levees and the ARFCD Recreational Trails Policy (ARFCD 2002). The trail would generally consist of an 8-foot-wide paved path with a 2-foot-wide compacted shoulder on the inner side and a similar 6-foot-wide shoulder on the waterside to provide space for walking and jogging adjacent to the paved portion of the trail, bringing the total trail cross section along most of its length to 16 feet wide. However, due to space limitations in some locations, the waterside shoulder of the trail would be narrowed to 4 feet wide. The trail would be paved and engineered to be load-bearing (**Figure 4**).

In Segments 1 and 2, where the trail would be located landward of the levee, storm water is expected to infiltrate into the ground before entering the City's storm water conveyance system. In Segments 3-6 and where the trail would be along the levee crown or on the waterside of the levee in Segments 1 and 2, the trail would be slightly sloped toward the American River to maintain existing runoff patterns. In areas where trail design may cause minor ponding of water, small drain inlets would be installed to carry water under the bike trail to outlets on the river side of the trail. Outlets would discharge out of a flared end section and onto a small area of rock designed to reduce storm water velocity and disperse the water to prevent erosion at the outlet.

Union Pacific Rail Road Crossings

The trail in Segments 1 and 3 would cross under active railway lines. In these locations fencing would be constructed to prevent trail users from accessing the UPRR right-of-way. Fencing would be placed near the tops of the levee, directly adjacent (but not connecting) to the ends of the existing railroad bridges on one end and existing fences on the land side of the levees. The fences would be designed to meet UPRR requirements. Gates would be placed at the tops of the levee near the existing at-grade crossings to allow levee maintenance and patrol vehicles to use the crossings. Protective covers similar to the one depicted in **Figure 5** may also be constructed to protect trail users crossing under the railroad bridges from potential falling debris from above. The protective cover is anticipated to be a free-standing canopy supported on a cantilever structure that would

Figure 2. Proposed Trail Alignment – Western Segments

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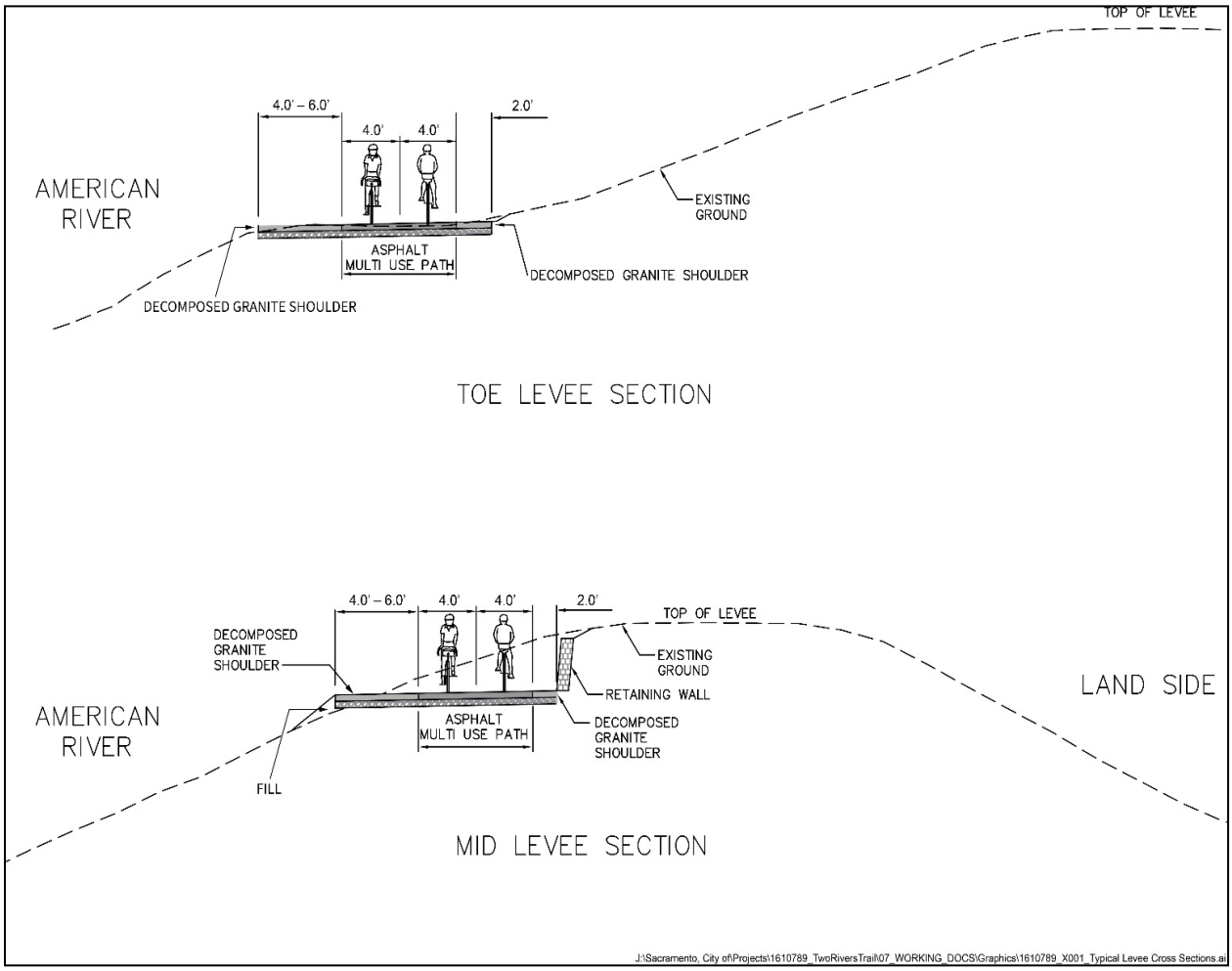
Source: Prepared by GEI Consultants, Inc. in 2017

Figure 3. Proposed Trail Alignment – Eastern Segments

Source: Prepared by GEI Consultants, Inc. in 2017

Figure 4. Typical Levee Cross Sections



Source: Prepared by Quincy Engineering, Inc. in 2017

extend up to 30 feet out perpendicular to each side of the railroad structure and would provide 3 feet of clearance below the railroad structure to allow access and inspection.

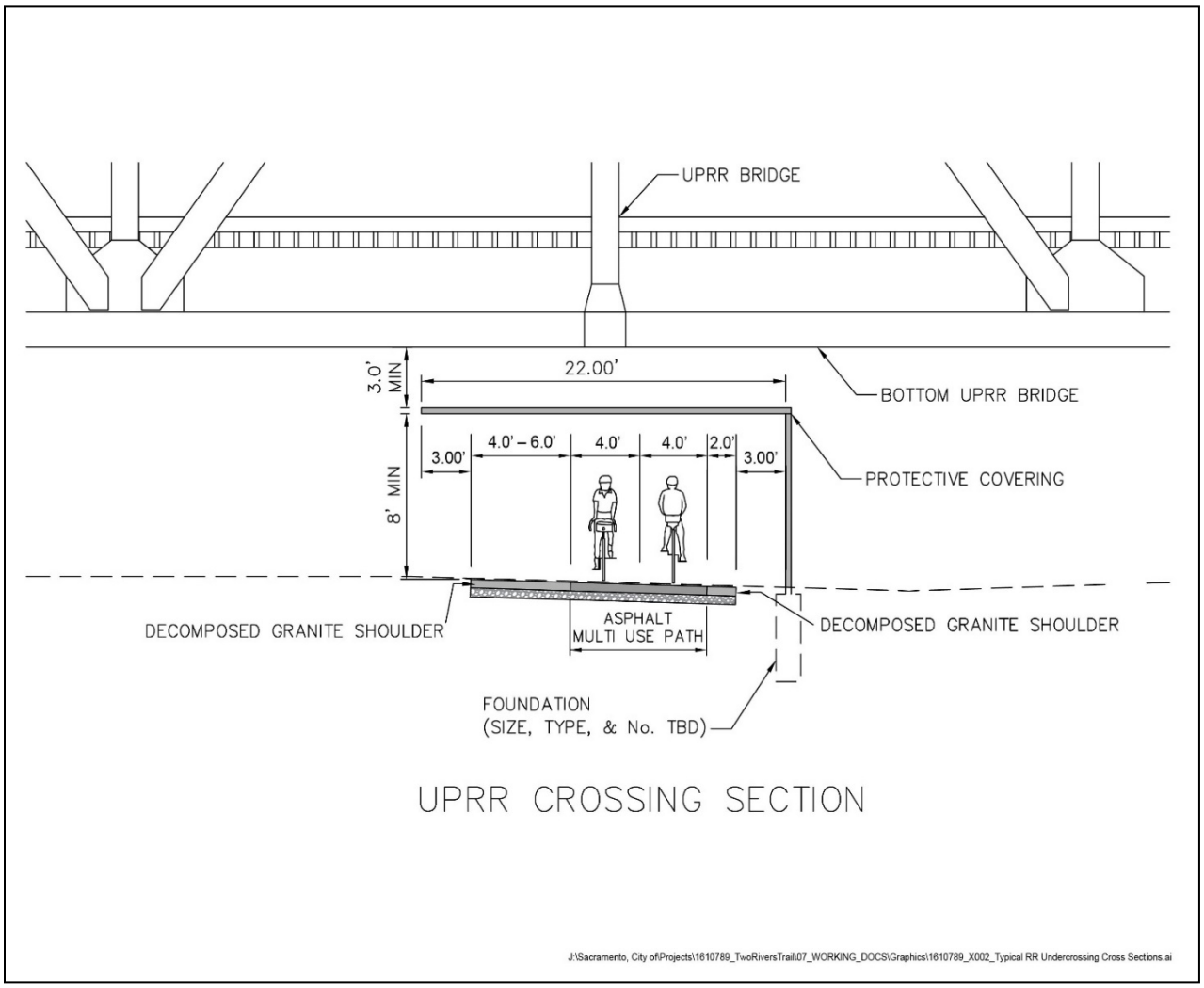
Public Access and Trail Connections

The proposed project has been designed to ensure access and connectivity with City neighborhoods, regional and local park facilities (Sutter's Landing Regional Park, Glenn Hall Park), and other regional trails (Jedediah Smith Memorial Trail). Four potential points of access have been identified and are described below. Directional and interpretive signage is also proposed at these locations. Signage would conform to the Parkway Trail & Parks Sign Manual (Sacramento County 2018).

Sacramento Northern Bikeway Trail (North 18th Street)

With the proposed project commencing just west of the Sacramento Northern Bikeway Trail, this access point in Segment 1 would facilitate connections to existing City neighborhoods (including New Era Park, Boulevard Park, and Alkali Flats) and newly developing areas of the City (including the Railyards) (see **Figure 2**). Trail users at this location could also access the larger regional trail system (Jedediah Smith Memorial Trail) via the Sacramento Northern Bikeway Bridge.

Figure 5. Typical Railroad Undercrossing Cross Section



Source: Prepared by Quincy Engineering, Inc. in 2017

Sutter's Landing Regional Park (28th Street)

Access to the trail would also occur at Sutter's Landing Regional Park in Segment 2 (see **Figure 2**) near the terminus of 28th Street by the entrance to the park. This location would also provide access from the trail south to on-street bike lanes connecting the trail to central city commercial, employment, and residential areas including the New Era Park, Marshall School, East Sacramento, and McKinley Park neighborhoods.

Glenn Hall Park

In Segment 5, access within the River Park neighborhood is proposed at Glenn Hall Park (see **Figure 3**). This point would provide ADA trail access to residents of the River Park neighborhood and would provide a connection to Carlson Avenue, Elvas Avenue, the CSUS campus, and surrounding commercial/residential areas.

H Street Bridge

The proposed project would connect to the existing paved trail along the south bank of the American River near the H Street Bridge at the terminus of Segment 6 (see **Figure 3**). This point provides an important connection linking the proposed project with the CSUS campus, the existing Jedediah Smith Trail on the north side of the Lower American River via the H Street Bridge, and the existing paved trail along the south

side of the Lower American River west of the H Street Bridge. This point would also provide access to east/west on-street bike lanes connecting the central city, the CSU Sacramento and the Campus Commons neighborhoods.

Project Construction

Construction Schedule

Construction of Segments 1 and 2 would take approximately 2 to 3 months to complete while Segments 3 through 6 would require approximately 5 to 6 months to complete. The City currently has construction funding to complete Segments 3 through 6 and proposes to complete construction of these four segments in 2020 between April 15 and November 1, in accordance with Title 23 requirements. Construction of Segments 1 and 2 would be completed at a future date, contingent on the availability of funding and landfill remediation activities in the area.

Methods

Trail construction would begin with clearing and grubbing any trees, shrubs and other organic material from within the construction limits. The alignment, including trail access points, would then be excavated, filled, and/or graded and compacted, as needed, to achieve a suitable base and ADA-compliant grades. Segment 4 of the trail would require excavating portions of the existing levee along the upper waterside slope. This would involve excavating approximately 4 to 5 feet into the levee embankment approximately 6 feet below the levee crown and installing a short (2 to 4 feet high) retaining wall on the inner side of the path. All the other segments of trail would only require minor excavation and fill to prepare for the Class I trail, with quantity estimates of these materials shown below in **Table 1**. Imported materials would include aggregate base rock and pavement materials that would be placed on top of the aggregate base to create the smooth finished paved surface of the trail. The materials, dimensions, and methods used would accommodate sufficient load-bearing capacity for heavy equipment used for levee maintenance and emergency operations, while maintaining the integrity of the pavement for recreational use.

Table 1. Estimates of Excavation and Import Fill for the Project

Trail Segments	Material Type	Quantity Estimates (cy – cubic yards)
Segments 1 & 2	Excavation Amount	2,500 cy
	Import Fill Material	1,000 cy
	Import Aggregate Base Material	2,500 cy
	Import Pavement Material	650 cy
	Total Imported Materials	**4,150 cy**
Segments 3 through 6	Excavation Amount	6,000 cy
	Import Fill Material	1,000 cy
	Import Aggregate Base Material	5,400 cy
	Import Pavement Material	1,350 cy
	Total Imported Materials	**7,750 cy**

Following construction, the contractor would remove any construction materials and restore all disturbed surfaces to their pre-project condition, including replacing fences, repairing asphalt roadway surfaces, restoring existing slopes and grades, and revegetating affected surfaces through means such as hydroseeding. All hard surfaces would be cleaned of dirt, dust, or other construction materials.

Construction Equipment and Work Force

Equipment used for the project would include typical pieces of general construction equipment including backhoes, bulldozers, excavators, graders and compactors (**Table 2**). Some haul trucks may also be required including those with water (dust control) and seed sprayers (revegetation activities). All equipment

types would be below legal limits for operating on local streets and would be staged as close to the project site as possible.

Table 2. Proposed Construction Equipment

Equipment	Construction Purpose
Backhoe	Soil manipulation
Bobcat	Fill distribution
Bulldozer/Loader	Earthwork construction, cleaning and grubbing
Excavator	Soil manipulation
Front-end Loader	Dirt or gravel manipulation
Grader	Ground leveling
Haul Truck	Earthwork construction; clearing and grubbing
Paver	Roadway paving
Roller	Earthwork and compacting
Scraper	Earthwork construction; clearing and grubbing
Truck with Seed Sprayer (hydroseeded)	Erosion control and landscaping
Water Truck	Earthwork construction; clearing and grubbing

An estimated 10 to 20 workers, which could vary based on specific trail development activity, would be onsite each day during construction activities. Construction activities would be limited to daylight hours, typically the hours from 7:00 a.m. to 6:00 p.m., Monday through Saturday, and possibly 9:00 a.m. to 6:00 p.m. Sunday. Construction-related noise during these hours is exempt from the City Noise Ordinance (City Code 8.68.080).

Construction Access and Staging Areas

Construction access would be via local roadways, including 28th Street (a local roadway), Carlson Drive (a minor collector), Camellia Drive (a local roadway) and H Street (an arterial east of Camellia Drive and major collector west of Camellia Drive) (City of Sacramento 2015).

Given the linear nature of the proposed project, several equipment staging areas would be required along the trail alignment (see **Figures 2** and **3**). The location of these staging areas has been planned to minimize construction activity/staging near residential/commercial areas to the extent feasible. Additionally, by distributing the staging areas at multiple locations along the project alignment/site, construction activity would also be distributed along the entire trail alignment resulting in shorter construction timeframes at individual locations and allowing for sections of the trail to remain open during construction.

Equipment staging areas may be located at the following locations:

- City-owned properties west and south of Sutter's Landing Park (001-0160-018, 003-0010-001) (see **Figures 2**).
- City-owned property between UPRR Bridge and SR 80 (001-0170-006) (see **Figure 3**).
- Area northeast of Glenn Hall Park on the waterside of the levee (005-0010-002) (see **Figure 3**).
- Scottish Rite Center parking lot (005-0232-003) (see **Figure 3**).

The City Code (City Code 12.20.030) establishes requirements for a construction traffic control plan for projects which include street closures. Although street closures during construction are not anticipated, a modified construction traffic control plan would be implemented to minimize impacts associated with construction traffic and trail closures. This plan would be prepared by the construction contractor and

subject to review by the City Traffic Engineer and all affected agencies. All work performed during construction would be required to conform to the conditions and requirements of the approved plan. At a minimum, the plan would include the following:

- Safe and efficient access routes for emergency vehicles;
- Provisions for pedestrian safety;
- Provisions for pedestrian and bicycle detours, where necessary, including signage;
- Use of manual traffic control when necessary;
- Number of anticipated truck trips, and time of day of arrival and departure of trucks; and
- Provision of a truck circulation pattern and staging area with a limitation on the number of trucks that can be waiting and any limitations on the size and type of trucks appropriate for the surrounding transportation network.

The plan would be required to be available at the project site for inspection by the City representative during all work.

Trail Operations and Maintenance

Upon completion, the trail would be operated as a recreational Class 1 trail by the City of Sacramento. The trail operator would prepare and implement a plan of operation and maintenance (O&M) for the trail. This O&M plan would address all aspects of operating and maintaining the trail, including but not limited to public safety, litter control, graffiti control, signage, access control, security, compliance enforcement, repair, rehabilitation, replacement, and removal of recreational trails facilities. Typical maintenance activities would include routine inspections, debris removal, and repair of cracks and slope failures.

In addition to the maintenance tasks listed above, typical vegetation management activities would routinely occur, including the following:

- **Mowing** – Mowing activities would occur up to 4 times annually, performed by ARFCD. Mowing would generally occur within a 4-foot area on each side of the trail. Mowing within the drip-line of elderberry shrubs would be limited to the season when adult valley elderberry longhorn beetles (VELB) are not active (August - February) and would avoid damaging the elderberry shrub.
- **Trimming** –Trimming of vegetation and hazard tree/limb removal along the trail would occur once annually. Woody vegetation would be trimmed back up to 4 feet from the sides of the trail, with a 12-foot vertical clearance. Vegetation less than 3 inches in diameter would be cleared by hand or small engine weed-eaters or chainsaws. Small material or grasses would be mowed close to the ground with low impact rubber-tired tractors. Vegetation over 3 inches in diameter may require larger equipment such as telescoping chainsaws, hoe-mounted flail mowers, bucket machines to hoist the crew and equipment, and climbing crew with chainsaws.
- **Removal of Vegetation from Trail Surfaces** – The removal of invasive vegetation would be eradicated through very limited and selective application of herbicides. Per U.S. Fish and Wildlife Service (USFWS) recommendations, the use of insecticides, herbicides, fertilizers, or other chemicals would not be used within 98 feet of elderberry shrubs.

As much as feasible, all O&M activities that could occur within 165 feet of an elderberry shrub, would be conducted outside of the flight season of the VELB (March - July) to minimize impacts to VELB. However, it is assumed that up to 5 elderberry shrubs may be affected as part of maintenance activities.

High river flow events, and some levee, railroad, and trail maintenance activities may also require temporary closure of sections of trail from time to time. During such closures, signs would be placed by the trail operator or ARFCD crew at access points to the trail alerting users of the closure and designating alternate routes.

PROJECT PERMITS AND APPROVALS

- The following agencies may have permitting or approval authority over the proposed project:
- ARFCD – Encroachment permit for portions of the trail located on or extending across ARFCD facilities; easements for trails over lands owned by ARFCD in fee title.
- National Marine Fisheries Service (NMFS) – Federal Endangered Species Act Section 7 Consultation for potential effects to federally listed and proposed (endangered and threatened) anadromous fish species.
- Public Utilities Commission – Permission for railroad crossings.
- USACE – Rivers and Harbors Act Section 14 (408) authorization for alterations to a Federal project levee; Clean Water Act (CWA) Section 404 permit for dredge or fill of waters of the U.S.
- USFWS – Federal Endangered Species Act Section 7 Consultation for potential effects to federally listed and proposed (endangered and threatened) plant and wildlife species.
- Union Pacific Railroad – Encroachment permit for the portions of the trail passing under a Union Pacific Railroad Bridge.
- Caltrans – Encroachment permit for the portion of the trail passing under SR 80.
- California Department of Fish & Wildlife (CDFW) – California Fish and Game Code Section 1602 Streambed Alteration Agreement for construction and alterations within riparian areas.
- Central Valley Flood Protection Board – Encroachment permit for work within the flood control easement.
- Central Valley Regional Water Quality Control Board – CWA Section 401 Water Quality Certification for discharge to surface waters.
- County of Sacramento, Department of Regional Parks –approval of 100% construction drawings; Lease Agreement for staging and construction within the Parkway; Map Amendment to convert the trail from future to active status; and Joint Use Agreement.

SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION

LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES, AND MINERAL RESOURCES

Introduction

CEQA requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable general plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use development in a community would not constitute a physical change in the environment. When a project diverges from an adopted plan, however, it may affect planning in the community regarding infrastructure and services, and the new demands generated by the project may result in later physical changes in response to the project.

In the same manner, the fact that a project brings new people or demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections.

This section of the Initial Study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the proposed project. This section also discusses agricultural resources and mineral resources and the effect of the project on these resources.

Discussion

Land Use, and Population and Housing

The majority of the proposed trail alignment (from Sutter's Landing Regional Park to H Street) is designated as "Parks and Recreation" on the City's General Plan Land Use Diagram. The westernmost portion of the trail (between the Sacramento Northern Bikeway Trail and Sutter's Landing Regional Park) is designated "Employment Center Low Rise" and identified as a "Proposed Park/Parkway" in the 2035 General Plan. The project site is zoned A-OS (Agricultural–Open Space), M-2 (Heavy Industrial), and ARP-F (American River Parkway–Floodplain).

The project site is located in an urbanized portion of the community. The Two Rivers Trail would be constructed in lands that are designated for recreational and park use adjacent to the Midtown and River Park neighborhoods. Development of the site as proposed would alter the existing landscape, but the project site has been designated for park and recreational use in the 2035 General Plan and the Planning and Development Code, and the proposed development is consistent with these planning designations. The project would not introduce any new housing or create demand for additional housing.

Agricultural Resources

The Master EIR discussed the potential impact of development under the 2035 General Plan on agricultural resources. See Master EIR, Chapter 4.1. In addition to evaluating the effect of the general plan on sites within the City, the Master EIR noted that to the extent the 2035 General Plan accommodates future growth within the City limits, the conversion of farmland outside the City limits is minimized. The Master EIR concluded that the impact of the 2035 General Plan on agricultural resources within the City was less than significant.

The project site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance). (FMMP 2016) The site traverses an area zoned

Agricultural-Open Space, but this area (a portion of Sutter's Landing Regional Park) is not currently in agricultural use, and there are no Williamson Act contracts that affect the project site. No existing agricultural or timber-harvest uses are located on or in the vicinity of the project site. The project would result in no impacts on agricultural resources.

Mineral Resources

The Master EIR discussed the potential impact of development under the 2035 General Plan on mineral resources. See Master EIR, Chapter 4.5. The Master EIR concluded that the impact of the 2035 General Plan on mineral resources within the City was less than significant. Within the City, projects near mining activities are required to be compatible with such activities, and buffers and setbacks are required from areas classified as MRZ-2 (mineral resource zone with significant existing or likely mineral deposits). No existing mining activities are located within the project site or vicinity. There are no areas designated as MRZ-2 within the project site or vicinity. The project would result in no impacts to mineral resources.

AESTHETICS

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
1. AESTHETICS Would the proposal: A) Create a source of glare that would cause a public hazard or annoyance?			X
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?			X
C) Substantially degrade the existing visual character of the site or its surroundings?			X

Environmental Setting

The project site extends along the south bank of the American River from the Sacramento Northern Bikeway to Sutter's Landing Regional Park, and along the waterside of the levee from the eastern terminus of Sutter's Landing Regional Park through the Paradise Beach area, to the H Street Bridge crossing the American River near CSUS. In Segments 1 and 2, the visual character is formed by riparian vegetation along the riverbank, with upland areas characterized by ruderal vegetation, small structures, and chain link fencing. Nearby industrial facilities, the Union Pacific Railroad, and solar panels in Sutter's Landing Regional Park are also visible. Segments 3 through 6 are generally characterized by riparian vegetation between the levee toe and the riverbank. A dirt or gravel track or road extends along most of the levee toe, and the levee slopes are kept clear of vegetation other than grass and ruderal vegetation. A gravel maintenance road extends along the crown of the levee. Single family residences are present on the land side of the levee in Segments 3 through 6, and visible from the levee crown, although not from the toe or levee shoulder where the proposed project would be constructed. Appendix A contains photos illustrating existing conditions at the project site. Views of the river, typically framed by a mix of trees and smaller vegetation, are characteristic of Segment 1 and Segments 3 through 6.

The ARPP establishes aesthetic values for the American River Parkway and identifies policies to reduce visual impacts within the Parkway (Sacramento County 2008, p. 3-77, p. 7-111—112).

Standards of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the CEQA Guidelines, thresholds of significance adopted by the City in applicable general plans and previous environmental documents, and professional judgment. A significant impact related to aesthetics would occur if the project would:

- substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource; or
- create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR described the existing visual conditions in the City of Sacramento, and the potential changes to those conditions that could result from development consistent with the 2035 General Plan. See Master EIR, Chapter 4.13, Visual Resources.

The Master EIR identified potential impacts for light and glare (Impact 4.13-1) and concluded that impacts would be less than significant.

Answers to Checklist Questions

Questions A and B

The proposed project would not introduce any new sources of light or glare to the project site. For the majority of the trail alignment, the trail would be paved, with gravel or aggregate shoulders. In Segment 4, a short retaining wall would be constructed on the inside of the trail to enable the trail to be located along the shoulder of the existing levee. Where the trail crosses under the two Union Pacific Railroad bridges, overhead structures may be required. However, the retaining wall and overhead structures would be designed in compliance with ARPP Policy 7.22, which require that structures be constructed of naturalistic materials and earth tones, and blend with surrounding vegetation. No lighting is proposed as part of the project. Therefore, this impact would be **less than significant**.

Question C

The project includes construction of a paved trail. As part of the construction of the trail, some existing vegetation, including trees, would be removed to provide a sufficient clear width along the levee toe for construction of the trail. Two overhead structures would be constructed where the trail would pass beneath the Union Pacific Railroad bridges, and a short retaining wall would be constructed in Segment 4 where the trail would traverse the levee slope due to the lack of any toe in this segment.

The existing visual character of the project site is generally formed by scrubby, riparian vegetation between the toe of the levee and the river, levee slopes covered by grassy vegetation, and upland uses including vacant lands, a former landfill, and (in Segments 3 through 6) single-family residences. There are numerous existing unpaved and gravel tracks and roadways along the levee crown and toes in the project vicinity. This visual character would not be significantly degraded by construction of the project. During construction activities, equipment would be staged at locations illustrated on Figures 2-2 and 2-3 in Chapter 2, “Project Description. These locations generally include vacant areas west of Interstate 80 Business, an area adjacent to Glenn Hall Park, and a parking lot located at H Street and Carlson Drive. Although construction activities and construction equipment staging would affect the visual character, this impact would be temporary, with impacts in any given area lasting less than a single construction season. After completion of the construction activities, although an existing dirt toe road would be paved, and some small and local improvements would be constructed (i.e. the overhead structures and the retaining wall), the overall visual character of the project site would remain. This impact would be **less than significant** due to the temporary nature of construction disturbances and the minor changes in visual character following implementation of the project.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Aesthetics.

AIR QUALITY

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
2. AIR QUALITY Would the proposal: A) Result in construction emissions of NOx above 85 pounds per day?			X
B) Result in operational emissions of NOx or ROG above 65 pounds per day?			X
C) Violate any air quality standard or have a cumulatively considerable contribution to an existing or projected air quality violation?			X
D) Result in PM_{10} and $PM_{2.5}$ concentrations that exceed SMAQMD requirements?			X
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?			X
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?			X
G) Result in TAC exposures that create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?			X
H) Conflict with the Climate Action Plan?			X

Environmental Setting

The proposed project is located within the City of Sacramento. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the primary local agency with respect to air quality for all of Sacramento County, including the City of Sacramento. The City of Sacramento is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is about 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the "Delta breeze" that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated

in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

As required by the Federal Clean Air Act (FCAA) passed in 1970, the United States Environmental Protection Agency (U.S. EPA) has identified six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. The U.S. EPA calls these pollutants "criteria air pollutants" because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead are the six criteria air pollutants. Notably, PM is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter. **Table 3** summarizes the attainment status for Sacramento County relative to national and California ambient air quality standards.

Table 3. Sacramento County Attainment Status

Pollutant	Designation/Classification	
	State Standards	Federal Standards
Ozone	Nonattainment	Nonattainment/Severe
Carbon Monoxide	Unclassified	Maintenance/Moderate
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Unclassified
Fine Particular Matter (PM_{10})	Nonattainment	Maintenance/Moderate
Fine Particular Matter ($PM_{2.5}$)	Unclassified	Attainment

Source: California Air Resource Board, 2018a. U.S. Environmental Protection Agency, 2018a.

The California Air Resources Board (CARB) regional air quality monitoring network provides information on ambient concentrations of non-attainment criteria air pollutants. The monitoring stations that include data representative of the proposed project site are located on T Street (monitors ozone, PM_{10}, and $PM_{2.5}$) and 100 Bercut Drive (monitors active CO). **Table 4** presents a three-year summary of air pollutant concentration data collected at these monitoring stations for ozone, PM_{10}, $PM_{2.5}$, and CO.

Table 4. Summary of Air Quality Monitoring Data (2015-2017)				
Pollutant	Applicable Standard	Number of Days Standards Were Exceeded[a] and Maximum Concentrations Measured		
		2015	2016	2017
Ozone – T Street Station				
Days 1-hour State Std. Exceed	>0.09 ppm[b]	0	0	0
Max. 1-hour Conc. (ppm)		0.092	0.094	0.107
Days 8-hour National Std. Exceeded	>0.07 ppm[c]	4	3	3
Days 8-hour State Std. Exceeded	>0.07 ppm[b]	4	3	3
Max. 8-hour Conc. (ppm)		0.076	0.074	0.077
Suspended Particular (PM10) – T Street Station				
Estimated Days Over 24-hour National Std.[d]	>150 µg/m^3 [c]	0	0	0
Estimated Days Over 24-hour State Std.[d]	>50 µg/m^3 [b]	ND	1.1	ND
Max. 24-hour Conc. National/ State (µg/m^3)		57.8/59.1	50.3/51.4	149.9/150.3
State Annual Average (µg/m3)	>20 µg/m^3 [b]	ND	19.6	ND
Suspended (PM2.5) – T Street Station				
Estimated Days Over 24-hour National Std.[d]	>35 µg/m^3 [c]	3	0	6.1
Max. 24-hour Conc. National (µg/m^3)		36.3	24.4	44.5
State Annual Average (µg/m^3)	>12 µg/m^3 [b]	9.6	7.7	9.2
Carbon Monoxide (CO) – Bercut Drive Station				
Days 8-hour Std, Exceeded	>9 ppm[b]	0	0	0
Max. 8-hour Conc. (ppm)		0.9	1.3	1.2
Days 1-hour Std. Exceeded	>20 ppm[b]	0	0	0
Max 1-hour Conc. (ppm)		1.3	1.6	1.87

Notes:
conc. = concentration; ppm = parts per million; ppb=parts per billion;
µg/m^3 = micrograms per cubic meter
ND = No data or insufficient data.

[a] Number of days exceeded is for all days in a given year, except for particulate matter. PM10 and PM2.5 are monitored every six days.

[b] State standard, not to be exceeded.

[c] National standard, not to be exceeded.

[d] Particulate matter sampling schedule of one out of every six days, for a total of approximately 60 samples per year. Estimated days exceeded mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.

Source: California Air Resource Board, 2018b. United States Environmental Protection Agency 2018b.

Standards of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NOx above 85 pounds per day;
- Operational emissions of NOx or reactive organic gases (ROG) above 65 pounds per day;

- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;

- Any increase in PM_{10} concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year;

- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or

- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

- TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

A project is considered to have a significant effect relating to greenhouse gas (GHG) emissions if it fails to satisfy the requirements of the City's Climate Action Plan (CAP).

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthful pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with CARB and SMAQMD to meet state and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of TAC as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and imposing appropriate conditions on projects to protect public health and safety; as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The Master EIR found that greenhouse gas emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.2, ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 CAP, which demonstrates compliance with and is the mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals. ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emission reductions goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this Initial Study. (CEQA Guidelines Section 15150)

The Master EIR identified numerous policies included in the 2035 General Plan that addressed greenhouse gas emissions and climate change. See Draft Master EIR, Chapter 4.14, and pages 4.14-1 *et seq*. The Master EIR is available for review at the offices of Development Services Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA during normal business hours, and is also available online at http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

Answers to Checklist Questions

Questions A, B, D, and F

The proposed project site is a planned Class 1 bicycle and pedestrian trail along the south bank of the American River. The project would not result in any new long-term (or operations-related) stationary or mobile air quality sources. Both construction and operations-related air quality impacts are described below.

Construction

Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur. The proposed project would result in the temporary generation of emissions resulting from excavation, importing, material hauling, and worker trips over the course of 2-3 months for Trail Segments 1 and 2 and 5-6 months for Trail Segments 3 through 6. Fugitive dust, the dominant source of PM_{10} and $PM_{2.5}$ emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Off-road construction equipment is often diesel-powered and can be a substantial source of NOx emissions, in addition to PM_{10} and $PM_{2.5}$ emissions. Worker commute trips and asphalt paving are dominant sources of ROG emissions.

Construction-related exhaust emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod allows the user to enter project-specific construction information, such as the types, number, and horsepower of construction equipment, and the number and length of off-site motor vehicle trips. Construction related emissions for the proposed project were estimated for construction worker commutes, haul trucks, and the use of off-road equipment.

The predicted maximum daily construction-generated emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$, associated with project construction and the SMAQMD significance criteria are shown in **Table 5**. As shown in the table, emissions generated during construction years 2020 and 2030 would not exceed SMAQMD's thresholds of significance. Consequently, construction-related air quality impacts resulting from implementation of the proposed project are considered less than significant**.** However, all projects that would involve construction activities, regardless of the significance determination, are required to implement SMAQMD's applicable Basic Construction Emission Control Practices. Implementation of Mitigation Measure 2-1, which includes applicable SMAQMD Basic Construction Emission Control Practices (including low vehicle speeds, limited equipment idling, etc.) would ensure that construction emissions remain low. Consequently, with implementation of **Mitigation Measure 2-1**, this impact would remain **less than significant**.

Operation

As a bicycle and pedestrian trail project, the proposed project would not result in the construction of new buildings or generate a significant number of operation-related vehicle trips that would result in any permanent stationary air quality source emissions. Trail operation would include a small number of vehicle trips resulting from routine inspections, debris removal, trail repair of cracks, in addition to typical vegetation management activities. However, these trips are considered relatively small and would only occur as needed to maintain the trail. Operation-related air quality emissions resulting from the project would not result in operational emissions of NO_x or ROG above 65 pounds per day Consequently, this impact is considered **less than significant**.

Table 5. Unmitigated Project Construction Emissions (Maximum) Pound Per Day					
	Emissions (lbs/day)				
Construction Phase	ROG	NOx	PM10	PM2.5	CO
Overall Maximum Construction Emissions					
2020 (Segments 3-6)	4.3	42.9	51.2	6.7	28.1
2030 (Segments 1-2)	3.0	12.5	47.0	5.1	22.2
SMAQMD Significance Criteria	**None**	**85**	**80**	**82**	**None**
Significant?	*N/A*	*No*	*No*	*No*	*N/A*

Note: lbs/day = pounds per day, ROG = reactive organic gases, NO_x = oxide of nitrogen, PM_{10}= particular matter with aerodynamic diameter less than 10 micrometers, $PM_{2.5}$ = particular matter with aerodynamic diameter less than 2.5 micrometers, CO = carbon monoxide.
Source: Emissions modeled by GEI Consultants Inc. using the California Emissions Estimator Model (CalEEMod), version 2016.3.2 computer program. Refer to Appendix B for model data outputs.

Question C

The SVAB is currently designated as nonattainment for the State and Federal ambient air quality standards for ground-level O_3, as well as for the Federal standards for $PM_{2.5}$. The air basin's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its nature, air pollution is largely a cumulative impact. According to SVAB the SMAQMD's approach to thresholds of significance is relevant to whether a project's individual emissions would result in a cumulative considerable adverse contribution to the SVAB's existing air quality conditions. If a project's emissions would be less than these levels, the project would not be expected to result in a cumulatively considerable contribution to the significant cumulative impact. As shown in **Table 5**, the proposed project does not exceed any of the SMAQMD's threshold of significance and therefore would not violate any air quality standards. This impact is considered **less than significant**.

Question E

Intersections that are categorized as a level of service (LOS) E or F result in increased delays and idling times. These intersections have the potential to create CO hotspots, which may result in an exceedance of the 1-or 8-hour State CO standard. A CO hotspot can also result in the exposure of nearby sensitive receptors to unhealthy CO concentrations. The SMAQMD's CEQA Guide to Air Quality Assessment in Sacramento County provides screening criteria to assess whether project-related vehicle trips would result in the generation of CO emissions that exceed or contribute to an exceedance to the California Air Quality Standard for CO.

As described above in **Question A**, the proposed project would not add long term vehicle traffic since it would only be developing a bike and pedestrian walking trail. Existing traffic patterns and roadway intersection levels of services are not anticipated to change, with exception of the temporary and short-term construction-related traffic that would result in or contribute to a CO hotspot. Additionally, CO, SO_2, and lead are of less concern because construction activities are not likely to generate substantial quantities of these criteria air pollutants. Therefore, the project would not result in CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm). This impact is considered **less than significant**.

Question F

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of a project's air quality impacts. Sensitive receptors include children, older adults, and persons with pre-existing respiratory or cardiovascular illness. Residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes are also included as sensitive receptors. While residences are located adjacent to portions of the project site, the proposed project is not expected to result

in the exposure of sensitive receptors to substantial pollutant concentrations, given the short-term nature of these construction emissions and the distance of these residences to the construction site. This impact is considered **less than significant**.

Question G

There are no ambient air quality standards for TACs. One of CARB's public health priorities is reducing diesel PM generated by trucks, which is the primary TAC found to be responsible for most of the cancer and non-cancer health risks associated with airborne exposure. SMAQMD has developed a methodology to assist local land use jurisdictions in assessing the potential cancer risk of siting sensitive land uses adjacent to major roadways. This methodology is contained in SMAQMD's *Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways.* The methodology also provides a disclosure mechanism for those risks and shows the relationship between potential cancer risk from diesel PM exposure and distance from a major roadway. According to the SMAQMD evaluation criteria, a site specific HRA is recommended only when cancer risks meet or exceed 446 cases per million.

As described above under **Question** "**A**", project-related construction emissions are considered short term and of temporary duration, lasting only as long as construction activities occur. The proposed project would not result in the construction of new buildings or generate a significant number of operation-related vehicle trips that would result in permanent stationary air quality source emissions. Because the potential generation of TACs would be temporary and intermittent in nature and the relatively low exposure period in combination with the dispersive properties of diesel PM, construction-related emissions would not result in the exposure of sensitive receptors to TAC concentrations that would exceed 10 in a million cancer risks.

Additionally, Mitigation Measure 2-1 would implement SMAQMD's Basic Construction Mitigation Measures and reduce diesel PM emissions from heavy-duty construction equipment by limiting idling time, limiting construction vehicle speeds, and properly maintaining construction equipment. Therefore, the impact would be **less than significant** with incorporation of **Mitigation Measure 2-1**.

Question H

In 2012, the City of Sacramento adopted a community wide CAP. The CAP outlines multiple initiatives intended to help the City achieve its overall goals of reducing community-wide emissions by 15% below 2005 levels by 2050. Included in the CAP are a comprehensive set of strategies, measures and implementing actions to achieve the 2020 GHG reduction target. These GHG reduction measures and actions apply to both existing sources within the City as of the 2005 baseline and projected emissions from new growth and development anticipated in the 2035 General Plan. In addition, the CAP identifies potentially adverse physical effects related to climate change on the community and includes specific adaptation measures to address and mitigate such effects.

The proposed project would create approximately 3.4 miles of new Class 1 bicycle and pedestrian trail comprising 6 segments consistent with the City's Bikeway Master Plan, Planning and Development Code, and CALGreen standards. The proposed project lies entirely within the City and the planning areas of the ARPP, which was adopted by the City Council on March 25, 1986 and updated by the County of Sacramento in 2008. In addition to the plans and policies of the ARPP, the Two Rivers Trail Concept Plan Report was prepared to provide specific guidance on development of the multiuse trail. Therefore, the project incorporates bicycle facilities consistent with the City's Bikeway Master Plan and meets the standards for bicycle facilities.

As previously described above, the proposed bicycle and pedestrian trail project does not include the development of additional housing units or result in land uses that would generate additional sources of permanent or long-term greenhouse gas emissions. Consequently, **no impact** is expected.

Mitigation Measures

Mitigation Measure 2-1 Implement Construction-related Emission Control Practices:

The City shall ensure that the construction contractor implement all basic construction emission control practices and requirements of SMAQMD Rule 403 during trail construction activities, including the following:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.

- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

- Limit vehicle speeds on unpaved roads to 15 miles per hour.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.

Maintain all equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Responsibility: City of Sacramento

Timing: During Construction Activities

Findings

The project would have no additional project-specific environmental effects relating to Air Quality; however, mitigation has been incorporated to comply with SMAQMD requirements.

BIOLOGICAL RESOURCES

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
3. BIOLOGICAL RESOURCES Would the proposal: A) Create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?			X
B) Result in substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal species?		X	
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?		X	

Environmental Setting

A Natural Environment Study (Area West Environmental, Inc. 2018) (NES) was prepared, for the City and Caltrans, that included a biological evaluation and field surveys of the study area to evaluate site conditions and potential impacts to biological resources from project activities. Other primary references consulted include species lists and information gathered using USFWS, Information, Planning, and Conservation System (IPAC), CDFW Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) list of rare and endangered plants, and a literature review. The NES conclusions are the result of field survey findings and research.

Area West Environmental, Inc. conducted focused biological field surveys on May 6 and 10, 2014; July 21, 2014; April 3, 4, 5, 11, and 12, 2017; June 21 and 22, 2017; February 27 and 28, 2018; and March 14, 2018. All vegetation and habitat types within the biological study area were noted, mapped, and evaluated, and VELB habitat assessments were conducted in accordance with USFWS 1999 guidance and 2017 framework (USFWS 1999, 2017). The Biological Study Area (BSA) for the project site includes the project footprint (Segments 1 through 6 and potential access and staging areas), and a 165-foot buffer.

Habitat and Land Cover Types

The BSA supports six generalized vegetation community types consisting of four upland communities (urban, ruderal, annual grassland, mixed scrub, and valley foothill riparian) and one aquatic community (Riverine [American River]). **Table 6** presents habitat information for the BSA. Habitat maps for Segments 3 through 6, the portion of the proposed trail that would be construction in the near term, are included in Appendix C.

Urban

The urban vegetation community consists of residential homes, industrial facilities, paved and graveled roadways, dirt trail, and train tracks. Vegetation within the urban community is regularly maintained with mowing, vegetation trimming and herbicide. Where residential homes with landscaped yards are present, horticultural species often included privet (*Ligustrum japonicum*), oleander (*Nerium oleander*), redwood (*Sequoia sempervirens*), interior live oak, and numerous cultivars of herbaceous garden plants.

Table 6. Habitat Community Types

Habitat Community	Acres within the Project Study Area
Urban	93.91
Ruderal	16.68
Annual Grassland	65.15
Mixed Scrub	7.78
Valley Foothill Riparian	34.15
Riverine (American River)[1]	27.03

Notes:
[1] Acreages presented are subject to verification by the U.S. Army Corps of Engineers. Modifications of the riverine acreage would increase or decrease the acreage of other vegetation communities accordingly.
Source: Area West Environmental, Inc., 2018

The urban community may provide habitat for nesting migratory birds and raptors, one large stick nest was observed in the top of a redwood tree located in a backyard in the eastern segment of the project alignment. Residential homes may provide nest boxes for birds and bird feeders to attract foraging birds. Other species that may use urban habitats for foraging include raccoon (*Procyon lotor*) and coyote (*Canis latrans*). Other areas like the graveled levee road and dirt trail consist of bare ground and are devoid of vegetation, and typically do not provide habitat for any special-status plants or wildlife species. Although killdeer (*Charadrius vociferus*) was observed using this habitat for nesting, and other wildlife, such as small lizards like western fence lizard (*Sceloporus occidentalis*) will use the roadway for basking.

Ruderal

The ruderal vegetation community consists of non-native annual grasses and forbs that are regularly maintained (mowed, sprayed with herbicide, etc.) along the fringes of the levee road (mainly the southern side), rail road right-of-way, or vacant lots. In the ruderal areas, annual grasses included foxtail barley (*Hordeum murinum*), soft brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and wild oats (*Avena fatua*). Annual forbs included filaree (*Erodium* spp.), smooth cat's ears (*Hypochaeris glabra*), English plantain (*Plantago lanceolata*), wild geranium (*Geranium dissectum*), and burclover (*Medicago polymorpha*). Shrubs such as California blackberry (*Rubus ursinus*) and coyote brush (*Baccharis pilularis*) were also observed in scattered patches in this habitat.

Due to continual disturbance, this vegetation community does not provide suitable habitat for special-status plant or wildlife species. However, this ruderal habitat may support various species of wildlife including small rodent species that forage on seeds or herbaceous growth such as California vole (*Microtus californicus*) and Botta's pocket gopher (*Thomomys bottae*). These prey species, along with insects supported by this habitat attract a variety of wildlife that forage in annual grassland including species such as western meadowlark (*Sturnella neglecta*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus*), and gopher snake (*Pituophis catenifeer*).

Annual Grassland

Annual grassland is found throughout the BSA and consists of non-native annual grasses and forbs. Species present in the annual grassland community are identical to species found in the ruderal community; the only exception between the two communities is that the ruderal community is regularly managed. In addition to annual grasses, forbs, and shrubs, the annual grassland community also consists of scattered occurrences of shrubs and trees.

The same wildlife species described as having potential to use the ruderal habitat would be the same species to use the annual grassland habitat. Additionally, a white-tailed kite was observed foraging in annual grasslands within the BSA near the 16th Street Bridge on April 12, 2017, and then a pair was observed in the same area on February 27, 2018.

Mixed Scrub

The mixed scrub community occurs in scattered patches, intermixed with annual grassland in the western segment of the BSA. While similar to riparian vegetation growing on the south side of the American River (between the levee and river), the mixed scrub community is not influenced by the river. As the name suggests, this community is not dominated by any one species. The main shrubs and trees contributing to the canopy layer are blue elderberry (*Sambucus nigra*), tree of heaven (*Ailanthus altissima*), domestic almond (*Prunus dulcis*), valley oak, and coyote brush. The understory of this community consists of species found in the ruderal and annual grassland communities.

The mixed scrub community is highly disturbed by human activity in the vicinity of Segments 1 and 2. Vegetation in this area has been altered to establish camps and trash piles are scattered throughout the area.

As previously mentioned, blue elderberry shrubs are the obligate host for VELB larvae. Focused surveys identified VELB habitat (elderberry shrubs) within the elderberry savanna community in the BSA. Additionally, larger shrubs and trees in these areas could provide habitat for nesting raptors or migratory songbirds.

Valley Foothill Riparian

Valley foothill riparian is present along the south side of the American River. Dominant species in the canopy layer are valley oak, Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), Northern California black walnut (*Juglans hindsii*), and black locust (*Robinia pseudoacacia*). Subcanopy trees present include boxelder (*Acer negundo*), white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia)*, and blue elderberry. Typical understory shrub layer plants include wild grape (*Vitis californica*), wild rose (*Rosa californica*), willows (*Salix* sp.), and blackberry. The herbaceous layer consists mainly of bedstraw (*Galium* sp.), man-root (*Marah fabacea*), and non-native grasses. In a section of this habitat located in the Paradise Beach Park area, the vegetation opens up and is less dense. This area has sandier soils and is dominated by herbaceous species such as California tule pea (*Lathyrus jepsonii* var. *californica*), hairy vetch (*Vicia villosa*), and non-native grasses, along with scattered silver bush lupines (*Lupinus albifrons*), shrubs, and trees.

The valley foothill riparian community is also highly disturbed by human activity. There are many trails that have been established throughout this habitat type that provide access down to the river. During the 2017 and 2018 surveys there was evidence of trail maintenance activities along the current trail (trimmed back vegetation).

Focused surveys identified VELB habitat within the valley foothill riparian community in the BSA. During the 2014 VELB surveys, a single female VELB was documented within this community type in the BSA. Trees in riparian habitat with cavities or tree hollows could provide habitat for cavity nesting birds. Habitat is also present for other migratory nesting birds and raptors. Red-shouldered hawk (*Buteo lineatus*) and red-tailed hawk were observed nesting in riparian habitat and foraging in adjacent annual grasslands. Thick brambles within the understory of the riparian habitat provide habitat cover along the banks for species such as American beaver (*Castor canadensis*) and river otter (*Lontra canadensis*).

American River (Riverine)

The American River occurs in the BSA and conveys water from the surrounding foothills of the Sierra Nevada Mountains to the southwest. The river flows into the Sacramento River which drains to San Francisco Bay. The riverine community supports riparian wetland vegetation outside of the ordinary high water mark (OHWM). Rocky erosion controls (e.g. riprap) have been placed along sections of riverbank within the BSA to protect the levee from erosion. In most areas with riprap, riparian vegetation has reestablished and includes alders, willows, and blue elderberries.

The American River provides habitat for anadromous fish species, such as Central Valley steelhead (*Oncorhynchus mykiss irideus*) and chinook salmon (*Oncorhynchus tshawytscha*). The American River also provides habitat for a multitude of bird species, such as Canada goose (*Branta canadensis*), mallard

(*Anas platyrhynchos*) and several other species. The river provides habitat for reptiles such as western pond turtle (*Actinemys marmorata*), which could occur basking along the banks or on emergent logs, or laying eggs along the bank. Amphibian species observed included Sierran tree frog (*Pseudacris sierra*).

Common Animal Species

The BSA provides habitat for an assemblage of wildlife species that are commonly found within stream/riparian corridors and valley grassland communities, as described above under each vegetation community description. During field surveys of the site, observations of wildlife were made, including raptors, great blue heron, egret, mallards and other waterfowl, beaver, and numerous species of birds. Cavity nesting birds, such as tree swallow (*Tachycineta bicolor*), were observed and could use tree hollows present throughout the BSA. Species such as cliff swallow (*Petrochelidon pyrrhonota*) and/or black phoebe (*Sayornis nigricans*) could nest under bridges.

Trees

Throughout the BSA there are numerous native and non-native tree species. Trees provide habitat for various wildlife including nesting birds and squirrels. Trees also provide shade over the American River which is essential for fish and aquatic species. Dominant tree species within the BSA included Fremont cottonwood, Oregon ash, Valley oak, arroyo willow, northern California black walnut, and black locust. Additional trees located within the BSA occur within residential neighborhoods adjacent to the levee; these are dominated by non-native horticultural trees, such as maples (*Acer* sp.), Eucalyptus (*Eucalyptus* sp.), privet, olive (*Olea europaea*), and various fruit and citrus trees (*Citrus* sp.).

Fish and Wildlife Migration Corridors

River/riparian corridors, such as that found along the lower American River, are commonly used by wildlife as migration and movement corridors. Striped skunk (*Mephitas mephitis*), Virginia opossum (*Didelphis virginiana*), black-tailed deer (*Odocoileus heminonus*) and song birds are commonly found traversing river/riparian corridors. Species of special concern that could use the American River as a migration corridor include ringtail (*Bassariscus astutus*) and western pond turtle. The Lower American River Watershed supports numerous species of native and nonnative fish species, including naturally spawning fish species of concern such as fall-run Chinook salmon and Central Valley steelhead.

Special-status Species

Special-status species with the potential to occur near the BSA were identified based on the species lists provided by USFWS (2018), NMFS) species list (2018), CNDDB records search (2018), CNPS Inventory of Rare and Endangered Plants (2018), and species distribution and habitat requirements data.

Special-status Plants

During the pre-field investigation, 16 special-status plant species were identified during the pre-field review as potentially occurring in the vicinity of the BSA. Based on the lack of suitable habitat (i.e., vernal pools, alkaline, and brackish soils), only 6 of the 16 special-status plant species (bristly sedge [*Carex comosa*], Peruvian dodder [*Cuscuta obtusiflora* var. *glandulosa*], Mason's lilaeopsis [*Lilaeopsis masonii*], Sanford's arrowhead [*Sagittaria sanfordii*], woolly rose mallow [*Hibiscus lasiocarpos* var. *occidentalis*], and Northern California black walnut have potential to occur in the BSA.

Scattered occurrences of Northern California black walnut trees were observed within the BSA. Black walnut trees occur within riparian forests and woodlands throughout Northern California. Historically, native varieties of black walnut trees were used as rootstock for English walnut (*Juglans regia*), resulting in hybridized trees. Over time, cultivated trees escaped and have become widely naturalized in parts of California. CNPS lists Northern California black walnut as 1B.1, and as such, is rare and endangered elsewhere, and seriously endangered in California. The CNPS designation only refers to the remaining native, un-hybridized stands of black walnuts. According to CNPS' *Inventory of Rare and Endangered Plants*, the current presumed extent of native trees only occurs within Contra Costa, Napa, and possibly Lake counties (CNPS 2018). Since the native species of black walnut is considered to be extirpated from

Sacramento County (CNPS 2018), it is highly unlikely that the black walnut trees observed within the BSA belong to a remaining native stand.

Special-status Wildlife

Based on the results of the field surveys and review of existing information including a search of the CNDDB, USFWS and NMFS species lists, and species distribution and habitat requirements data, 34 special-status wildlife species were identified during the pre-field review as occurring or having the potential to occur within the vicinity of the proposed project.

Of the 34 special-status wildlife species, 16 species would not occur in the BSA or have the potential to be affected by the proposed project because: 1) the BSA lacks suitable habitat for the species, 2) the BSA is outside the species' known range, and/or 3) field surveys determined that the species is not present. The remaining 17 species identified below have potential to occur within the BSA:

- Green Sturgeon Southern Distinct Population Segment (DPS), federally threatened species and state species of special concern;
- Central Valley steelhead DPS, federally threatened species;
- Central Valley fall/late-fall-run Chinook salmon Evolutionarily Significant Unit (ESU), NMFS and state species of special concern;
- Central Valley spring-run Chinook salmon ESU, federally threatened species;
- Sacramento splittail, state species of special concern;
- Valley elderberry longhorn beetle, federally threatened species;
- Western pond turtle, state species of special concern;
- Burrowing owl, state species of special concern;
- Swainson's hawk, state threatened species;
- White-tailed kite, state fully protected species;
- Bald eagle, state endangered and state fully protected species;
- Song sparrow "Modesto population", state species of special concern;
- Purple martin, state species of special concern;
- Bank swallow, state threatened species;
- Least Bell's vireo, federally endangered species and state endangered species;
- Ringtail, state fully protected species; and
- Western red bat, state species of special concern.

Special-status Species Critical Habitat

Based on the results of the field surveys and review of existing information, the BSA falls within designated critical habitat for Central Valley steelhead and Central Valley spring-run Chinook salmon.

Other Protected Wildlife Species

In addition to the wildlife species listed above, the BSA was also evaluated for its potential to support migratory birds and raptors which are not special-status species. Trees and shrubs within and adjacent to the BSA could provide nesting habitat for migratory birds and raptors.

Additionally, Chinook salmon Essential Fish Habitat (EFH) and groundfish EFH are mapped and listed by NMFS within the BSA. These EFHs are managed under the Magnuson-Stevens Fishery Conservation and Management Act.

Standards of Significance

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

For the purposes of this document, “special-status” has been defined to include those species, which are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by USFWS, or as species of special concern to CDFW;
- Plants or animals that meet the definition of rare or endangered under CEQA.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.3 of the Master EIR evaluated the effects of the 2035 General Plan on biological resources within the City. The Master EIR identified potential impacts in terms of degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.

Policies in the 2035 General Plan were identified as mitigating the effects of development that could occur under the provisions of the 2035 General Plan. Policy ER 2.1.5 calls for the City to preserve the ecological integrity of creek corridors and other riparian resources; Policy ER 2.1.10 requires the City to consider the potential impact on sensitive plants for each project and to require pre-construction surveys when appropriate; and Policy ER 2.1.11 requires the City to coordinate its actions with those of CDFW, USFWS, and other agencies in the protection of resources.

The Master EIR discussed biological resources in Chapter 4.3. The Master EIR concluded that policies in the general plan, combined with compliance with the California Endangered Species Act, Natomas Basin Habitat Conservation Plan (when applicable) and CEQA would minimize the impacts on special-status species to a less-than-significant level (see Impact 4.3-1), and that the general plan policies, along with similar compliance with local, state and federal regulation would reduce impacts to a less-than-significant level for habitat for special-status invertebrates, birds, amphibians and reptiles, mammals and fish (Impacts 4.3-3-6).

Given the prevalence of rivers and streams in the incorporated area, impacts to riparian habitat is a common concern. Riparian habitats are known to exist throughout the City, especially along the Sacramento and American rivers and their tributaries. The Master EIR discussed impacts of development adjacent to riparian habitat that could disturb wildlife species that rely on these areas for shelter and food and could also result in the degradation of these areas through the introduction of feral animals and contaminants that are typical of urban uses. The CDFW regulates potential impacts on lakes, streams, and associated riparian (streamside or lakeside) vegetation through the issuance of Lake or Streambed Alteration Agreements (per Fish and Game Code Section 1602) and provides guidance to the City as a resource agency. While there are no federal regulations that specifically mandate the protection of riparian vegetation, federal regulations set forth in Section 404 of the CWA address areas that potentially contain riparian-type vegetation, such as wetlands.

The 2035 General Plan calls for the City to preserve the ecological integrity of creek corridors, canals and drainage ditches that support riparian resources (Policy ER 2.1.5) and wetlands (Policy ER 2.1.6) and requires habitat assessments and impact compensation for projects (Policy ER 2.1.10). The City has adopted a standard that requires coordination with state and federal agencies if a project has the potential to affect other species of special concern or habitats (including regulated waters and wetlands) protected by agencies or natural resource organizations (Policy 2.1.11).

Implementation of 2035 General Plan Policy ER 2.1.5 would reduce the magnitude of potential impacts by requiring a 1:1 replacement of riparian habitat lost to development. While this would help mitigate impacts on riparian habitat, large open areas of riparian habitat used by wildlife could be lost and/or degraded directly and indirectly through development under the 2035 General Plan. Given the extent of urban development designated in the 2035 General Plan, the preservation and/or restoration of riparian habitat would likely occur outside the City limits. The Master EIR concluded that the permanent loss of riparian habitat would be a less-than-significant impact. (Impact 4.3-7)

Answers to Checklist Questions

Question A

Project activities would not disturb contaminated soils or release any materials that would be hazardous to special-status species during construction of Segments 3 through 6. However, portions of the project site in Segments 1 and 2 include lands that were historically used for waste disposal, and the Phase I Environmental Site Assessment prepared for the project indicated the potential presence of contaminated soil (see Item 7, Hazards, below). Therefore, project activities could disturb contaminated soils or release materials that would be hazardous to special-status species, and this impact would be potential significant. **Mitigation Measure 7-2** would reduce the impact related to exposure of special-status species to contaminated soil to a **less-than-significant** level because measures would be taken to ensure appropriate closure of potentially contaminated sites prior to construction.

Questions B and C

Impacts from project activities are described by resource, below.

American River Habitat

The project could result in indirect impacts to the American River related to increased sediment loads from earth moving activities during construction or the accidental introduction of wash water, solvents, oil, cement, or other pollutants during construction or maintenance. This impact would be potentially significant.

Implementing **Mitigation Measures 3-1 through 3-4** would reduce this impact to a le**ss-than-significant** level by requiring training, fencing, BMPs to avoid sediment transport, and restoring disturbed areas to pre-project conditions.

Valley Foothill Riparian Habitat

Construction of the proposed trail would affect the Valley foothill riparian habitat. Although the proposed project has been designed to minimize impacts on mixed riparian woodland habitat by using developed areas and annual grassland where possible, construction of the proposed trail would result in approximately 0.05 acre of temporary impacts in Segments 1-2 and 1.75 acres in Segments 3-6, and approximately 0.60 acre of permanent impacts in Segments 1-2 and 0.80 acre in Segments 3-6 to Valley foothill riparian habitat. Temporary impacts would occur as a result of vegetation clearing, grubbing, or trimming of tree canopy required in order to provide construction crews and equipment access to the project alignment and as part of maintenance activities. Permanent impacts on riparian habitat would occur as a result of construction of the proposed trail. No permanent impacts to Valley foothill riparian habitat would occur from operation and maintenance activities. Impacts to Valley foothill riparian habitat would be significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-5, 3-6, and 3-7** would reduce impacts to a **less-than-significant** level by requiring training, monitoring, fencing, restoring disturbed areas to pre-project conditions, avoiding the spread of invasive species, and compensating for the loss of habitat and protected trees.

Protected Trees

Construction of the proposed trail would result in the removal of trees. The project would also adversely affect trees by requiring tree trimming for equipment access and conducting ground-disturbing activities within the dripline of protected trees.

The number of trees removed and trimmed within Segments 1-2 has not been determined. These Segments would be constructed in the future; therefore, the size of trees and portions of trees overhanging the project footprint may differ from current conditions. The trees within Segments 1-2 are within riparian habitat and co-occur with elderberry shrubs.

Segments 3-6 of the proposed project would permanently affect (remove) 22 trees and temporarily affect (trim) approximately 72 additional trees located within the project footprint. All trees identified for removal are located within the valley foothill riparian vegetation community. Of the trees to be removed, four trees are protected under the City's Heritage Tree Ordinance (City of Sacramento Municipal Code 12.64.020), which protects trees of any species with a circumference of 100 inches or more; California native oak, buckeye, and sycamore trees with a circumference of 36 inches or greater; and/or trees of any species with a circumference of 36 inches or greater in a riparian zone. These trees include two black locust trees (with DBHs of 50 inches and 45 inches), one cork oak (DBH of 40 inches), and one Fremont cottonwood (DBH of 50 inches). Of these four trees, only the Fremont cottonwood is a native tree species.

During operations and maintenance, dead, dying, and hazard trees may be trimmed or removed.

Heritage trees and other trees identified for removal within the project footprint are owned by the City of Sacramento. As required by Section 12.64.050 of the City Code, the proposed tree removals would require City Council approval and the City Project Manager would need to provide written justification to the Director of the Parks and Recreation Department of the need to remove City trees for the public project.

Impacts related to protected trees would be significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-6, and 3-7** would reduce impacts to a **less-than-significant** level by requiring training, monitoring, fencing, restoring disturbed areas to pre-project conditions, and compensating for the loss of habitat and protected trees.

Special-status Plants

Based on the results of the April and June, 2017, and the March, 2018 botanical surveys, no special-status plants are present in the BSA. The BSA does not support potential habitat for any of the 16 special-status plants. There would be **no impact**.

Special-status Fish

The proposed project would require no in-water work and would not result in direct impacts to riverine habitat (American River). Construction activities would result in impacts to riparian habitat, however no riparian trees or shrubs located at or near the banks of the river would be removed. Therefore, the project would not result in the loss of shaded riverine aquatic habitat. There would be no direct impact related to special-status fish or fish habitat, including green sturgeon, Central Valley steelhead, Sacramento splittail, or Central Valley spring-run or fall/late-fall-run Chinook salmon. There would be no direct habitat effects, including to EFH for Chinook salmon or critical habitat for Central Valley steelhead and Chinook salmon. Indirect construction effects to habitat, EFH, and critical habitat for these species, including the potential for sediment or contaminants to affect the American River, would be potentially significant. Implementation of Mitigation Measures 3-1, 3-2, 3-3, and 3-7 would ensure that indirect construction impacts to the aquatic environment in the American River through siltation or contamination would be **less than significant** by requiring training, fencing, BMPs to avoid sediment transport, and restoring disturbed areas to pre-project conditions.

Valley Elderberry Longhorn Beetle

Elderberry shrubs are present and abundant within the BSA. There are various CNDDB records within a 5-mile radius of the BSA and several elderberry shrubs within the BSA have exit holes on the stems which indicate that VELB is present within the BSA. The USFWS 2017 Framework states that if elderberry shrubs occur on or within 165 feet of the project area, adverse effects to VELB may occur as a result of project implementation. Therefore, surveys for VELB habitat (elderberry shrubs) were conducted within 165 feet of the project footprint. A total of 501 elderberry shrubs were identified within 165 feet of the project footprint.

Table 7 summarizes elderberry shrub impacts. The placement of the proposed project under Segments 1-2 Alternative 1 would result in the permanent removal of 22 elderberry shrubs (105 stems, 32 of which had exit holes). Segments 1-2 Alternative 2 would result in the permanent removal of 14 elderberry shrubs (88 stems, 16 of which had exit holes). Segments 3-6 would result in the permanent removal of 29 elderberry shrubs (114 stems, 22 of which had exit holes). Annual operations and maintenance along the trail would not result in the permanent loss (removal) of elderberry shrubs.

The placement of the proposed project under Segments 1-2 Alternative 1 would require trimming of an additional 2 elderberry shrubs (11 stems, 6 of which had exit holes), resulting in temporary impacts. Segments 1-2 Alternative 2 would require trimming of an additional 1 elderberry shrub (10 stems, 5 of which had exit holes). Segments 3-6 would result in the trimming of 48 elderberry shrubs (274 stems, 33 of which had exit holes). During trail maintenance in future years, temporary impacts would occur from trimming of up to 5 elderberry shrubs.

Although VELB were not observed during the 2018 surveys, one female VELB was observed during a previous survey of the project area on May 6, 2014 and the presence of exit holes in many of the shrubs indicates that VELB occupy the riparian habitat in the BSA. No critical habitat for VELB is located within the BSA. However critical habitat is located approximately 0.45 mile northeast of the VELB habitat (elderberry shrubs). Permanent impacts to VELB habitat (elderberry shrubs) would occur from removal of elderberry shrubs during construction of the proposed trail. Temporary impacts would occur as a result of vegetation clearing, grubbing, or trimming required to provide construction crews and equipment access to the project, and as part of maintenance from clearing debris, removing hazard vegetation, and mowing. **Table 8** summarizes impacts to VELB habitat.

Segments 1-2 Alternative 1 would result in the permanent removal of approximately 0.95 acre of VELB, riparian, and mixed scrub habitat. Segments 1-2 Alternative 2 would result in the permanent removal of approximately 0.97 acre. Segments 3-6 would result in the permanent removal of approximately 0.92 acre. No permanent impacts would occur as a result of maintenance activities.

Maintenance activities would trim vegetation that grows to overhang the trail and results in a hazard to cyclists. Additionally, maintenance would include work within 165 feet of riparian habitat, mixed scrub habitat, and the elderberry shrubs within that habitat. Maintenance activities may temporarily affect up to 0.205 acre (approximately 5 elderberry shrubs). This acreage is included in the temporary impact acreage presented for construction in **Table 8** but would occur later in time. These maintenance areas correspond with (are the same as) the temporary loss area described above for construction.

Table 7. Summary of Elderberry Shrub Impacts

Item		Number of Shrubs	Number of Stem(s) (by Diameter) (inches)			Total number of Stems	Number of Exit Holes in Stem(s) (by Diameter) (inches)			Total number of Stems with Exit Holes
			1" - 3"	3" - 5"	>5"		1" - 3"	3" - 5"	>5"	
Segments 1-2 Alternative 1	Shrubs with stems 1 inch or greater to be **trimmed**	**2**	5	1	5	**11**	5	0	1	**6**
	Shrubs with stems 1 inch or greater to be **removed**	**22**	43	33	29	**105**	2	11	19	**32**
Segments 1-2 Alternative 2	Shrubs with stems 1 inch or greater to be **trimmed**	**1**	5	1	4	**10**	5	0	0	**5**
	Shrubs with stems 1 inch or greater to be **removed**	**14**	43	24	21	**88**	2	3	11	**16**
Segments 3-6	Shrubs with stems 1 inch or greater to be **trimmed**	**48**	196	47	31	**274**	6	11	16	**33**
	Shrubs with stems 1 inch or greater to be **removed**	**29**	63	23	28	**114**	5	7	10	**22**
Maintenance[1]	Shrubs with stems 1 inch or greater to be trimmed	**5**	5	-	-	-	-	-	-	-

Note:
[1] Actual maintenance impacts are unknown. Impacts from maintenance are assumed to be 5 shrubs and 5 1-3" stems.

Table 8. Direct Impacts to Valley Elderberry Longhorn Beetle Habitat

Habitat Type	Direct Impacts to Potential Habitat					
	Permanent (acres)			Temporary (acres)		
	Segments 1-2 Alt. #1	Segments 1-2 Alt. #2	Segments 3-6	Segments 1-2 Alt. #1	Segments 1-2 Alt. #2	Segments 3-6
Mixed Scrub	0.35	0.37	0.12	0.23	0.22	0.03
Valley Foothill Riparian	0.60	0.60	0.80	0.05	0.05	1.75
Total	***0.95***	***0.97***	***0.92***	***0.28***	***0.27***	***1.78***

The project would result in significant temporary and permanent impacts to VELB and VELB habitat. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-6, 3-7, 3-8, 3-9, 3-10, 3-11, and 3-12**, would reduce

impacts to a **less-than-significant** level by requiring training, monitoring, fencing, restoring disturbed areas to pre-project conditions, compensating for the loss of habitat, constructing outside sensitive seasons, and controls on dust, herbicides, and mowing near shrubs.

Western Pond Turtle

Potential aquatic and upland habitat for western pond turtle is present within the BSA. If western pond turtles are present within the project footprint during construction, the movement of equipment within the project footprint could crush pond turtles or nests containing eggs or young. The project would result in a permanent impact of approximately 0.60 acre in Segments 1-2 (Alternative 1 or 2) and 0.80 acre in Segments 3-6, and a temporary impact of approximately 0.05 acre in Segments 1-2 and 1.75 acres in Segments 3-6 of potential upland western pond turtle habitat (Valley foothill riparian habitat). Impacts to western pond turtle would be potentially significant. Implementing **Mitigation Measures 3-1 through 3-4, 3-7, 3-13, and 3-14** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, restoring disturbed areas to pre-project conditions, water quality BMPs, providing escape ramps during trenching, and preconstruction surveys to avoid the species.

Burrowing Owl

Removal of vegetation within the project footprint could directly affect burrowing owl, if present. Additionally, noise associated with construction and maintenance activities and vegetation removal involving heavy equipment operation that occurs during the breeding season (generally from February to March) could disturb nesting burrowing owl if an active nest is located near these activities. Vegetation removal and soil disturbance could result in alteration of burrowing owl nesting or foraging habitat. Segments 1-2 Alternative 1 would result in a permanent impact of approximately 1.56 acres in Segments 1-2 and a temporary impact of approximately 1.17 acres to annual grasslands in the BSA. Segment 1-2 Alternative 2 would result in a permanent impact of approximately 1.69 acres and temporary impact of approximately 0.81 acre to annual grasslands in the BSA. Segments 3-6 would result in a permanent impact of approximately 3.72 acres and a temporary impact of approximately 7.28 acres to annual grasslands in the BSA. No additional acreage is anticipated to be affected by operations and maintenance activities. Impacts to burrowing owl would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-7, 3-9 and 3-14** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, dust control, restoring disturbed areas to pre-project conditions, and preconstruction surveys to avoid the species.

Swainson's Hawk

Segments 1-2 Alternative 1 would result in a permanent impact to approximately 1.56 acres of annual grassland habitat and approximately 0.58 acre of ruderal habitat which could be used by Swainson's hawk as foraging habitat. Segments 1-2 Alternative 2 would result in a permanent impact to approximately 1.69 acres of annual grassland habitat and approximately 0.72 acre of ruderal habitat which could be used by Swainson's hawk as foraging habitat. Segments 3-6 would result in a permanent impact to approximately 3.72 acres of annual grassland habitat and approximately 0.83 acre of ruderal habitat which could be used by Swainson's hawk as foraging habitat. However, the habitat affected by the project is disturbed, fragmented, and set in an urban area, providing low-quality habitat for Swainson's hawk.

Suitable large trees within the Valley foothill riparian habitat along the American River within the BSA could provide nesting habitat for Swainson's hawk. Segments 1-2 (Alternative 1 or 2) would result in a permanent impact to approximately 0.60 acre and a temporary impact of approximately 0.05 acre of Valley foothill riparian habitat which could provide nesting habitat for Swainson's hawk. Segments 3-6 would result in a permanent impact to approximately 0.80 acre and a temporary impact of approximately 1.75 acres of Valley foothill riparian habitat which could provide nesting habitat for Swainson's hawk. No additional acreage is anticipated to be affected by maintenance activities.

Noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) could disturb nesting Swainson's hawk if an active nest is located near these activities. Within urban areas, CDFW considers 0.25 mile to be a sufficient buffer to avoid disturbance of nesting Swainson's hawks (CDFW 1994).

Impacts to Swainson's hawk would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-7, 3-9, 3-14, and 3-15** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, dust control, restoring disturbed areas to pre-project conditions, preconstruction surveys to avoid the species, and avoiding loss of nests.

White-tailed Kite

Segments 1-2 Alternative 1 would result in a permanent impact to approximately 1.56 acres of annual grassland habitat and approximately 0.58 acre of ruderal habitat which could be used by white-tailed kite as foraging habitat. Segments 1-2 Alternative 2 would result in a permanent impact to approximately 1.69 acres of annual grassland habitat and approximately 0.72 acre of ruderal habitat which could be used by white-tailed kite as foraging habitat. Segments 3-6 would result in a permanent impact to approximately 3.72 acres of annual grassland habitat and approximately 0.83 acre of ruderal habitat which could be used by white-tailed kite as foraging habitat. No additional acreage is anticipated to be affected by operations and maintenance activities. However, the habitat affected by the project is disturbed, fragmented, and set in an urban area, providing low-quality habitat for white-tailed kite.

Suitable large trees within the Valley foothill riparian habitat along the American River within the BSA could provide nesting habitat for white-tailed kite. Segments 1-2 (Alternative 1 or 2) would result in a permanent impact to approximately 0.60 acre and a temporary impact of approximately 0.05 acre of Valley foothill riparian habitat which could provide nesting habitat for white-tailed kite. Segments 3-6 would result in a permanent impact to approximately 0.80 acre and a temporary impact of approximately 1.75 acres of Valley foothill riparian habitat which could provide nesting habitat for white-tailed kit. No additional acreage is anticipated to be affected by operations and maintenance activities.

Noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between February 1 and August 31) could disturb nesting white-tailed kite if an active nest is located near these activities. Within urban areas, CDFW considers 0.25 mile to be a sufficient buffer to avoid disturbance of nesting white-tailed kites (CDFW 1994).

Impacts to white-tailed kite would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-7, 3-9, and 3-14** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, dust control, restoring disturbed areas to pre-project conditions, and preconstruction surveys to avoid the species.

Bald Eagle

No riverine habitat would be directly impacted by construction activities. Construction-related soil disturbance could indirectly result in temporary impacts to water quality in aquatic foraging habitat for bald eagle in the watershed.

Suitable large trees within the Valley foothill riparian habitat along the American River within the BSA could provide nesting habitat for bald eagle. Segments 1-2 (Alternative 1 or 2) would result in a permanent impact to approximately 0.60 acre and a temporary impact of approximately 0.05 acre of Valley foothill riparian habitat which could provide nesting habitat for Bald eagle. Segments 3-6 would result in a permanent impact to approximately 0.80 acre and a temporary impact of approximately 1.75 acres of Valley foothill riparian habitat which could provide nesting habitat for Bald eagle. No additional acreage is anticipated to be affected by operations and maintenance activities.

Noise associated with construction activities involving heavy equipment operation that occurs during the breeding season (generally between February 1 and August 31) could disturb nesting bald eagle if an active nest is located near these activities. Within urban areas, CDFW considers 0.25 mile to be a sufficient buffer to avoid disturbance of nesting bald eagle.

Impacts to bald eagle would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-3, 3-4, 3-7, 3-9, and 3-14** would reduce these impacts to a **less-than-significant** level by requiring training,

monitoring, water quality BMPs, fencing, dust control, restoring disturbed areas to pre-project conditions, and preconstruction surveys to avoid the species.

Other Protected Birds and Raptors

Removal of trees and shrubs within the project footprint could directly affect nesting birds. Additionally, noise associated with construction or maintenance activities involving heavy equipment operation that occurs during the breeding season (generally between March 1 and August 31) could disturb nesting birds and raptors if an active nest is located near these activities.

Impacts to other protected birds and raptors, including song sparrow, purple martin, least Bell's vireo, and other migratory birds, would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-7, 3-9, and 3-14** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, dust control, restoring disturbed areas to pre-project conditions, and preconstruction surveys to avoid the species.

Ringtail

Potential foraging and den habitat for ringtail occurs within large trees in the riparian woodland habitat in the BSA. Forage that is present includes berries from Himalayan blackberry, insects, and small vertebrate prey such as mice or lizards. Other food sources available in the BSA include mistletoe (Viscum album) and other berry producing vegetation is present but is not abundant. Although this species may avoid urban areas, the BSA is located along an expansive riparian corridor which could be used by ringtail to pass through the area to different locations along the American and Sacramento River.

Ringtail are nocturnal and would not likely be foraging in the project footprint during daylight hours. However, because the project area includes potential den and foraging habitat for ringtail, and the area could be used by ringtail as a movement corridor, project-related construction or maintenance activities and related noise could cause short-term, temporary disturbance to ringtail, or could have a direct permanent effect on ringtail through removal of mature trees and riparian vegetation that could represent potential foraging and/or den habitat for this species.

Impacts to ringtail would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-7, 3-9, and 3-13** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, dust control, restoring disturbed areas to pre-project conditions, and escape ramps or covers for trenches.

Roosting Bats

The project may have a direct permanent effect on bats through removal of mature trees that could support roosting bat colonies. Additionally, noise associated with construction or maintenance activities involving heavy equipment operation could disturb roosting bats if a roosting colony is located near these activities.

Impacts to bats, including western red bats, would be potentially significant. Implementing **Mitigation Measures 3-1, 3-2, 3-4, 3-7, 3-9, and 3-14** would reduce these impacts to a **less-than-significant** level by requiring training, monitoring, fencing, dust control, restoring disturbed areas to pre-project conditions, and preconstruction surveys to avoid the species.

Waters of the U.S. and State

USACE has not determined the OHWM of the American River in the project vicinity. If the USACE determines that the OHWM of the American River extends into the project footprint, the project would have a potentially significant impact related to waters of the U.S. and State. Implementing **Mitigation Measures 3-1 through 3-4 and 3-16** would reduce this impact to a **less-than-significant** level by requiring training, fencing, BMPs to avoid sediment transport, restoring disturbed areas to pre-project conditions, obtaining a jurisdictional determination or preliminary jurisdictional determination from USACE, and purchasing credits to ensure that the project would not result in a net loss of Waters of the U.S. and State.

Mitigation Measures

Mitigation Measure 3-1: Conduct Worker Environmental Awareness Training Program Regarding Special-status Species and Sensitive Habitats prior to Construction.

The City will implement the following actions before and during construction activities:

Before any work occurs in the proposed project footprint, including grading and equipment staging, all construction personnel shall participate in an awareness training program (Worker Environmental Awareness Training Program [WEAP]) regarding special-status species and sensitive habitats present in the project limits. The training shall describe sensitive resources (i.e., waters of the U.S. and state, riparian habitat, special-status species and habitat, nesting birds/raptors) to be avoided during project construction and applicable permit conditions identified by state and federal agencies to protect these resources. If new construction personnel are added to the project, they must receive the mandatory training before starting work. After being trained, each construction person shall sign-in to document they received the training.

Responsible Party: City of Sacramento

Timing: Before and During Construction

Mitigation Measure 3-2: Install Temporary Fencing Around Environmentally Sensitive Habitat

Before any ground-disturbing activity occurs within the project footprint, the City shall ensure that temporary construction barrier fencing, silt fencing, and/or flagging is installed between the work area and environmentally sensitive habitat areas (i.e., waters of the U.S. and State, riparian vegetation, special-status species habitat, active bird/raptor nests to be avoided), as appropriate. Construction/maintenance personnel and construction/maintenance activity shall avoid fenced environmentally sensitive areas. The exact location of the fencing and/or flagging shall be determined by the resident engineer coordinating with a qualified biologist, with the goal of protecting sensitive biological habitat and water quality. No ground disturbance or vegetation removal activity shall be allowed until this condition is satisfied. The fencing/flagging shall be checked regularly and maintained until all work is complete. For construction, any required barrier or sediment fencing and a note reflecting this condition shall be shown on the final construction documents.

Responsible Party: City of Sacramento

Timing: Before and During Construction

Mitigation Measure 3-3: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention and Control Plan, and Associated Best Management Practices.

The City shall require that the construction contractor implement the following BMPs to protect water quality within the American River.

- Conduct ground-disturbing activities adjacent to the American River during the low-flow period (generally between June 1 and October 15).

- Install sediment fencing, fiber rolls, or other equivalent erosion and sediment control measures between the designated work area and the American River, as necessary, to ensure that construction debris and sediment does not inadvertently enter the drainage. The City shall also cover or otherwise stabilize all exposed soil 48 hours prior to potential precipitation events of greater than 0.5 inch.

- Immediately after trail construction is complete, all exposed soil shall be stabilized. Soil stabilization may include, but is not limited to, seeding with a native grass seed mix, planting native plants and placement of rock.

- No refueling, storage, servicing, or maintenance of equipment shall take place within 100 feet of waters of the U.S. and State.

- All machinery used during construction of the project shall be properly maintained and cleaned to prevent spills and leaks that could contaminate soil or water.

- Any spills or leaks from construction equipment (i.e., fuel, oil, hydraulic fluid, and grease) shall be cleaned up in accordance with applicable local, state, and/or federal regulations.

- Tightly woven fiber netting (no monofilament netting) or similar material shall be used for erosion control or other purposes within the project footprint to ensure that wildlife are not trapped. This limitation shall be communicated to the contractor through the special provisions included in the bid solicitation package. Coconut coir matting and burlap-containing fiber rolls are an example of acceptable erosion control materials.

- Before any construction-related ground-disturbing activities, the City shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP; as required under the SWRCB's General Construction Permit Order 2009-0009-DWQ [and as amended by most current order(s)]) or a Water Pollution Control Plan (WPCP), as applicable, that includes erosion control measures and construction waste containment measures to ensure that waters of the State are protected during and after project construction. The Plan (a SWPPP or WPCP) shall include site design to minimize offsite storm water runoff that might otherwise affect adjacent waters of the U.S. and State.

  The Plan (a SWPPP or WPCP) shall be prepared with the following objectives: (a) to identify pollutant sources, including sources of sediment, that may affect the quality of storm water discharges from the construction of the proposed project; (b) to identify BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the project during construction; (c) to outline and provide guidance for BMP monitoring; (d) to identify proposed project discharge points and receiving waters; to address post-construction BMP implementation and monitoring; and (f) to address sedimentation, siltation, and turbidity.

  The SWPPP or WPCP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials business plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent, and materials available to clean up, hazardous material and waste spills. The SWPPP or WPCP shall also identify emergency procedures for responding to spills.

Responsible Party: City of Sacramento

Timing: Before and During Construction

Mitigation Measure 3-4: Return Temporarily Disturbed Areas to Pre-Project Conditions

All temporarily disturbed areas shall be returned to pre-project conditions within one year following completion of construction/maintenance. These areas shall be properly protected from washout and erosion using appropriate erosion control devices including coir netting, hydroseeding, and revegetation.

Responsible Party: City of Sacramento

Timing: During and After Construction

Mitigation Measure 3-5: Avoid the Spread of Invasive Plant Species

The following mitigation measures shall be implemented, as appropriate, to avoid the spreading of invasive plant species throughout the project site during construction and maintenance activities, particularly in riparian areas:

- All hay, straw, hay bales, straw bales, seed, mulch, or other material used for erosion control or landscaping on the project site, and all material brought to the site, including rock, gravel, road base, sand, and top soil, shall be free of noxious weed seeds and propagules. Noxious weeds are defined in Title 3, Division 4, Chapter 6, Section 4500 of the California Code of Regulations and the California Quarantine Policy – Weeds. (Food and Agriculture Code, Sections 6305, 6341 and 6461)

- All equipment brought to the project site for construction shall be thoroughly cleaned of all dirt and vegetation prior to entering the site to prevent importing noxious weeds. (Food and Agriculture Code, Section 5401)

Responsible Party: City of Sacramento

Timing: During Construction and Maintenance Activities

Mitigation Measure 3-6: Compensate for Permanent Impacts to Riparian Habitat and Protected Trees

In accordance with policies stated in the City's General Plan, to compensate for the permanent removal of riparian vegetation associated with the trail construction, the City shall purchase off-site credits at a mitigation bank or replant riparian trees and shrubs at a 1:1 ratio (e.g., 1 acre planted for every 1 acre removed). The replacement plantings shall consist of a variety of native tree species that occur within the riparian vegetative community along the American River corridor such as live oak, Fremont cottonwood, Oregon ash, boxelder, white alder, arroyo willow, and native shrub species such as narrowleaf willow, California rose, and California blackberry. No long-term management of landscaping or watering beyond that needed to initially establish the plants is anticipated to occur.

If an onsite or offsite City-responsible mitigation site is used, the City shall accomplish riparian habitat compensation by implementing the following: after completion of the trail design, the City shall total the number, type, and size of all trees and shrubs to be removed and prepare a planting plan that identifies the location of the riparian mitigation plantings and the number, type, and size of plants. The planting plan shall also describe the irrigation and maintenance required to establish and monitor the planting area. Mitigation plantings will be completed between October 15 and December 31 of the year immediately following when impacts occur. All mitigation plantings will be monitored for 3 years. The survival goals established by CDFW will be adhered to, and if the goals are not met, then the City will be responsible for installing replacement plantings. Replacement plants shall be monitored with the same survival and growth requirements for 3 years following planting. The City will be responsible for planting, replanting, watering, weeding, invasive exotic eradication, and any other practice needed to ensure this goal. An annual status report on the mitigation will be provided to CDFW by December 31 of each year. The report will include the survival, percent cover, and height of both tree and shrub species. The number by species of plants and trees replaced, and overview of the re-vegetation effort, and the method used to assess these parameters will also be included. Photographs of the mitigation area will also be included. To ensure success of the mitigation plantings, the City shall prepare and implement an adaptive management plan that identifies specific monitoring tasks, success criteria, and reporting requirements.

If mitigation bank credits are purchased, the credits must be purchased at a CDFW-approved site.

Responsible Party: City of Sacramento

Timing: At the Completion of Construction Activities

Mitigation Measure 3-7: Monitor During Ground Disturbance and Vegetation Removal

A qualified biological monitor shall be present during all project activities requiring ground disturbance or vegetation removal within the construction area and shall make weekly monitoring visits to construction/active maintenance areas occurring in or adjacent to environmentally sensitive habitat areas, (i.e., waters of the U.S. and State, riparian vegetation, special-status species habitat, active bird/raptor nests). The biologist shall be responsible for ensuring that the contractor maintains the fencing/flagging protecting sensitive biological resources. Additionally, the biologist shall assist the City and the construction crew in complying with all proposed project implementation restrictions and guidelines as needed.

Vegetation less than 3 inches in diameter shall be cleared by hand or small engine weed-eaters or chainsaws. Small material or grasses shall be mowed close to ground with low impact rubber-tired tractors. Vegetation over 3 inches in diameter may require larger equipment such as telescoping chainsaws, hoe-mounted flail mowers, bucket machines to hoist crews and equipment, and crews climbing with chainsaws.

To qualify for approval from the USFWS, the biological monitor must be a biologist with demonstrated knowledge of VELB natural history, ecology, and identifying characteristics, as well as demonstrated field experience identifying other listed species. The monitor will be approved by the Sacramento USFWS Office in writing prior to the start of any ground-disturbing activities.

Responsible Party: City of Sacramento

Timing: During Construction Activities

Mitigation Measure 3-8: Avoid Construction Activities within 165 feet of Elderberry Shrubs During Valley Elderberry Longhorn Beetle Flight Season

As much as feasible, all construction activities that could occur within 165 feet (50 meters) of an elderberry shrub, will be conducted outside of the flight season of the VELB (March - July).

Responsible Party: City of Sacramento

Timing: During Construction Activities

Mitigation Measure 3-9: Implement Dust Control Measures

The City shall require that the construction contractor implement dust-control measures during all construction activities. These measures may include application of water to graded and disturbed areas that are un-vegetated. To avoid attracting Argentine ants, at no time shall water be sprayed within the driplines of elderberry shrubs).

Responsible Party: City of Sacramento

Timing: During Construction Activities

Mitigation Measure 3-10: Prohibit Use of Herbicides and Mowing near Elderberry Shrubs

The City shall prohibit the contractor from using insecticides, herbicides, fertilizers, or other chemicals within 95 feet of elderberry shrubs. The City shall prohibit the contractor from conducting mechanical weed removal within the drip-line of the elderberry shrub during the season when adults are active (February - August) and will avoid damaging the elderberry.

Responsible Party: City of Sacramento

Timing: During Construction and Maintenance Activities

Mitigation Measure 3-11: Compensate for the Permanent Removal and Temporary Disturbance of Valley Elderberry Longhorn Beetle Habitat

The City will purchase mitigation credits for impacts to potential valley longhorn elderberry beetle riparian and mixed scrub habitat in accordance with the USFWS 2017 Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017). The City will coordinate with USFWS to determine the appropriate type and amount of compensatory mitigation for all unavoidable adverse impacts to VELB or its habitat.

Compensation for Permanent Loss of Habitat: Per the 2017 Framework, the USFWS recommends that the permanent loss of VELB habitat be replaced with habitat that is commensurate with the type (riparian or non-riparian) and amount of habitat lost. Suitable riparian habitat may be replaced, at a minimum of 3:1 for all acres that will be permanently impacted by the project (**Table 9**). The USFWS typically recommends that any shrub that will be adversely impacted by the project be transplanted to a USFWS-approved location.

Table 9. Potential Valley Elderberry Longhorn Beetle Habitat-level Compensation Ratios

Habitat Type	Compensation Ratio[1]	Approximate Direct Impacts to Potential Habitat					
		Approximate Permanent (acres) of Disturbance			Acres of Credits / Total Credit Purchase[2]		
		Segments 1-2 Alt. 1	Segments 1-2 Alt. 2	Segments 3-6	Segments 1-2 Alt. 1	Segments 1-2 Alt. 2	Segments 3-6
Mixed Scrub	3:1	0.35	0.37	0.12	0.36 / 8.7	1.05 / 25.4	1.41 / 34.1
Valley Foothill Riparian		0.94	0.94	0.97	2.91 / 70.4	2.82 / 68.2	5.73 / 138.7
Total		**1.29**	**1.09**	**1.29**	**3.27 / 79.1**	**3.87 / 93.7**	**7.14 / 172.8**

Notes:
[1] acre(s) of credit: acre(s) of disturbance
[2] one credit (unit) = 1,800 square feet (0.041 acre)

For the purpose of this analysis, both the Valley foothill riparian and mixed scrub community types were considered to be potential riparian habitat for this species. Therefore, the acres of disturbance to these two community types will be mitigated at the 3:1 ratio stated in the USFWS 2017 Framework (as shown in **Table 9**).

Temporary Loss of Valley Elderberry Longhorn Beetle Habitat: To appropriately compensate for all individual shrubs that will be impacted by the project, the City shall first consider the location of the plant (riparian or non-riparian) and the potential for the plant to be occupied by VELB (exit holes present, likely occupied). For direct effects to individual shrubs, the City may consider replacing habitat based on the amount of effects that occur, the location of the shrub (riparian or non-riparian), and the presence of exit holes (non-riparian only). Impacts to individual shrubs in riparian areas may be replaced by the purchase of 2 credits at an USFWS-approved bank for each shrub that will be trimmed regardless of the presence of exit holes.

For purposes of this analysis, impacts to individual elderberry shrub that result from temporary trimming activities were considered as riparian, and therefore would be mitigated at the 2:1 ratio stated in the USFWS 2017 guidelines. The number of elderberry shrubs requiring transplantation as shown in **Table 10** are included in the amounts described in Mitigation Measure 3-12: Transplant Elderberry Shrubs.

Table 10. Valley Elderberry Longhorn Beetle Shrub-level Impact Ratios					
	Habitat	Compensation Ratio	# of Shrubs to be Trimmed	Compensation	Total Credit Purchase[2]
Segments 1-2 Alternative 1	Riparian	2:1	2	Transplant the shrub + 2:1 compensation	**2 shrubs transplanted + 4 credits**
Segments 1-2 Alternative 2	Riparian	2:1	1	Transplant the shrub + 2:1 compensation	**1 shrub transplanted + 2 credits**
Segments 3-6	Riparian	2:1	47	Transplant the shrub + 2:1 compensation	**47 shrubs transplanted + 94 credits**
	Non-Riparian	1:1	1	Transplant the shrub + 1:1 compensation	**1 shrub transplanted + 1 credits**
Maintenance	Riparian	2:1	5	Transplant the shrub + 2:1 compensation	**5 shrubs transplanted + 10 credits**

Notes:
[1] number of credits: number of shrubs trimmed
[2] one credit (unit) = 1,800 square feet (0.041 acre)

Responsible Party: City of Sacramento

Timing: Prior to Completing Construction Activities

Mitigation Measure 3-12: Transplant Elderberry Shrubs

USFWS recommends that all loss of elderberry longhorn beetle habitat be replaced with habitat that is commensurate with the type and amount lost under the following conditions:

- If the elderberry shrub cannot be avoided.
- If indirect effects will result in the death of stems or the entire shrub.

If the shrub can be avoided, and indirect effects will not result in the death of the entire shrub, individual shrub-level impact compensation is recommended. Placement of the proposed project under Segments 1-2 Alternative 1 would result in temporary impacts (trimming) to 2 elderberry shrubs requiring both to be transplanted according to the 2017 Framework. Segments 1-2 Alternative 2 would result in temporary impacts (trimming) to 1 elderberry shrub (Table 4-4), requiring one to be transplanted according to the 2017 Framework. Segments 3-6 would result in temporary impacts (trimming) to 48 shrubs (Table 4-4), requiring 48 shrubs to be transplanted according to the 2017 Framework. Operations and maintenance would potentially impact up to 5 shrubs throughout all segments (Table 4-4), requiring 5 additional shrubs be transplanted.

Removal of entire elderberry plants without disturbance to the surrounding habitat is uncommon but may occur. The removal may either include the roots or just the removal of the aboveground portion of the plant. When possible, the City shall attempt to remove the entire root ball and transplant the shrub. To minimize the fragmentation of VELB habitat, the City will relocate elderberry shrubs as close as possible to their original location. Elderberry shrubs may be relocated adjacent to the project footprint if: 1) the planting location is suitable for elderberry growth and reproduction; and 2) the City is able to protect the shrub and ensure that the shrub becomes reestablished. If these criteria cannot be met, the shrub may be transplanted to an appropriate USFWS-approved mitigation site.

Any elderberry shrub that is unlikely to survive transplanting because of poor condition or location, or a shrub that would be extremely difficult to move because of access limitations, may not be appropriate for transplanting. The following transplanting guidelines may be used by the City:

- Monitor - A qualified biologist will be on-site for the duration of transplanting activities to assure compliance with avoidance and minimization measures and other conservation measures.

- Exit Holes - Exit-hole surveys will be completed immediately before transplanting. The number of exit holes found, global positioning system (GPS) location of the plant to be relocated, and the GPS location of where the plant is transplanted will be reported to the USFWS and to the CNDDB.

- Timing - Elderberry shrubs will be transplanted when the shrubs are dormant (November through the first two weeks in February) and after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the shrub and increase transplantation success.

- Transplanting Procedure - Transplanting will follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting (http://www.tcia.org/).

- Trimming Procedure - Trimming will occur between November and February and should minimize the removal of branches or stems that exceed 1 inch in diameter. (USFWS 2017)

Responsible Party: City of Sacramento

Timing: Before and During Construction Activities

Mitigation Measure 3-13: Provide Escape Ramps or Cover Open Trenches

To avoid entrapment of wildlife, all excavated steep-walled holes or trenches more than two feet deep will be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. If escape ramps cannot be provided, then holes or trenches will be covered with plywood or similar materials. Providing escape ramps or covering open trenches will prevent injury or mortality of wildlife resulting from falling into trenches and becoming trapped. The trenches will be thoroughly inspected for the presence of federally listed species at the beginning of each workday. Any species observed shall be allowed to voluntarily move outside of the work area on its own.

Responsible Party: City of Sacramento

Timing: During Construction Activities

Mitigation Measure 3-14: Conduct Preconstruction Surveys

Western Pond Turtle: A qualified biologist shall conduct a preconstruction clearance survey for western pond turtles within 48 hours prior to any ground disturbance within the project footprint. Any western pond turtles found within the construction work area shall be allowed to voluntarily move out of this area or shall be captured and held by a qualified biologist for the minimum amount of time necessary to release them into suitable aquatic habitat outside the construction work area. If a western pond turtle nest containing eggs or young is identified within the construction work area, the biologist shall consult with CDFW to determine an appropriate no-disturbance buffer to ensure avoidance of the nest.

Burrowing Owl: A qualified biologist shall conduct a preconstruction survey to locate any active burrowing owl burrows within the BSA or within a 500-foot-wide buffer around the BSA, if feasible. The preconstruction survey shall be conducted in accordance with recommendations provided in CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) and no more than 14 days before the start of construction activities. If no burrowing owls or burrows exhibiting burrowing owl use (i.e., whitewash, owl pellets, feathers, or egg fragments) are detected, then construction may proceed. Preconstruction

surveys must be reinitiated if more than 30 days lapse between the survey dates and construction or maintenance activities.

If active burrowing owls or occupied burrows are detected in the survey area, occupied burrows shall not be disturbed during the nesting season (generally February 1–August 31) or the wintering season (September 1–January 31). A no-disturbance buffer shall be established around the burrow to avoid disturbance of nesting burrowing owls until a qualified biologist, coordinating with CDFW, determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with the CDFW) and shall depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.

Raptors/Nesting Birds: If construction/maintenance or vegetation removal occur during the breeding season for migratory birds and raptors (generally February through August), the City shall retain a qualified biologist to conduct a preconstruction nesting bird and raptor survey prior to the start of construction activities (including equipment staging). The preconstruction nesting bird and raptor surveys shall be conducted between February 1 and August 31 within suitable habitat within the designated project footprint. Surveys for raptors' nests shall also extend 250 feet from the project footprint to ensure that nesting raptors are not affected by construction disturbances. For raptor surveys outside the project footprint where property access has not been granted, the surveying biologist shall use binoculars to scan any suitable nesting substrate for potential raptor nests. The preconstruction survey shall be conducted no more than 14 days before the initiation of construction activities.

If an active bird or raptor nest is identified within the construction or maintenance work area or an active raptor nest is identified within 250 feet from the construction work area, a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting birds or raptors until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with the CDFW) and shall depend on the species identified, level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined during CDFW coordination) may include monitoring of the nest during construction and restricting the type of work that can be conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required

Bats: During April–September before construction begins, a qualified biologist will survey trees and structures within the project footprint and identify any snags, hollow trees, voids or other trees with cavities that may provide suitable roosting habitat for bats. If evidence of bat usage is observed, a focused species acoustic survey shall be performed to determine the presence and type of bat roost. If no suitable roosting trees are found or the acoustic survey findings are negative, construction may proceed. If bats are found or evidence of use by bats is present, the qualified biologist will work with the City and CDFW to implement measures to avoid or minimize disturbance. Avoidance measures may include excluding bats from the tree before their hibernation period (mid-October to mid-March) and before construction or maintenance begins.

Responsible Party: City of Sacramento

Timing: Before and During Construction Activities

Mitigation Measure 3-15: Avoid Loss of Swainson's Hawk Nests

For construction or maintenance activities (including vegetation removal and/or other ground disturbance) that need to be conducted during the breeding season (March 1 – July 31), Swainson's hawk surveys shall include all suitable nesting habitat within line of sight of construction activities within a 0.5-mile radius of the project site. One survey following the guidelines provided in Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley (Swainson's Hawk Technical Advisory Committee 2000) shall be followed for surveys for Swainson's hawk.

If active Swainson's hawk nests are identified within the project area, preconstruction activity shall cease and CDFW will be contacted. If a Swainson's hawk nest is identified a no-disturbance buffer shall be established around the nest to avoid disturbance of the nesting Swainson's hawk until a qualified biologist determines that the young have fledged and are foraging on their own. The extent of these buffers shall be determined by the biologist (coordinating with the CDFW), level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. In addition to the establishment of buffers, other avoidance measures (determined during CDFW coordination) may include monitoring of the nest during construction and restricting the type of work that can be conducted near the nest site. If no active nests are found during the preconstruction surveys, then no additional mitigation is required.

Responsible Party: City of Sacramento

Timing: Before and During Construction Activities

Mitigation Measure 3-16: Obtain Preliminary Jurisdictional Determination and Compensate for Impacts to Waters of the U.S. and State

The City shall obtain a Jurisdictional Determination or Preliminary Jurisdictional Determination from the USACE. Based on the determination, the City shall finalize the acreage of impacts to Waters of the U.S. and State based on project footprint and USACE-verified OHWM. If no impacts would occur, no compensation is required. If impacts would occur, the City shall compensate for impacts to Waters of the U.S. and State by purchasing credits from a State Water Resources Control Board (SWRCB)- and/or USACE-approved mitigation bank at a minimum ratio of 1:1, or in-lieu fees shall be paid to a SWRCB- and/or USACE-approved fund at a 1:1 replacement ratio to ensure the project would not result in a net loss of Waters of the U.S. and State.

Responsible Party: City of Sacramento

Timing: Before Construction Activities

Mitigation Measure 7-2: Obtain Site Closure and Follow Post-Closure Requirements for Dellar Encroachment Area.

Mitigation Measure 7-2 is described in full in the Hazards section of this Initial Study document.

Findings

All additional significant environmental effects of the project relating to Biological Resources can be mitigated to a less-than-significant level.

CULTURAL RESOURCES

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
4. CULTURAL RESOURCES Would the project: A) Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?		X	
B) Directly or indirectly destroy a unique paleontological resource?		X	
C) Adversely affect tribal cultural resources?		X	

Environmental Setting

The summary below is based on content previously presented in the Historic Property Survey Report of September 2018, including the Archaeology Survey Report appended to that document.

GEI conducted a records search on July 27, 2017, at the North Central Information Center in Sacramento, California. The records search area included the proposed project area and a 1-mile buffer zone. The records search revealed five previously identified cultural resources within the project area. These include four railway crossings and Levee Unit 118, Part 1 (also known as the American River South Levee). GEI also conducted pedestrian surveys on December 7 and 14, 2017, and January 19, 2018. The surveys were done to intensive standards, and no additional cultural resources were observed within the project area.

One historic-era (more than 45 years old) resource, Levee Unit 118 Part 1, is in the project area. The levee unit is assumed eligible for listing in the National Register of Historic Places for the purposes of this project and is therefore also considered a historical resource for the purposes of CEQA.

An overview of the environmental, ethnographic, and historic background of the project area is provided in the September 2018 Historic Property Survey Report. A shortened version of the project area background is below.

Prehistoric and Ethnographic Context

Archaeological research in the Central Valley has revealed almost 14,000 years of occupation, which has been organized into a chronology called the Archaic-Emergent System (Bennyhoff and Fredrickson 1969), built on the work of Lillard et al. (1939) and Beardsley (1948).

The earliest well-documented entry and spread of humans into California occurred at the beginning of the Paleo-Indian Period (13,500-8,000 B.P.). Little evidence from this period has been found in the Sacramento area, but sites typically include hunting implements such as fluted projectile points and chipped stone crescent forms. Social units are thought to have been small and highly mobile.

Human populations grew and occupied more diverse settings during the Middle Archaic Period (5,000-2,500 B.P). Permanent villages were established, primarily along major waterways. Sedentary settlements led to more intensive subsistence strategies, including the introduction of acorn processing technology. By the Upper Archaic Period (2,500-1000 B.P.), increased population density led to status differentiations and sociopolitical complexity. Exchange systems become more complex and formalized. Evidence of regular, sustained trade between groups was seen for the first time.

During the Emergent Period (1,000 B.P. to Historic), socioeconomic complexity continued to develop, with extensive exchange networks, social status associated with acquired wealth, and increasing territorial

circumscription. The bow and arrow were introduced, replacing the atlatl. In the latter portion of this period (450-150 B.P.), the clamshell disk bead became a monetary unit for exchange and increasing quantities of goods moved greater distances. Specialists arose to govern various aspects of production and exchange.

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the City. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for tribal cultural resources are located within close proximity to the Sacramento and American rivers and other watercourses.

The Two Rivers Trail project area is situated within the lands traditionally occupied by the Valley Nisenan, or Southern Maidu. Valley Nisenan territory was divided into politically autonomous "tribelet" areas, each including several large villages (Kroeber 1925, Moratto 1984). Two important villages were located near the project area, on the south bank of the American River, *Momol*, to the west of the project area, and *Yalisumni,* to the east (Wilson and Towne 1978:388). Valley Nisenan people lived in small, domed houses (10–15 feet in diameter) covered with earth and tule or grass and followed a seasonal round of food gathering (Wilson and Towne 1978).

Euro-American contact with the Nisenan began with infrequent excursions by Spanish explorers and Hudson's Bay Company trappers traveling through the Sacramento-San Joaquin Valley in the early 1800s (Wilson and Towne 1978). With the coming of Russian trappers, Spanish missionaries, and Euro-American settlers, traditional lifeways were threatened by competition for land and resources, and by the introduction of new diseases. The malaria epidemic of 1833 decimated the Valley Nisenan population, killing an estimated 75 percent of the population. The influx of Euro-Americans during the Gold Rush-era further reduced the population due to forced relocations and violent retribution from the miners for real or imagined affronts (Madley 2016).

Despite these major and devastating historical setbacks, today many Native Americans in the proposed project area are maintaining traditional cultural practices. Sometimes supported by thriving business enterprises, Tribal groups maintain governments, historic preservation programs, education programs, cultural events, and numerous other programs that sustain a vibrant culture (Johnson 2018).

Historic Context

City of Sacramento

The City of Sacramento—named after the river that runs beside it—was built on 4 square miles of John Sutter's New Helvetia land grant in 1849 and officially incorporated in 1850 (McGowan and Willis 1983:21, 28). Sacramento served as an important gateway to California's gold fields during the Gold Rush years. By 1854, Sacramento had grown and matured as a city and secured the title of state capitol (McGowan and Willis 1983:49, 51–52). In 1861, the Central Pacific Railroad (CPRR) formed and groundbreaking for the transcontinental railroad commenced in 1863 in downtown Sacramento. The CPRR had a tremendous impact on Sacramento's economy as people were enticed to come to the region by the cheap rail fare and promise of rich agricultural land. The railroad also enabled easier transport of materials and goods from nearby communities to markets throughout the U.S. (McGowan and Willis 1983:56, 59).

Residential development continued into the early 20th century, slowing down only briefly during the Great Depression and World War II. Following World War II, the local economy boomed as the region adjusted to a post-war economy. Development spilled into the surrounding areas as the suburban lifestyle became more appealing to homeowners. In December 1964, the city merged with North Sacramento. Throughout the 1970s and 1980s, improvements were made to the area's infrastructure and roads (Page & Turnbull 2013: 6.3-16). Sacramento continues to grow in the present day as its suburbs expand to keep pace with an ever-increasing population.

Flood Management

The California Legislature tried to coordinate a levee system and control levee construction by creating the Swamp Land Commission in 1861. The Commission gave California drainage districts the power to

construct levees. It would become the responsibility of state engineers to design the levees for each district. By the end of 1861, there were 28 drainage districts in the Sacramento and San Joaquin Valleys and the San Francisco Bay-Delta. The California Legislature enhanced the levee district powers in 1864, which spurred additional levee construction (O'Neill 2006:81).

Captain Thomas Jackson of the USACE came to California in 1905 and began studying Sacramento's rivers. He understood that there was a linkage between the mining debris, making the river navigable, and flood control. Jackson undertook a comprehensive flood management plan for the Sacramento Valley. In 1910, Jackson's plan, known as the Jackson Report became the foundation for the Sacramento River Flood Control Project (SRFCP) (Russo 2010:20; Kelley 1989:278, 280).

During the first half of the 20th century, Congress passed a handful of flood control acts, including the Flood Control Acts of 1917, 1928, 1936, and 1941. The Flood Control Committee was tasked with regulating and controlling the flood waters of the United States through levees, land reclamation, swampland reclamation, and storage for water power. In 1933, USACE planned to raise and strengthen approximately 2.5 miles of the American River south bank levee, from the Sacramento River to approximately the foot of C Street in Sacramento. Before the improvements, the levee was very uneven in both the cross-section and height, but USACE did not expect to introduce a lot of new material to make the necessary improvements, which ARFCD partially funded (Drinkwater 1933:1).

The American River levees were upgraded to USACEs' standards in three stages. The levee protecting the City of Sacramento (Levee Unit 118, Part 1) was finished in 1948 as part of the SRFCP. The north bank levee, which was designed to protect the City of North Sacramento, also was constructed as part of the SRFCP and was completed in 1955. This levee extended from the high ground near present-day Cal Expo, downstream to the east bank of Natomas Canal. A non-project levee was constructed on the north bank of the American River from the eastern end of Arden Way, downstream to the H Street Bridge. At the time it was constructed, if the river overtopped the levee, it would have flooded a hop field. In 1956, USACE brought this levee up to its standards as part of the American River project levee; the improvements extended upstream to the Carmichael Bluffs (McClurg and Haupt 1991:1–2).

Paleontological Resources

Based on review of California Geological Survey (CGS) geologic mapping of the project area, the proposed project is located entirely within historic-period/modern alluvium levee and channel deposits (CGS 2018). Soils on the site consist of alluvium and historic-period and modern fill (see Section 5, *"Geology and Soils")* and have been heavily disturbed due to past excavation of fill for levee construction and to elevate city streets for flood prevention (along Segments 1-2) and levee construction (Segments 3-6).

By definition, to be considered a unique paleontological resource, a fossil must be more than 11,700 years old. Therefore, the historic-period and modern fill on the site are not considered to be paleontological sensitivity.

Standards of Significance

For purposes of this Initial Study, cultural resource impacts may be considered significant if construction and/or implementation of the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5; or
- Directly or indirectly destroy a unique paleontological resource; or
- A substantial adverse change in the significance of such resources.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10) and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort (Policy HCR 2.1.15).

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources. (Impacts 4.4-1, 2).

Chapter 4.5 of the Master EIR evaluated the potential effects of development under the 2035 General Plan on paleontological resources among other issues related to geology, soils, and mineral resources. Implementation of General Plan Policy HCR 2.1.16, which requires that accepted protocols be adhered to if paleontological resources are discovered during excavation or construction, reduced effects related to paleontological resources to a less-than-significant level.

Answers to Checklist Questions

Question A

Built Environment Resources

Levee Unit 118 Part 1 (American River South Levee) is considered significant under National Register of Historic Places Criterion A within the context of flood management and for its association with the SRFCP. The period of significance begins in 1917, when U.S. Congress approved the Flood Control Act, marking the first comprehensive plan for flood management in California, and ends in 1968. An arbitrary 50-year cutoff was selected because per the National Park Service's bulletin *How to Complete the National Register Registration Form*, the significance period can continue when a resource has been in existence and continues to have importance and no specific date can be defined to end the period of significance (NPS 1997:42). Levee Unit 118 Part 1 is also considered to be a historical resource for the purposes of CEQA.

As designed, the proposed project's bike trail would be located primarily along the toe of the levee, with a portion of Segments 1 and 2 along the levee crown, and Segment 4 along the waterside levee slope. The proposed project would not alter the character-defining features of the levee (i.e. its compacted earth, slope, crown). The levee would retain its important aspects of integrity (location, materials, design, setting, feeling and association) that allow it to convey its historical significance as an important component of the SRFCP and flood management efforts in Sacramento. Therefore, the impacts to Levee Unit 118 Part 1 (American River South Levee) are considered **less-than-significant**.

Archaeological Resources

While no archaeological resources have been previously recorded within the project area, both ethnohistoric accounts and previously recorded sites nearby suggest that the project area is potentially sensitive for buried archaeological resources. To ascertain whether buried resources may be present within the project area, GEI archaeologists, Karen Gardner, RPA, Jesse Martinez, RPA, and Julie Sage conducted pedestrian surveys, to intensive standards, on December 7 and 14, 2017, and January 19, 2018, with negative results.

Native American consultation under CEQA and under Section 106 of the National Historic Preservation Act (NHPA) has been initiated and is on-going and is summarized in the Tribal Cultural Resources Section of this Initial Study.

A Limited Subsurface Testing Plan was implemented to test for buried resources in areas of significant ground disturbance. Because ground-disturbing activities in project segments 2, 5, and 6 would involve only

a ~12-inch degrade of the existing bench, no subsurface testing was recommended. Trail construction in segments 1 and 3, would also only require a ~12 inch degrade; however, a protective structure would be constructed in each of these segments, underneath and adjacent to the Union Pacific Railroad Bridges. The protective structures would be stabilized with posts set in footings up to 8 feet deep. Construction of segment 1 would be in a later phase of the project. Limited subsurface testing was recommended and completed in segment 3; results are summarized below. In segment 4, a bench would be constructed on the waterside levee slope, approximately 0.3 miles long, involving excavation of up to 4 to 5 feet into the levee slope. While this is a significant amount of ground disturbance, subsurface testing was not recommended, as testing within the levee prism is not permitted per USACE guidelines.

Subsurface testing in segment 3 was completed on August 31, 2018, and included digging six hand-augered holes, ranging between 73 and 190 cm deep. Depth was limited by the presence of river rocks. Results for all augers were negative for buried archaeological resources; however, there remains the possibility that a previously unknown archaeological resource could be discovered during project construction and inadvertently damaged, resulting in a potentially significant impact to an archaeological resource. Implementation of **Mitigation Measures 4-1a, 4-1b, and 4-1c** would reduce the potentially significant impact on any previously undiscovered unique archaeological resources to a **less-than-significant** level because the resources would be avoided and preserved in place or assessed and treated in accordance with appropriate professional standards.

Buried Human Remains

No human remains have been discovered in the project area and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during ground disturbance activities with the proposed project. However, should human remains, including those interred outside of formal cemeteries, be discovered during construction activities, the human remains could be inadvertently damaged. Therefore, this potential impact would be potentially significant. Implementation of **Mitigation Measures 4-1a, 4-1b, and 4-1c** would reduce the potentially significant impact on any previously undiscovered human remains to a **less-than-significant** level because the California Health and Safety Code (HSC) would be adhered to in the event human remains are discovered; non-Native American human remains would be treated in accordance with HSC Section 7000 (et seq.); and Native American human remains would be avoided and preserved in place or assessed and treated in accordance with appropriate professional standards in consultation with the Most Likely Descendant (MLD).

Question B

As discussed in Section 4.5, Geology, Soils, and Mineral Resources, of the General Plan Master EIR, the City of Sacramento (and thus the project alignment) is not considered sensitive for paleontological resources and the likelihood for finding paleontologically significant resources is very low. However, there remains the possibility during project-related ground-disturbing activities that a paleontological resource could be inadvertently affected, and thereby cause a substantial change in the significance of a unique paleontological resource. Therefore, the proposed project could result in potentially significant impacts on paleontological resources. Implementation of **Mitigation Measure 4-2** would reduce this potential impact to **less than significant** because construction workers would be alerted to the possibility of encountering paleontological resources and, should resources be discovered, fossil specimens would be recovered and recorded and would undergo appropriate curation.

Mitigation Measures

Mitigation Measure 4-1a: Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities

The City shall require the contractor to provide a cultural resources and tribal cultural resources sensitivity and awareness training program (WEAP) for all personnel involved in project construction, including field consultants and construction workers. The WEAP will be developed in coordination with an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archaeology, as well as culturally affiliated Native American tribes. The City may invite Native American

representatives from interested culturally affiliated Native American tribes to participate. The WEAP shall be conducted before any project-related construction activities begin at the project site. The WEAP will include relevant information regarding sensitive cultural resources and tribal cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations.

The WEAP will also describe appropriate avoidance and impact minimization measures for cultural resources and tribal cultural resources that could be located at the project site and will outline what to do and who to contact if any potential cultural resources or tribal cultural resources are encountered. The WEAP will emphasize the requirement for confidentiality and culturally appropriate treatment of any discovery of significance to Native Americans and will discuss appropriate behaviors and responsive actions, consistent with Native American tribal values.

Responsibility: City of Sacramento

Timing: Before and During Construction Activities

Mitigation Measure 4-1b: In the Event that Cultural Resources or Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.

If cultural resources or tribal cultural resources (such as Native American archaeological materials, sacred objects, unusual amounts of bone or shell, artifacts, or human remains and associated objects and materials) are encountered at the project site during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative. Avoidance and preservation in place is the preferred manner of mitigating impacts to cultural resources or tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:

- Planning construction to avoid cultural resources or tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.

- Recommendations for avoidance of cultural resources or tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, considering factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project site to avoid cultural resources or tribal cultural resources, modification of the design to eliminate or reduce impacts to tribal cultural resources or modification or realignment to avoid highly significant features within a cultural resource or tribal cultural resource.

- Native American representatives from interested culturally affiliated Native American tribes will be invited to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.

- If the discovered cultural resource or tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and tribes will be invited to monitor the installation of fencing. Use of temporary and permanent forms of

protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes.

- The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area".

If a cultural resource or tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of tribal cultural resources:

- Each resource will be evaluated for California Register of Historical Resources- (CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable.

If a cultural resource or tribal cultural resource is determined to be eligible for listing in the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City's invitation. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of any discovered Native American cultural resources or tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and considering ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.

If the City determines that the project may cause a significant impact to a cultural resource or tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:

- Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

- Treat the resource with culturally appropriate dignity considering Tribal cultural values and meaning of the resource, including, but not limited to, the following:

- Protect the cultural character and integrity of the resource.

- Protect the traditional use of the resource.

- Protect the confidentiality of the resource.

- Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.

- Protect the resource.

Responsibility: City of Sacramento

Timing: During Construction Activities

Mitigation Measure 4-1c: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains.

If an inadvertent discovery of human remains is made at any time during project-related construction activities or project planning, the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).

If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.

Responsibility: City of Sacramento

Timing: During Construction Activities

Mitigation Measure 4-2: Avoid Potential Effects on Undiscovered Unique Paleontological Resources.

To minimize the potential for destruction of or damage to potentially unique, scientifically important paleontological resources during earthmoving activities, the City will implement the measures described below.

Before the start of construction activities, construction personnel involved with earthmoving activities (including the site superintendent) shall be informed of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This worker training may either be prepared and presented by an experienced field archaeologist at the same time as construction worker education on cultural resources or prepared and presented separately by a qualified paleontologist.

If paleontological resources are discovered during earthmoving activities, the construction crew shall notify the City and shall immediately cease work within 50 feet of the discovery. The City shall retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with

Society of Vertebrate Paleontology guidelines for impact mitigation (Society of Vertebrate Paleontology 2010). The recovery plan may include, but is not limited to, a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.

Responsibility: City of Sacramento

Timing: Before and During Construction Activities

Findings

All additional significant environmental effects of the project relating to Cultural Resources can be mitigated to a less-than-significant level.

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ENERGY

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
5. ENERGY Would the project: A) Result in a potentially significant environmental impact due to wasteful. Inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation			X
B) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if it would a) result in wasteful, inefficient, or unnecessary consumption of energy or natural resources during project construction or operation or b) conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR discussed energy conservation and relevant general plan policies in section 6.3 (page 6-3). The discussion concluded that with implementation of the general plan policies and energy regulation (e.g., Title 24) development allowed in the general plan would not result in the inefficient, wasteful or unnecessary consumption of energy.

See also Section 12, below, discussing impacts related to energy. The Master EIR concluded that implementation of state regulation, coordination with energy providers and implementation of general plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level.

Answers to Checklist Questions

Questions A and B

Project construction would be typical of trail construction practices. Construction would require use of equipment as described in Chapter 2, “Project Description.” There are no unusual features of the trail construction that would result in inefficient or unnecessary consumption of energy or obstruct implementation of plans related to energy. Operation of the trail would have no significant energy impacts, and potential for the trail to increase usage of bicycle and pedestrian transportation in nearby neighborhoods and the City could potentially reduce energy use. Impacts related to energy would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Energy.

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GEOLOGY AND SOILS

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
6. GEOLOGY AND SOILS Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?		X	

Environmental Setting

Within the City of Sacramento and the Sacramento region, there are no known active faults. The Sacramento Valley has historically experienced low levels of seismic activity and does not contain any Alquist-Priolo Earthquake Fault Zones (CGS 2018a). Numerous earthquakes of magnitude (M) 5.0 or greater have occurred on regional faults in the Coast Ranges, approximately 38–55 miles west of downtown Sacramento. The nearest known active (Holocene or Historic) fault trace to the project study area is the Dunnigan Hills fault, approximately 25 miles northwest of downtown Sacramento (Jennings and Bryant 2010).

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey five soil map units are present within the project area (**Table 11**) (NRCS 1993, 2018). These soils exhibit a low shrink-swell potential, except for the deepest layers of the Columbia-Urban land complex, which occurs along a small portion of the westernmost end of Segment 4.

Table 11. Soils within the Project Area

Soil Series Name and ID	Parent Material	Shrink-Swell Potential
117, Columbia sandy loam, drained, 0 to 2 percent slopes	Alluvium	Low
124, Columbia-Urban land complex, drained, 0 to 2 percent slopes	Alluvium	Low-High, depending on depth.
136, Dumps	N/A	N/A
203, Riverwash	Gravelly alluvium	N/A
205, Rossmoor-Urban land complex, 0 to 2 percent slopes	Alluvium	Low

Source: NRCS 1993, 2018

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources, and paleontological resources in the City. Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level. Policy EC 1.1.1 requires regular review of the City's seismic and geologic safety standards, and Policy EC 1.1.2 requires geotechnical investigations for project sites to identify and respond to geologic hazards, when present.

Answers to Checklist Question

Regional topography of the area surrounding the lower American River consists of low rolling foothills, floodplain areas, and a relatively flat valley floor. Levees constructed on both sides of the American River and steep banks in some areas are the most significant topographic relief along the project alignment.

Seismicity

The project area is not located within an Alquist-Priolo Earthquake Fault Zone or in the immediate vicinity of an active fault. Surface fault rupture is most likely to occur on active faults (i.e., faults showing evidence of displacement within the last 11,700 years). Damage from surface fault rupture is generally limited to a linear zone a few yards wide. **Table 12** describes the proximity of the project site to local active and potentially active faults. The intensity of ground shaking caused by an earthquake at the Dunnigan Hills Fault is not expected to cause substantial damage to the project site, according to the *Probabilistic Seismic Hazard Assessment for the State of California*. However, the 2035 General Plan indicates that groundshaking would occur periodically in Sacramento due to distant earthquakes on any of the major regional faults.

Table 12. Regional Active and Potentially Active Faults

Activity	Fault Name	Distance and Direction in Relation to Project Site
Historic	Green Valley Fault	45 mi W-SW
Historic	Rodgers Creek Fault	61 mi W-SW
Active	Dunnigan Hills	30 mi W-NW
Active	West Napa Fault	51 mi W-SW
Active	Concord Fault	55 mi SW
Potentially Active	Midland Fault	24 mi SW
Potentially Active	Bear Mountains Fault Zone – West	23 mi E
Potentially Active	Bear Mountains Fault Zone – East	28 mi E
Potentially Active	Maidu Fault	26 mi E
Potentially Active	Melones – West	33 mi E
Potentially Active	Melones – East	36 mi E

Source: CGS 2018b

Earthquake Induced Liquefaction, Surface Rupture Potential, and Settlement

Portions of Sacramento, especially along streams and floodplains, are underlain by historic alluvial deposits that, in their present states, could become unstable during seismic ground motion. To reduce the primary and secondary risks associated with seismically induced groundshaking, it is necessary to take the location and type of subsurface materials into consideration when designing foundations and structures, including recreational and flood management facilities.

Preliminary geotechnical investigations for the project alignment have been completed by GEI Consultants (GEI 2017). Sampling of subsurface conditions have focused on Segments 4 and 6, where the proposed waterside bike trail could potentially impact levee performance. Subsurface conditions in Segments 4 and 6 were evaluated using draft subsurface profiles developed as part of the Department of Water Resources (DWR) Urban Levee Evaluation (ULE) for the American River study area (URS 2010). The subsurface data on the profiles consisted of geotechnical borings performed predominantly by USACE. Explorations were typically performed through the levee crown; however, several explorations were also performed at the landside levee toe or on waterside benches. The explorations range in depth, with the deepest explorations extending to about 85 feet. Review of the subsurface profiles indicated relatively consistent conditions throughout Segments 4 and 6. The subsurface was generally composed of a sandy levee overlying a medium to stiff fine-grained blanket, an upper silty sand aquifer, a lower gravelly/cobbley aquifer, and a deep, very stiff to hard fine-grained layer.

Past performance issues documented in the DWR ULE Supplemental Geotechnical Data Report (SGDR) for the American River study area (URS 2010) were reviewed to evaluate past performance of Segments 4 and 6 and to determine whether any prior levee instabilities had occurred within Segments 4 and 6. Available past performance records indicated a single past performance issue consisting of waterside erosion of the riverbank below the levee toe in Segment 4 (approximately Sta. 114+80 to Sta. 130+80 of the present project or DWR Sta. 1206+30 to Sta. 1222+30). No waterside slope instabilities or sloughs were documented. Existing improvements to the levees include a 75-foot-deep cutoff wall for the entire lengths of Segments 4 and 6 and placement of revetment in several locations (GEI 2017).

All trail improvements would be designed based on the results of ongoing, detailed geotechnical engineering studies (GEI 2017) and would be required to comply with standard engineering practices for trail and levee design. Preliminary geotechnical design criteria for the project were based on DWR Urban Levee Design Criteria (ULDC) (DWR 2012). The Central Valley Flood Protection Board's (CVFPB's) standards are the primary state standards applicable to levees in the project area; these are stated in Title 23, Division 1, Article 8, Sections 111–137 of the California Code of Regulations. The Board's standards direct that any modifications to existing levees (made to accommodate trail placement) be in accordance with EM 1110-2-1913 *Engineering Design and Construction of Levees* (USACE 2000), the primary Federal standards applicable to levee improvements. Because the design, construction, and maintenance of levee improvements must comply with the regulatory standards of USACE and CVFPB, it is assumed that the design and construction of all levee modifications to accommodate placement of the trail would meet or exceed applicable design standards for static and dynamic stability, seismic ground shaking, liquefaction, subsidence, and seepage.

Additionally, final designs would comply with California Uniform Building Code (UBC), which is based on the federal UBC but is more detailed and stringent. Chapter 18 of the California UBC, which regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles, and also with UBC Appendix Chapter A33 which regulates grading activities, including drainage and erosion control, and construction on unstable soils, such as expansive soils (BSC 2016).

Based on an existing regulatory framework that addresses earthquake safety issues and requires adherence to requirements of the CBC and various design standards, seismically induced groundshaking and secondary effects would not be a substantial hazard in the project area. Additionally, this area is not mapped by CGS as lying within a known liquefaction or landslide hazard area (CGS 2018a).

Erosion

Construction activities would involve excavating, filling, moving, grading, and temporarily stockpiling soils onsite, which would expose site soils to erosion from wind and surface water runoff. The City has adopted standard measures to control erosion and sediment during construction and all projects in the City are required to comply with the City's Standard Construction Specifications for Erosion and Sediment Control. The proposed project would comply with the City's standards set forth in the "Administrative and Technical Procedures Manual for Grading and Erosion and Sediment Control." The project would comply with the City's grading ordinance, which specifies construction standards to minimize erosion and runoff (City of Sacramento 2018).

Because the proposed project would be required to comply with federal, state, and local construction standards, it would not expose people or structures to the risk of loss, injury, or death. However, per City requirements (2035 Master EIR Policy EC 1.1.2), a geotechnical investigation of the site is required. Since the geotechnical investigation for the project area is still under development to verify onsite geologic conditions, the impact is potentially significant. Implementation of **Mitigation Measure 6-1** described below would reduce the impacts to **less than significant** by identifying site-specific soil conditions and limitations and implementing recommendations to meet engineering requirements**.**

Mitigation Measures

Mitigation Measure 6-1: Perform Geotechnical Investigation and Implement Report Recommendations.

Prior to issuance of a construction contract, the project applicant shall prepare a final geotechnical investigation of the project alignment to determine the potential for ground rupture, earth shaking, and liquefaction due to seismic events, as well as expansive soils problems. As required by the City, recommendations identified in the geotechnical report for the proposed project shall be implemented to ensure that the project's design meets Caltrans Class 1 bikeway design criteria and State Water Code Title 23 standards for recreation trails on levees.

Responsibility: City of Sacramento

Timing: Before and During Construction Activities

Findings

All additional significant environmental effects of the project relating to Geology and Soils can be mitigated to a less-than-significant level.

HAZARDS

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
7. HAZARDS Would the project: A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?		X	
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?			X
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?			X

Environmental Setting

Segments 1 and 2 traverse parcels that were historically used for waste disposal and dumping, and there are regulatory listings which indicate that contaminated materials are still present. Please refer to the Phase I Environmental Site Assessment (GEI Consultants, Inc., 2018, included as Appendix D) for additional details. Groundwater monitoring wells associated with historic landfill uses are present near Segment 2, although sample results from these wells have not indicated the presence of contaminants above regulatory standards.

No evidence of soil or groundwater contamination has been identified in Segments 3 through 6 (GEI Consultants, Inc., 2018).

The project does not include demolition of any structures, and there are no known asbestos-containing materials that would be affected by construction of the project.

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if the proposed project would:

- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated effects of development on hazardous materials, emergency response and aircraft crash hazards. See Chapter 4.6. Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to

hazards and hazardous materials during the life of the general plan. Impacts identified related to construction activities and operations were found to be less than significant. Policies included in the 2035 general Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) were effective in reducing the identified impacts.

Answers to Checklist Questions

Question A
Portions of the project site (Segments 1 and 2) include lands that were historically used for waste disposal, and the Phase I Environmental Site Assessment prepared for the project indicated the potential presence of contaminated soil. During cut and fill activities associated with constructing the proposed project, construction workers could encounter contaminated soil. This impact would be significant. **Mitigation Measures 7-1 and 7-2** have been identified to reduce this impact to **less than significant**.

Implementing Mitigation Measures 7-1 and 7-2 would reduce the impact related to exposure to contaminated soil to a less-than-significant level because measures would be taken to ensure appropriate closure of potentially contaminated sites prior to construction, and safety measures would be put in place for workers, including identifying the potential contaminants that could be encountered during construction, and a framework for responding to any hazardous materials so encountered.

Question B
No structures would be demolished as a part of the project, so there would be no potential for exposure to asbestos-containing materials.

Construction activities associated with trail construction would use minor amounts of hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, and cleaners (which could include solvents and corrosives in addition to soaps and detergents) that are commonly used in construction projects. The proposed project would not entail any unusual risks associated with the transport and handling of hazardous materials.

Regulations governing hazardous materials transport are included in CCR Title 22, the California Vehicle Code (CCR Title 13), and the State Fire Marshal Regulations (CCR Title 19). Transport of hazardous materials can only be conducted under a registration issued by the California Department of Toxic Substances Control. Furthermore, the proposed project would not entail the use or storage of large quantities of hazardous or flammable materials. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction as indicated above.

This impact would be **less than significant**.

Question C
Construction of the proposed trail would include only minor excavation and fill and is not expected to encounter the water table. No dewatering would be required during construction of the project. There would be **no impact**.

Mitigation Measures

Mitigation Measure 7-1: Prepare a Worker Health and Safety Plan and Implement Appropriate Measures to Minimize Potential Exposure to Hazardous Materials.

The City of Sacramento shall implement the following measures before and during construction to reduce potentially significant impacts associated with exposure to hazardous materials.

- Prepare and implement a worker health and safety plan before the start of construction activities that identifies, at a minimum, the potential types of contaminants that could be encountered during construction activity; all appropriate worker, public health, and environmental protection equipment and procedures to be used during project activities; emergency response procedures; the most direct route to the nearest hospitals; and a Site Safety Officer. The plan shall describe actions to be taken should hazardous materials be encountered on-site, including the telephone numbers of local and state emergency hazmat response agencies.

- If, during site preparation and construction activities, evidence of hazardous materials contamination is observed or suspected (e.g., stained or odorous soil or groundwater) cease immediately construction activities in the areas of the find. If contamination is observed or suspected, the City shall retain a qualified hazardous materials specialist to assess the site and collect and analyze soil and/or water samples, as necessary. If contaminants are identified in the samples, the City shall notify and consult with the appropriate Federal, State, and/or local agencies. Measures to remediate contamination and protect worker health and the environment shall be implemented in accordance with Federal, State, and local regulations before construction activities may resume at the site where contamination is encountered. Such measures could include, but are not limited to, preparation of a Phase I and/or Phase II Environmental Site Assessment, removal of contaminated soil, and pumping of groundwater into containment tanks.

Responsibility: City of Sacramento

Timing: Before and During Construction

Mitigation Measure 7-2: Obtain Site Closure and Follow Post-Closure Requirements for Dellar Encroachment Area.

If Alternative 1 is selected for Segment 2, The City of Sacramento shall implement the following measures for all Segment 2 construction:

- Construction of the trail should not commence until this area is properly closed as per the requirements of the City of Sacramento.

- Segment 2 construction should be completed under the requirements described in Title 27 of the California Code of Regulations (CCR), Division 2, Subdivision 1, Chapter 3, Subchapter 5, Section 21190 titled “CIWMB-Post-Closure Land Use.”

- Where cut and fill activities occur in Segment 2, proper measures should be taken to mitigate any landfill material or other hazardous material that is encountered.

- If fill material/soils will be brought in, these soils must be certified as clean fill.

- The trail will be designed to conform with drainage patterns in the project area and to prevent water collection that could cause seepage of the buried landfill material.

Responsibility: City of Sacramento

Timing: Before and During Construction

Findings

All additional significant environmental effects of the project relating to Hazards can be mitigated to a less-than-significant level.

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HYDROLOGY AND WATER QUALITY

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
8. HYDROLOGY AND WATER QUALITY Would the project: A) Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?		X	
B) Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?			X

Environmental Setting

The project site is immediately adjacent to the American River along most of the project alignment, except for a small portion of Segment 2. Within Sacramento County, the American River is impounded at Folsom Dam and Nimbus Dam. The dams regulate the water-level of the American River throughout the project site (excepting stormwater flows from the adjacent levee slopes and floodplain) and downstream to its confluence with the Sacramento River.

The project site is in the Sacramento Hydrologic Basin Planning Area and the Lower American Hydrologic Subarea, as designated by the Central Valley Regional Water Quality Control Board (CVRWQCB). In accordance with Section 303 of the federal CWA, water quality standards for this basin are contained in the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin (Basin Plan). Stormwater runoff from the project site is received by the American River which is listed on the 303(d) list as an impaired water for several constituents of concern, including fecal indicator bacteria, bifenthrin, pyrethroids, toxicity, mercury, and polychlorinated biphenyls (PCBs) (CVRWQCB 2016).

The project site is in the Sacramento Valley Groundwater Basin, within the larger South American Subbasin (DWR 2003). According to the Groundwater Information Center Interactive Map Application, groundwater levels in the project area are approximately 25-40 feet from ground surface (DWR 2017).

The proposed project is mapped as Zone X (Segments 1 and 2) and Zone AE (Segment 3-6) on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (map panels 06067C0180J and 06067C0183H) (FEMA 2018). Zone X areas are designated as having a reduced flood risk due to the presence of levees and are considered by FEMA to be areas of minimal hazard (500-year flood zone) which are outside the 0.2% chance floodplain. The project areas mapped as Zone AE are designated as a Regulatory Floodway and are within the 100-year floodplain for the American River.

As detailed in Section 5, “Geology and Soils” the lands around Segments 1 and 2 are already served by the City’s Combined Sewer System (since they are located on the landside of the existing levee) and local runoff along Segments 3-6 flows by gravity overland during storm events, and also through culverts and vegetated or lined intermittent drainages, ultimately to the American River (since they are on the waterside of the existing levee).

Standards of Significance

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

- substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the Specific Plan or

- substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.7 of the Master EIR evaluates the potential effects of the 2035 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation due to construction activities (Impacts 4.7-1, 4.7-2), and exposure of people to flood risks (Impacts 4.7-3). Policies included in the 2035 General Plan, including a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1), comprehensive flood management (Policy EC 2.1.23), and construction of adequate drainage facilities with new development (Policy ER 1.1.1 to ER 1.1.10) were identified that the Master EIR concluded would reduce all impacts to a less-than-significant level.

Answers to Checklist Questions

Question A
The proposed project could cause surface or groundwater to become contaminated by soil or construction-related substances. As described in the Project Description, the proposed project is limited to short-term construction activities that would cease upon project completion. During work on all trail segments and the cantilever railroad undercrossing, the proposed activities would disturb and expose soils to erosion from wind and stormwater, which could temporarily impair water quality should disturbed material, petroleum products from equipment, or construction-related wastes accidently be discharged into local drainage ditches or onto the ground where they could be carried into receiving waters. Accidental spills of construction-related substances such as oils and fuels could also contaminate both surface water and groundwater. The extent of potential impacts on water quality would depend on several factors: the tendency of erosion of soil types encountered, soil chemistry, types of construction practices, extent of the disturbed area, durations of construction activities, proximity to receiving water bodies, and sensitivity of those water bodies to construction-related contaminants.

During project construction, clearing and grubbing of vegetation along the trail alignment, excavation, fill, grading, and compacting of soils may be needed to achieve a suitable trail base and ADA-compliant gradient which could result in short-term increased turbidity or sedimentation in the adjacent American River. Restoration of the site would involve grading and hydroseeding/revegetation after construction. These design features would protect surface water quality in the project vicinity after construction. The proposed project would not increase drainage flows along the alignment after construction. Additionally, the trail would be used by bicyclists and pedestrians, and motorized vehicles would be prohibited on the trail (except for maintenance vehicles). The prohibition on motorized vehicles, and their associated oil, grease and other fluids would also serve to protect water quality along the project alignment, after construction.

Construction activities would take place primarily during the typical construction season, April 1 to November 15, which corresponds to the dry season during which rain, and resulting stormwater runoff and ponding are not expected in this region. Given that the maximum depth of excavation expected is 5 feet, this excavation would occur just below the levee crown, and the depth to groundwater in the project area is 25-40 feet, the need to dewater any trail segments during construction is not expected. However, during earthmoving activities close to a waterway, impacts to water quality could occur due to accidental release of sediment or other contaminants. Thus, this impact would be potentially significant. Implementing

Mitigation Measure 3-3 would reduce the impact related to degradation of water quality and violation of any water quality objectives to a **less-than-significant** level because a SWPPP or SWMP would be prepared and implemented to prevent and control pollution and to minimize and control runoff and erosion.

Question B

As discussed in the setting, the project alignment (Segments 3-6) is located on the waterside of the levee, and therefore, is within a designated floodway and the 100-year floodplain. To understand the effect that the trail and railroad undercrossing structures may have on flood flows within the project area, a *Hydraulic Assessment of Existing and Project Conditions* has been prepared for the project alignment (cbec 2018).

Under the HEC-RAS two-dimensional hydraulic analysis, the cross-sectional area of the river was compared in the pre- and post-project conditions to determine if 1% or more of the river conveyance would be blocked by the proposed project during four different flow scenarios (ranging from 115,000 cfs to 192,000 cfs). The 1% threshold was established based on USACE guidance (Kukas 2014). Analysis determined that the trail footprint itself would not impact the modeled water surface elevation due to the limited topographic changes resulting from trail placement. In the model, railroad undercrossing structures were conservatively represented as complete obstructions across the width of the structural support columns to simplify calculations. Under this condition, the maximum reduction in conveyance for both undercrossings, was 0.28%, which is well below the 1% threshold. Thus, the project features are not expected to impede flood flows during or after construction and would not substantially increase exposure of people or property to injury or damage due to flooding. This impact would be **less than significant**.

Mitigation Measures

Mitigation Measure 3-3: Prepare and Implement a Storm Water Pollution Prevention Plan, Spill Prevention and Control Plan, and Associated Best Management Practices.

Mitigation Measure 3-3 is described in full in the Biological Resources section of this Initial Study document.

Findings

All additional significant environmental effects of the project relating to Hydrology and Water Quality can be mitigated to a less-than-significant level.

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NOISE

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
9. NOISE Would the project: A) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?			X
B) Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project?			X
C) Result in construction noise levels that exceed the standards in the City of Sacramento general plan or Noise Ordinance?			X
D) Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?			X
E) Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?			X
F) Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?			X

Environmental Setting

Noise and Vibration

Sound is the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium, such as air. Noise is defined as sound that is unwanted (loud, unexpected, or annoying). Excessive exposure to noise can result in adverse physical and psychological responses (e.g., hearing loss and other health effects, anger, and frustration); interfere with sleep, speech, and concentration; or diminish the quality of life.

The perceived loudness of sounds depends on many factors, including sound pressure level and frequency content. However, within the usual range of environmental sound levels, perception of loudness is relatively predictable, and can be approximated through frequency filtering using the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (decibels expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard

descriptor for environmental noise assessment. All noise levels reported in this section are in terms of A-weighting.

Groundborne vibration is energy transmitted in waves through the ground. Vibration attenuates at a rate of approximately 50% for each doubling of distance from the source.

Noise-Sensitive Receptors

The project site is in central Sacramento. Construction access would be via local roadways, including 28th Street, Carlson Drive, Camellia Drive and H Street. Land uses defined by Federal, State, and local regulations as noise-sensitive vary slightly but typically include schools, hospitals, rest homes, places of worship, long-term care facilities, mental care facilities, residences, convalescent (nursing) homes, hotels, certain parks, and other similar land uses. The closest noise-sensitive land uses are residences located within 85 feet of construction areas. Residences, and two schools and two churches (Caleb Greenwood Elementary, Fremont Presbyterian Church and School, Sacramento Central Seventh-Day Adventist Church) along local haul routes are also noise-sensitive uses potentially affected by the project. The primary existing noise sources near the project site include vehicular traffic, and the UPRR line.

Standards of Significance

For purposes of this Initial Study, impacts due to noise may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of general plan policies:

- result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;
- result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project;
- result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential for development under the 2035 General Plan to increase noise levels in the community. New noise sources include vehicular traffic, aircraft, railways, light rail and stationary sources. The general plan policies establish exterior (Policy EC 3.1.1) and interior (Policy EC 3.1.3) noise standards. A variety of policies provide standards for the types of development envisioned in the general plan. See Policy EC 3.1.8, which requires new mixed-use, commercial and industrial development to mitigate the effects of noise from operations on adjoining sensitive land use, and Policy 3.1.9, which calls for the City to limit hours of operations for parks and active recreation areas to minimize disturbance to nearby residences. Notwithstanding application of the general plan policies, noise impacts for exterior noise levels (Impact 4.8-1) and interior noise levels (Impact 4.8-2), and vibration impacts (Impact 4.8-4) were found to be significant and unavoidable.

Answers to Checklist Questions

Questions A, B, and C
The project would generate construction noise from equipment operating at the project site, and from the transport of construction workers, construction materials, and equipment to and from each work location. The list of construction equipment that would be used for project construction activities is shown in **Table 13** with typical noise levels generated at 50 feet from the equipment (reference levels).

Table 13. Construction Equipment and Typical Equipment Noise Levels

Type of Equipment	Noise Levels (dBA)	
	L_{max} at 50 Feet	L_{eq} at 50 Feet
Equipment/Supply Transport Trucks	84	80
Front-end Loader	80	76
Bulldozer	85	81
Highway Dump Truck	84	80
Grader	85	81
Water Truck	84	80
Self-propelled Sheepsfoot or Tamping Roller	85	78
Vibratory Smooth-wheel Compactor	80	73
Forklift	85	78
Concrete Transit Truck	84	80
Lubricating Truck	84	80
Pick-up Truck	55	51
Hydro-seed Truck	84	80

Notes:
L_{max} = maximum instantaneous sound level; L_{eq} = 1-hour equivalent sound level (the sound energy averaged over a continuous 1-hour period)
Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI Consultants, Inc. in 2016 and 2017

The 2035 General Plan establishes acceptable exterior noise levels in Policy EC 3.1.1. Acceptable exterior noise levels for land uses in the vicinity of the project site range from a weighted 24-hour average of 60 dBA for low-density residential to 70 dBA for schools, parks, office buildings, and urban residential projects, to 75 dBA for industrial uses. Depending on the existing exterior noise environment, incremental noise increases can also be significant, even if the noise compatibility standards are not exceeded. Chapter 8.68.060 (Exterior Noise Standards) establishes acceptable noise levels of 55 dBA from 7 a.m. to 10 p.m. for residential properties.

Chapter 8.68.080 (Exemptions) of the Sacramento City Code exempts construction noise from its noise standards, provided that construction noise occurs between the hours of 7:00 am and 6:00 pm Monday through Saturday and between the hours of 9:00 am and 6:00 pm on Sunday. Since all project-related construction activities would only occur within the hours specified in the City's code, the proposed project would not result in a violation of the City's construction noise standards.

Trail uses following project implementation would be similar to existing uses (hiking, dog walking, bicycling). Although the number of users along the trail alignment, particularly bicycle commuters, may at times be greater relative to existing conditions, there would be no motors or other mobile sources of noise introduced. Activities associated with trail maintenance would also be similar to existing levee maintenance activities. Typical maintenance activities during project operation would include routine inspections, debris removal, and repair of cracks and slope failures. Mowing would occur four times per year, and tree and vegetation

trimming would occur on an annual basis. Because operation of the trail would not introduce significant new noise sources or expose new sensitive receptors to noise, this impact would be **less than significant**.

Questions D, E, and F

Operation of some construction and maintenance equipment, and construction traffic would produce groundborne vibration. Project-related vibration levels were estimated using FTA's guidelines for environmental impact assessment to calculate a screening distance for vibration effects. The calculated screening distance is based on FTA's reference vibration levels for construction equipment (shown in **Table 14**). The highest reference vibration level for equipment used in constructing or maintaining the project is associated with use of a vibratory roller, approximately 94 VdB (0.210 inch per second PPV) at a distance of 25 feet (Caltrans 2013; FTA 2006). This vibration level at 25 feet is below the City of Sacramento's 0.5 inch per second PPV threshold. Although the use of a vibratory roller within 25 feet of the UPRR overcrossing (a historic structure) would exceed the City's 0.2 inch per second PPV standard, the UPRR overcrossing is built to withstand the vibration produced by freight and passenger rail traffic, well in excess of that produced by a vibratory roller. Therefore, impacts related to groundborne vibration from the operation of construction and maintenance equipment would be less than significant.

Table 14. Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 feet (in/sec)	Approximate VdB at 25 feet
Hoe Ram	0.089	87
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Notes: PPV = peak particle velocity; in/sec = inches per second; VdB = vibration decibels
Source: Federal Transit Administration 2006

Unless there are substantial discontinuities in local roads, groundborne vibration generated by traffic traveling on roadways does not exceed FTA standards (FTA 2006). The project-generated construction traffic would use established roadways and potential project impacts related to groundborne vibration from construction traffic would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Noise.

PUBLIC SERVICES

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
10. PUBLIC SERVICES Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan?			X

Environmental Setting

The project site is located within the City of Sacramento and within the Woodlake and Paradise Beach ARPP areas. The Sacramento County Park Ranger Unit is responsible for day-to-day patrol and law enforcement within the Parkway. The City of Sacramento Police (SPD) and Sacramento County Sheriff 's Department have concurrent law enforcement responsibilities within their respective jurisdictions where those jurisdictions overlap within the Parkway. Portions of the project alignment that are within Sutter's Landing Regional Park are also under the jurisdiction of City of Sacramento Park Rangers. The project lies within SPD Police District 3A, 3B, and 6E (SPD 2017). Other public safety agencies that provide law enforcement within the Parkway on a less frequent basis include CDFW, the California Highway Patrol, Cal Expo Police and the CSUS Police Department (Sacramento County 2008).

Police resources, are allocated and assigned on an annual basis based upon several factors, including, but not limited to incidents of crime within a geographic area (police beat), population, and police staffing capabilities. Any significant expansion in terms of buildings, population, etc. would be factored into the annual patrol planning analysis when determining the amount of resources (patrol officers) to place in that particular geographic beat for the coming calendar year. (Young, Pers. Comm. 2018)

Emergency medical and fire protection is provided by the Sacramento City Fire Department. The project site is located within the Engine Company First-In District or Response Zone for Stations 2 and 4 (trail segments 1-3), and Station 6 (trail segments 4-6) (SFD 2012).

The City of Sacramento Unified School District provides school services to 42,000 students in the project vicinity.

Standards of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries and emergency services (Chapter 4.10).

The general plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concluded that effects of development that could occur under the general plan would be less than significant.

General plan policies that call for the City to consider impacts of new development on schools (see, for example, Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use

development of facilities) reduce impacts on schools to a less-than-significant level. (Impacts 4.10-3, 4) Impacts on library facilities were considered less than significant (Impact 4.10-5).

Answers to Checklist Question

Fire Protection Services

Segments 1 and 2 are not readily accessible to or routinely used by the public at the time of the preparation of the IS. Segments 3 through 6 are on public land and are routinely used for recreation. The existing gravel road along the levee crown, the existing road along the levee toe (which includes both gravel and unpaved areas) and informal trails through wooded areas closer to the river are all used for recreation, including walking, jogging, biking, and dog walking.

Segments 3 through 6 are readily accessible and routinely used by existing local and regional residents for recreation. The proposed project would not involve construction of residences or commercial buildings that would increase the population in the SFD service area. Construction workers, some likely from outside the immediate adjacent neighborhoods, would be in the area temporarily during construction, and following project completion, the developed access would likely result in increased bicycle and pedestrian use in the project area. Nevertheless, several fire stations are in close proximity to the proposed project alignment and these areas already receive fire protection services from SFD, as discussed in the Environmental Setting for this section. Construction and operation of the project would not cause an increase in population such that additional fire stations would be needed under General Plan guidelines. The proposed project is consistent with the land use designation for these areas in the 2035 General Plan. Existing Sacramento County Parks Fire Fuel Reduction Action Plan activities along the Parkway would continue as would fuels and vegetation management in compliance with City Code (Sacramento County 2018). Therefore, impacts to fire service from the proposed project have already been accounted for, and the project would comply with the requirements of the City Code, County Parks, and General Plan policies regarding adequate fire protection services. As a result, **no impact** would occur related to fire protection.

Police Protection Services

The majority of the project alignment is already used for undeveloped recreation and areas along the trail alignment are already under the jurisdiction of and served by SPD and City and County Park Rangers. The proposed project would not require construction of a new station or expansion of an existing facility in order to provide law enforcement services in the project area. Additionally, trail improvements associated with the proposed project were anticipated under the 2035 General Plan and would be consistent with General Plan policies. Thus, there would be **no impact**.

Nearby residents have expressed concerns that the project would increase the number of unsheltered people along the Parkway in the project site, resulting in indirect impacts. Although the project would introduce a paved path into areas currently characterized by informal recreation (Segments 3 through 6), this portion of the project site is currently accessible to the public and in widespread use for undeveloped recreation. There is no evidence to indicate that a paved path would lead to increased crime, fires, or noise relative to the current condition.

School and Library Services

The project site is located along City-owned lands and the Parkway. The proposed project would not require school or library services because the project does not propose any residential uses that would generate demand for such services. Therefore, there would be **no impact** to school and library resources as a result of the proposed project.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Public Services.

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RECREATION

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
11. RECREATION Would the project: A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?			X
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?			X

Environmental Setting

The project site extends from the Sacramento Northern Bikeway to Sutter's Landing Regional Park (Segments 1 and 2), and from Sutter's Landing Regional Park to H Street (Segments 3 through 6).

Segments 1 and 2 are not readily accessible or routinely used for recreation at the time of this IS's preparation. Segments 3 through 6 are on readily accessible public land and are routinely used for recreation. In Segments 3 through 6, the existing gravel road along the levee crown, the existing road along the levee toe (which includes both gravel and unpaved areas), and informal trails through wooded areas closer to the river are all used for recreation, including walking, jogging, biking, and dog walking.

The ARPP (Sacramento County 2008) designates Segments 1 and 2, and Segments 3 through 6 as "Protected Area." Facilities permitted in this designation include surfaced and unsurfaced trails, water fountains, occasional family unit picnic tables, and restrooms located at trail rest stops. Trail recreational activities envisioned in Protected Areas include walking, hiking, running, horseback riding, and bicycling. The Two Rivers Trail is identified as a "proposed bike trail" in the ARPP. The ARPP also identifies activities and facilities for the Paradise Beach area. Due to the limited availability of parking at Glenn Hall Park, and the lack of legal on-street parking in the immediate vicinity of the park, the ARPP recommends that structures or physical changes that would attract groups of users to Paradise Beach should not be introduced.

During public outreach activities conducted by the City of Sacramento during the project planning and design, residents expressed satisfaction with the existing informal use of the levee crown, levee toe, and trails, and expressed concerns about compatibility of trails for bicycles, pedestrians, and dog walkers.

Existing park facilities in proximity to the proposed project include Sutter's Landing Regional Park and Glenn Hall Park. Sutter's Landing Regional Park offers a dog park, skate park, basketball and bocce courts, an existing portion of the Two Rivers Trail, and several parking lots. (City of Sacramento 2018a) Facilities at Glenn Hall Park include a public swimming pool, playground, picnic areas, tennis and volleyball courts, athletic fields, restrooms, and a parking lot. (City of Sacramento 2018b) Other nearby access points to the American River Trail's system of bicycle and pedestrian trails include Discovery Park, Ethan Way, Paradise Beach (at Glenn Hall Park), and Howe Avenue. (ARPF 2018)

The Lower American River has been designated a "Recreational River" under both the California Wild and Scenic Rivers Act and the National Wild and Scenic Rivers Act (NWSR 2018).

Standards of Significance

For purposes of this IS, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- cause or accelerate substantial physical deterioration of existing area parks or recreational facilities; or

- create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.9 of the Master EIR considered the effects of the 2035 General Plan on the City's existing parkland, urban forest, recreational facilities and recreational services. The general plan identified a goal of providing an integrated park and recreation system in the City (Goal ERC 2.1). New residential development will be required to dedicate land, pay in-lieu fees or otherwise contribute a fair share to the acquisition and development of parks and recreation facilities (Policy ERC 2.2.5). Impacts were considered less than significant after application of the applicable policies. (Impacts 4.9-1 and 4.9-2)

Answers to Checklist Questions

Question A
The project would expand recreational opportunities at the project site by offering a paved multi-use trail. The trail would generally consist of an 8-foot-wide paved path with a 2-foot-wide compacted aggregate base shoulder on the inner side and a similar 6-foot-wide shoulder on the waterside to provide space for walking and jogging adjacent to the paved portion of the trail, bringing the total trail cross section along most of its length to 16 feet wide. However, due to space limitations in some locations, the waterside shoulder of the trail would be narrowed to 4 feet wide. There are no formal recreational facilities along most of the proposed trail alignment; the trail would connect several existing recreational facilities, including the Sacramento Northern Bikeway Trail, Sutter's Landing Regional Park, Glenn Hall Park, and an existing developed trail in the American River Parkway, extending eastward from H Street. Visitors seeking access to the proposed project might increase the use of Sutter's Landing Regional Park facilities, including use of parking and other facilities. However, as described above, the limited parking available at Glenn Hall Park reduces the potential for an increase in visitors using Glenn Hall Park to access the proposed trail facilities.

Existing informal recreational use along the proposed trail alignment would be temporarily disrupted during construction, but the disruption would be temporary and there are other trails and parks in the region. Following the completion of construction activities, the levee crown and existing informal foot trails between the levee and the American River would be unchanged from the existing condition. The proposed trail is a modification of the City's standard trail cross section; the paved width would be less than the standard trail section, and the project would include a wider gravel shoulder on the waterside of the trail. These modifications to the standard trail section are intended to better accommodate the existing pedestrian uses of the corridor, while providing an accessible facility for bicycles. This impact would be **less than significant**.

Question B
The project would not introduce any new residents or commercial uses which would increase the demand for recreational facilities beyond what was envisioned in the 2035 General Plan, and the project would include construction of recreational facilities as envisioned in the General Plan. There would be **no impact**.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Recreation.

TRANSPORTATION AND CIRCULATION

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
12. TRANSPORTATION AND CIRCULATION Would the project: A) Roadway segments: degrade peak period Level of Service (LOS) from A, B, C or D (without the project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.			X
B) Intersections: degrade peak period level of service from A, B, C or D (without project) to E or F (with project) or the LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.?			X
C) Freeway facilities: off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway; project traffic increases that cause any ramp's merge/diverge level of service to be worse than the freeway's level of service; project traffic increases that cause the freeway level of service to deteriorate beyond level of service threshold defined in the Caltrans Route Concept Report for the facility; or the expected ramp queue is greater than the storage capacity?			X
D) Transit: adversely affect public transit operations or fail to adequately provide for access to public transit?			X
E) Bicycle facilities: adversely affect bicycle travel, bicycle paths or fail to adequately provide for access by bicycle?			X
F) Pedestrian: adversely affect pedestrian travel, pedestrian paths or fail to adequately provide for access by pedestrians?			X

Environmental Setting

The project site is in central Sacramento. Construction access would be via local roadways, including 28th Street (a local roadway), Carlson Drive (a minor collector), Camellia Drive (a local roadway) and H Street (an arterial east of Camellia Drive and major collector west of Camellia Drive) (City of Sacramento 2015).

The City of Sacramento strives to operate most roadways at a LOS D or better during typical weekday conditions. The City has identified several roadways as exceptions to this policy in the 2035 General Plan, including the Central City Community Plan Area (which includes 28th Street access to Sutter's Landing

Park), Carlson Drive, and H Street west of Carlson Drive. On these roadways, LOS F is acceptable. (City of Sacramento 2015)

Transit serving the project vicinity includes the Sacramento Regional Transit (SacRT) Bus #30, which travels on H Street between downtown Sacramento and Sacramento State University; Bus #34, which circulates through the River Park neighborhood on Carlson Drive, Moddison Avenue, Sandberg Drive, and Messina Drive and in the Midtown neighborhood on F Street; and Buses #82 and #87, which pass the project site on H Street/Fair Oaks Boulevard. (SacRT 2018)

The Midtown and River Park neighborhoods are served by sidewalks on both sides of most roadways. The project would connect to existing portions of the Two Rivers Trail, the Sacramento Northern Bikeway Trail, and the existing developed trail that extends eastward from H Street in the American River Parkway.

Standards of Significance

For purposes of this IS, impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan MEIR:

Roadway Segments

A. the traffic generated by a project degrades peak period LOS from A, B, C, or D (without the project) to E or F (with the project) or

B. the LOS (without the project) is E or F, and project generated traffic increases the volume to capacity ratio (V/C ratio) by 0.02 or more.

Intersections

- the traffic generated by a project degrades peak period LOS from A, B, C, or D (without the project) to E or F (with the project) or

- the LOS (without the project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Freeway Facilities

Caltrans considers the following to be significant impacts.

- off-ramps with vehicle queues that extend into the ramp's deceleration area or onto the freeway;

- project traffic increases that cause any ramp's merge/diverge LOS to be worse than the freeway's LOS;

- project traffic increases that cause the freeway LOS to deteriorate beyond LOS threshold defined in the Caltrans Route Concept Report for the facility; or

- the expected ramp queue is greater than the storage capacity.

Transit

- adversely affect public transit operations or

- fail to adequately provide for access to public transit.

Bicycle Facilities

- adversely affect bicycle travel, bicycle paths or
- fail to adequately provide for access by bicycle.

Pedestrian Circulation

- adversely affect pedestrian travel, pedestrian paths or
- fail to adequately provide for access by pedestrians.

Construction Traffic

The Institute of Transportation Engineers (ITE) has recommended a screening criterion for assessing the effects of construction projects that create temporary traffic increases (ITE 1988). To account for the large percentage of heavy trucks associated with typical construction projects, ITE recommends a threshold level of 50 or more new peak-direction truck trips during the peak-hour. Therefore, a project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system, and result in a significant effect related to traffic, if they would result in 50 or more new truck trips (100 passenger car equivalent [PCE] trips) during the a.m. or p.m. peak hours. This is considered an "industry standard" and is the most current guidance.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Transportation and circulation were discussed in the Master EIR in Chapter 4.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian, and aviation components. The analysis included consideration of roadway capacity and identification of levels of service, and effects of the 2035 General Plan on the public transportation system. Provisions of the 2035 General Plan that provide substantial guidance include Mobility Goal 1.1, calling for a transportation system that is effectively planned, managed, operated and maintained, promotion of multimodal choices (Policy M 1.2.1), identification of LOS standards (Policy M 1.2.2), support for state highway expansion and management consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS) (Policy M 1.5.6) and development that encourages walking and biking (Policy LU 4.2.1).

While the general plan includes numerous policies that direct the development of the City's transportation system, the Master EIR concluded that the general plan development would result in significant and unavoidable effects. See Impacts 4.12-3 (roadway segments in adjacent communities, and Impact 4.12-4 (freeway segments).

Answers to Checklist Questions

Questions A through C

Construction-related activity from the proposed project may potentially disrupt the existing transportation network in the surrounding project area. No lane, street, sidewalk, or bikeway closures are planned, but heavy construction vehicles, materials, and workers would travel to and from the site and staging areas. As a result of these activities, existing roadway operation conditions may be degraded. Based on the construction details provided in the Project Description, up to 20,400 cubic yards (cy) of material would be transported as part of project construction. This includes excavation and transport offsite of 8,500 cy of material, and import of approximately 2,000 cy of fill material, approximately 7,900 cy of aggregate base, and 2,000 cy of pavement material. Based on a 5- to 6-month construction period, and assuming 10 cy per trip, this would generate approximately 21 heavy truck trips per day. Up to 20 construction workers would be present at any given time. Construction-related activity would therefore include less than 50 heavy truck trips (or 100 PCE trips) during the peak a.m. or p.m. hour. This impact would be **less than significant**. Implementation of the construction traffic control plan as described in the Project Description under "Access

and Staging Areas" would involve measures that would further reduce the potential for impacts associated with construction traffic by designating circulation routes and waiting areas for trucks.

Question D

The project would not adversely affect existing or planned transit operations. As previously discussed, SacRT routes 30, 34, 82, and 87 operate nearby and would be accessible to the project site. While the project would not be anticipated to add noticeable transit demand, any additional demand is anticipated to be adequately accommodated by the existing/planned transit system. The impacts of the proposed project would be **less than significant**.

Questions E and F

Construction

Construction of the project could result in temporary closures to the public of portions of the existing levee crown road and unimproved trail along the toe of the levee for construction access. As described in the Project Description under "Access and Staging Areas," the construction traffic control plan would include identification and signage of detours for bicycles and pedestrian traffic. In Segments 1 and 2 currently, there is no public access to the proposed trail alignment. Therefore, closures during construction would not disrupt pedestrian or bicycle transportation in this area. At Sutter's Landing, closures also would not significantly disrupt pedestrian or bicycle transportation because the existing trail currently dead-ends in the park, limiting through pedestrian- and bicycle traffic. At H Street, the existing bike trail along the south side of J Street, and existing bike lanes and sidewalks along Carlson Drive between H and J Streets offer an alternative route for bicycles and pedestrians. However, while portions of the trail would remain open to the public during construction between Sutter's Landing Park and north of the H Street bridge, closures would be necessary and could disrupt existing informal recreation, including walking, bicycle riding, and dog walking. These disruptions would be temporary; alternative routes are available, and as described in the Project Description under "Access and Staging Areas," the construction traffic control plan would include identification and signage of detours for bicycles and pedestrian traffic; therefore, this impact would be **less than significant**.

Operations

The project would add bicycle traffic to the corridor between Sutter's Landing Regional Park and H Street (Segments 3 through 6) and eventually between Sutter's Landing Regional Park and the Sacramento Northern Bikeway (Segments 1 and 2). Although bicycle travel is currently prohibited on the levee maintenance roads, there is some bicycle travel along the existing paths primarily along Segments 3 through 6. The number of bicycles would be expected to increase on all trail segments as a result of the project. The design of the project (with wider shoulders for pedestrian access and a narrower paved surface to reduce bicycle speeds) is intended to minimize the conflict between bicycles and pedestrians. This impact would be **less than significant**.

The project includes construction of a multiuse trail along a corridor that is currently used informally by pedestrians, joggers, and dog walkers. The project has been designed to accommodate these uses alongside bicycle users. Operational impacts related to bicycle facilities and pedestrian transportation would be beneficial.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Transportation and Circulation.

TRIBAL CULTURAL RESOURCES

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
13. TRIBAL CULTURAL RESOURCES Would the project: A) Cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k) or		X	
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X	

Environmental Setting

The prehistoric and ethnographic setting of the proposed project area is described in the Cultural Resources section of this Initial Study document.

Data Sources/Methodology

Under PRC section 21080.3.1 and 21082.3, the City must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

On January 23, 2018, a search of the Sacred Lands Database was requested from the Native American Heritage Commission (NAHC). A response was received on January 31, 2018, indicating that Sacred Sites have been identified in the general vicinity (within the USGS quad, township, ranges, and sections of the project) but specific locations were not provided. Two tribes were listed as points of contact regarding these sites: the Ione Band of Miwok Indians (Ione), and United Auburn Indian Community (UAIC). Three additional

federally listed tribes were indicated for consultation: Buena Vista Rancheria of Me-Wuk Indians (Buena Vista), Shingle Springs Band of Miwok Indians (Shingle Springs), and Wilton Rancheria (Wilton).

Native American Consultation Under the California Environmental Quality Act

Two tribes have previously requested to be notified regarding projects within their traditional geographic area of cultural affiliation, in accordance with Public Resources Code Section 21080.3.1: UAIC and Wilton Rancheria. Consultation under Public Resources Code Section 21080.3.1 with UAIC is on-going.

A description of Native American consultation activities completed to date is provided below in **Table 15**.

Table 15. Native American Contact Efforts

Date(s) Contacted	Method of Contact	Response
February 2, 2018	Letter	The City sent letters to UAIC and Wilton Rancheria notifying these Tribes about the proposed project and requesting a response within 30 days if consultation concerning the proposed project is requested. No response was received by the City from Wilton Rancheria.
February 15, 2018	Letter/Email	UAIC sent a letter to the City responding to the City's February 2, 2018 letter, indicating that UAIC would like to consult with the City under Assembly Bill 52. On the same date UAIC sent an email to the City requesting consultation, requesting a meeting and information about the proposed project, and providing recommended mitigation measures for potential impacts to tribal cultural resources.
March 22, 2018	In Person Meeting	The City and its cultural resources consultant, GEI met with a UAIC representative to discuss the proposed project. UAIC requested archaeological testing between site CA-Sac-40 and the proposed project area (the previously recorded site is outside the project area but in the vicinity); requested a copy of the cultural resources records search; and requested to have paid Native American monitors during any archaeological testing.
March 26, 2018	Email	UAIC sent an email to the City saying that upon review of their files, that 60% of the project area is what UAIC considers to be significantly sensitive.
March 30, 2018	Letter/Mailing	GEI sent UAIC a copy of the cultural resources records search, as requested by UAIC on March 22, 2018.
April through August 2018	Telephone/Email	GEI had intermittent contact with UAIC to coordinate UAIC monitoring of future archaeological augering near site CA-Sac-40
August 31, 2018	Field Visit	UAIC conducted Native American monitoring of archaeological augering between site CA-Sac-40 and the proposed project. Results for all augers were negative for buried archaeological resources.

Native American Consultation Under the National Historic Preservation Act, Section 106

Using the list of Native American contacts provided by the NAHC On January 31, 2018, GEI, on behalf of Caltrans, sent letters to the following Native American Tribes, groups and individuals on February 8, 2018.

- Crystal Martinez-Alire, Chairperson, Ione Band of Miwok Indians
- Randy Yonemura, Cultural Committee Chair, Ione Band of Miwok Indians
- Gene Whitehouse, Chairperson, United Auburn Indian Community of the Auburn Rancheria (UAIC)
- Rhonda Morningstar Pope, Chairperson, Buena Vista Rancheria of Me-Wuk Indians

- Nicholas Fonseca, Chairperson, Shingle Springs Band of Miwok Indians

- Raymond Hitchcock, Chairperson, Wilton Rancheria

On February 14, 2014, Antonio Ruiz, Cultural Resources Officer for the Department of Environmental Resources of the Wilton Rancheria, responded via email to GEI's letter. Ruiz determined that the project is within the Wilton Rancheria Tribe's ancestral territory. They requested copies of any cultural resources assessments or other assessments that have been completed on all or part of the project's APE. This includes the records search results, archaeological inventory survey, results of the Sacred Lands File search, ethnographic studies, and geotechnical reports. The response also included the Tribe's fees for reviewing these materials and comparing it with their own information and databases. Cherilyn Neider, Administrative Assistant for the Department of Tribal Historic Preservation of UAIC, responded on March 13, 2018, also by email. She requested copies of any existing cultural resource assessments and records search results, GIS SHP files for the project APE, and a meeting to be set up between the City of Sacramento, GEI, and Caltrans.

My Randy Yonemura of Ione Band of Miwok Indians responded to the GEI letter by telephone and requested a meeting. A Section 106 consultation meeting was conducted with Mr. Yonemura on May 18, 2018 and Mr. Yonemura also participated in a field review of the project area with GEI archaeologists.

Section 106 consultation meetings were also held with UAIC representatives on March 22, 2018 and on May 21, 2018. UAIC identified areas considered to be sensitive by UAIC and requested archaeological testing in the APE near site CA-Sac-40 and Native American monitoring during that testing. UAIC conducted Native American monitoring of the archaeological monitoring on August 31, 2018.

To date, no specific Native American cultural resources have been identified in the APE by consulting Tribes. Native American consultation under Section 106 of the NHPA is on-going.

Regulatory Setting

Federal

There are no Federal plans, policies, or regulations related to Tribal Cultural Resources that are directly applicable to the proposed project, however Section 106 of the National Historic Preservation Act does require consultation with Native Americans to identify and consider certain types of cultural resources. Cultural resources of Native American origin identified as a result of the identification efforts conducted under Section 106 may also qualify as tribal cultural resources under CEQA.

State

California Environmental Quality Act — Statute and Guidelines. CEQA requires that public agencies that finance or approve public or private projects must assess the effects of the project on tribal cultural resources. Tribal cultural resources are defined in Public Resources Code (PRC) 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 that is (1) listed or determined eligible for listing on the California Register of Historical Resources (CRHR) or a local register, or (2) that is 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

California Public Resources Code Section 5024. PRC Section 5024.1 establishes the CRHR, which is the authoritative guide for identifying the State's historical resources to indicate what properties are to be protected, if feasible, from substantial adverse change. For a resource to be eligible for the CRHR, it must be more than 50 years old, retain its historic integrity, and satisfy one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important in prehistory or history.

Standards of Significance

For the purposes of this Initial Study, a tribal cultural resource is considered to be a significant resource if the resource is: 1) listed or eligible for listing in the CRHR or in a local register of historical resources; or 2) the resource has been determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. For purposes of this Initial Study, impacts on tribal cultural resources may be considered significant if construction and/or implementation of the proposed project would result in the following:

- cause a substantial change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources (see Master EIR Chapter 4.4 and Appendix C – Background Report, B. Cultural Resources Appendix), but did not specifically address tribal cultural resources because that resource type had not yet been defined in CEQA at the time the Master EIR was adopted. The Master EIR identified significant and unavoidable effects on historic resources and archaeological resources, some of which could be tribal cultural resources as defined in Public Resources Code 21074. Ground-disturbing activities resulting from implementation of development under the 2035 General Plan could affect the integrity of an archaeological site (which may be a tribal cultural resource), thereby causing a substantial change in the significance of the resource. General plan policies identified as reducing such effects on cultural resources that may also be tribal cultural resources include identification of resources on project sites (Policy HCR 2.1.1); implementation of applicable laws and regulations (Policy HCR 2.1.2); consultation with appropriate organizations and individuals including the Native American Heritage Commission and implementation of their consultation guidelines (Policy HCR 2.1.3); enforcement programs to promote the maintenance, rehabilitation, preservation, and interpretation of the City's historic resources (Policy HCR 2.1.4); listing of qualified historic resources under appropriate national, State, and local registers (Policy HCR 2.1.5); consideration of historic and cultural resources in planning studies (Policy HCR 2.1.6); enforcement of compliance with local, State, and federal historic and cultural preservation requirements (Policy HCR 2.1.8); and early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10).

Of particular relevance to this project are policies that ensure compliance with protocol that protect or mitigate impacts to archaeological resources (Policy HCR 2.1.16) and that encourage preservation and minimization of impacts on cultural resources (Policy HCR 2.1.17).

Answers to Checklist Questions

Questions A i and A ii
Based on consultation with the Native American Heritage Commission, consultation with Native American Tribes in accordance with Public Resources Code Section 21080.3.1, consultation with Native American Tribes in accordance with Section 106 of the NHPA, and archaeological testing conducted near site CA-Sac-40, portions of the proposed project area may be sensitive for the presence of tribal cultural resources,

but no tribal cultural resources as defined in Public Resources Code 21074 have been identified in or adjacent to the proposed project area.

The proposed project is therefore not anticipated to result in an adverse change in the significance of a tribal cultural resource pursuant to Public Resources Code 21074. While unlikely, construction of the proposed project could result in the inadvertent discovery of undocumented tribal cultural resources such as Native American archaeological sites, Native American human remains and associated objects and materials, features, sacred places or objects with value to a Tribe that is culturally or traditionally affiliated with the proposed project, and the disturbance or destruction of these resources. Therefore, the proposed project could result in potentially significant impact on tribal cultural resources. Implementation of **Mitigation Measures 4-1a, 4-1b, and 4-1c** would reduce the impacts to a **less-than-significant** level because the resources would be avoided and preserved in place or assessed and treated in accordance with appropriate professional standards.

Mitigation Measures

Mitigation Measure 4-1a: Conduct Cultural Resources and Tribal Cultural Resources Sensitivity and Awareness Training Program Prior to Ground-Disturbing Activities

Mitigation Measure 4-1a is described in full in the Cultural Resources section of this Initial Study document.

Mitigation Measure 4-1b: In the Event that Cultural Resources or Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.

Mitigation Measure 4-1b is described in full in the Cultural Resources section of this Initial Study document.

Mitigation Measure 4-1c: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains.

Mitigation Measure 4-1c is described in full in the Cultural Resources section of this Initial Study document.

Findings

All potentially significant environmental effects of the project relating to Tribal Cultural Resources can be mitigated to a less-than-significant level.

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UTILITIES AND SERVICE SYSTEMS

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
14. UTILITIES AND SERVICE SYSTEMS Would the project: A) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?			X
B) Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?			X

Environmental Setting

Water Supply

Water service to the project area is provided by the City of Sacramento. The City provides domestic water service from a combination of surface water and groundwater sources including the American River, Sacramento River, and groundwater wells. Water from the American River and Sacramento River is diverted by two water treatment plants (WTP): the Sacramento River WTP located south of Richards Boulevard between Bercut Drive and Sequoia Pacific Drive and the Fairbairn WTP located at the northeast corner of State University Drive South and College Town Drive. Water diverted from the Sacramento and American Rivers is treated, stored in storage reservoirs, and pumped to customers via an existing conveyance network.

The City of Sacramento complies with the California Water Code, which requires urban water suppliers to prepare and adopt an Urban Water Management Plan (UWMP) every five years. The most recent UWMP was adopted in 2016 (the 2015 UWMP) and includes an analysis of water demand sufficiency under normal, single dry year, and multiple dry year scenarios. Water supply and demand projections include future planned development until 2040.

Due to recent severe drought conditions in California, the Governor has issued multiple Executive Orders mandating water use reductions and to support making water conservation a way of life in California. These include urban water use reporting requirements and prohibitions on wasteful practices such as watering during or after rainfall, hosing off sidewalks, and irrigating ornamental turf on public street medians.

Wastewater and Stormwater

The Sacramento Regional County Sanitation District (SRCSD) and the Sacramento Area Sewer District (SASD) and City of Sacramento provide both collection and treatment services within their service area. Wastewater generated in the service area is collected by trunk facilities in the Sacramento Area Sewer District and then conveyed via interceptors to the Sacramento Regional Wastewater Treatment Plant (SRWTP) (SRCSD 2018, SASD 2018). Wastewater within the vicinity of Segments 1 and 2 is collected by the City of Sacramento's Combined Sewer System and wastewater within the vicinity of Segment 3 through 6 is collected by SASD facilities. During non-storm conditions, all wastewater collected is conveyed to the SRCSD system, and ultimately treated at the SRWTP, which is located in Elk Grove.

There are no public restrooms or other wastewater-generating facilities along the project alignment. Local runoff along the project alignment flows by gravity overland during storm events, and also through culverts and vegetated or lined intermittent drainages, ultimately to the American River.

Solid Waste Disposal

Solid waste disposal services in the project area are provided by the Sacramento Regional Solid Waste Authority (SWA). The Sacramento County Kiefer Landfill in Sloughhouse, CA is the primary location for the disposal of waste from the City of Sacramento. The landfill accepts municipal waste and industrial waste and is permitted to accept up to 10,815 tons per day (CalRecycle 2018). It is the only landfill facility in Sacramento County permitted to accept household waste from the public. Current peak and average daily disposal is much lower than the current permitted amounts. As a result, the Kiefer Landfill is expected to be able to provide service to the City, without need for new expansion beyond that already planned, until the year 2065 (City of Sacramento 2014).

Electricity and Natural Gas

Sacramento Municipal Utility District (SMUD) is responsible for the generation, transmission, and distribution of electrical power to its 900 square mile service area, which includes most of Sacramento County and a small portion of Placer County. The Pacific Gas & Electric Company (PG&E) provides natural gas service to residents and businesses within the City of Sacramento.

Telecommunications

AT&T provides telecommunications service in the City of Sacramento and within the project area.

Standards of Significance

For the purposes of this IS, an impact would be considered significant if the project resulted in the need for new or altered services related to water supply, wastewater, stormwater, solid waste, electricity, natural gas, or telecommunications utilities beyond what was anticipated in the 2035 General Plan:

- result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments or
- require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the effects of development under the 2035 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas and telecommunications. See Chapter 4.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the general plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1) but the Master EIR concluded that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity, which could require construction of new water supply facilities, would result in a significant and unavoidable effect (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant effect (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

Answers to Checklist Questions

Questions A and B

Water Supply

The proposed project consists of constructing a bicycle and pedestrian trail. The project would not involve construction of any housing, commercial or public buildings, facilities or landscaping that would require

connection to existing water conveyance pipelines or require additional connections to the regional water supply system. There would be **no impact**.

Wastewater and Stormwater

The proposed project would not involve construction of any public restrooms or other wastewater-generating facilities along the project alignment. Therefore, additional wastewater treatment and conveyance capacity or connections to the regional wastewater management system would not be required to implement the proposed project. The bike trail footprint is not large enough to create a substantial increase in runoff from impervious surfaces and overall stormwater runoff patterns would not change along the project alignment. In Segments 1 and 2, stormwater is expected to infiltrate into the ground before entering the City's stormwater conveyance system. In Segments 3-6, all stormwater would continue to flow to the American River. The trail would be slightly sloped away from the levee crown (toward the river) to encourage sheet flow of stormwater over the ground surface. In areas where trail design may cause minor ponding of water, small drain inlets would be installed to carry water under the bike trail to outlets on the river side of the trail. Outlets would discharge out of a flared end section and onto a small area of rock which would reduce stormwater velocity and disperse the water in a way that reduces the possibility of erosion around the outlet. Therefore, project construction and operation would not contribute to a need for additional stormwater facilities or additional connections to existing facilities. There would be **no impact**.

Solid Waste

As described above, the proposed project would be served by the Sacramento Solid Waste Authority (SWA). The 2035 General Plan Master EIR does not include analysis regarding waste generation for public park or trail facilities, however the proposed project does not include residential or business facilities, thus solid waste generation would be limited to trash generated by trail users. Because the project was accounted for in the City's General Plan and Master EIR, and the project is consistent with the General Plan land use designation, this increase in solid waste production would not exhaust the remaining landfill capacity. There would be **no impact**.

Electricity and Natural Gas

Electrical service is provided to the project area by SMUD's network of overhead lines. However, in compliance with ARPP Policy 5.27 "Prohibited Activities and Facilities" which prohibits permanent lighting facilities in the Parkway, the proposed trail would not be constructed with electrical lighting along the alignment and no connections to the regional electricity grid would be required. The proposed project would also not require connection to the PG&E natural gas distribution system. Since construction of the project would not require additional connections or capacity within the electrical or natural gas distribution systems, there would be **no impact**.

Telecommunications

Construction of the proposed project would not affect the use of the existing telecommunications system. Additionally, the project would not result in the need for additional capacity within the existing system. There would be **no impact**.

Mitigation Measures

No mitigation measures are required.

Findings

The project would have no additional project-specific environmental effects relating to Utilities and Service Systems.

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MANDATORY FINDINGS OF SIGNIFICANCE

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	No additional significant environmental effect
15. MANDATORY FINDINGS OF SIGNIFICANCE A.) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X	
B.) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X

Answers to Checklist Questions

Question A

The analysis conducted in this IS concludes that the proposed project with mitigation would not have a significant effect on the physical environment and would not result in any of the impacts defined above.

As discussed in the Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards, Hydrology and Water Quality, and Tribal Cultural Resources sections, any potentially significant impacts related to the quality of the environment, plant, fish, or wildlife habitat or populations, special-status species, and important historical or cultural resources would be reduced to a less-than-significant level through implementation of avoidance and minimization measures and by incorporating mitigation measures. No known cultural resources would be affected by the proposed project and if unidentified resources are encountered during construction, mitigation measures are in place to ensure that impacts would be less than significant.

Question B

Past and present projects within the project vicinity are limited as the area is primarily already developed and used as a floodway (within the leveed river corridor), for recreation (within the American River Parkway, Sutter's Landing Park, and Glenn Hall Park), and established residential uses (in the vicinity of Segments 3-6). There are no other ongoing or proposed projects along the project alignment that would overlap with construction of the proposed project as there are strict development regulations within the American River Parkway planning area. Construction of the proposed project would result in temporary and short-term impacts that would be limited to the project site and immediate vicinity over a two-year construction period

and mitigation measures are proposed to avoid, minimize, rectify, reduce, eliminate, and/or compensate for any potentially significant impacts.

As discussed in this IS, the proposed project would result in less-than-significant impacts or no impacts on the following resource areas: aesthetics, agriculture resources, energy, land use, mineral resources, noise, public services, recreation, transportation, and utilities. Furthermore, mitigation measures have been included in this IS that would reduce impacts to a less-than-significant level in the following areas: air quality, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, and tribal cultural resources. Therefore, all impacts would be less than significant or would be reduced to a less-than-significant level through implementation of required mitigation measures, and the proposed project would not make a cumulatively considerable incremental contribution to significant cumulative adverse impacts on those resource areas. The incremental effects of the proposed project would not be cumulatively considerable when viewed in connection with the effects of past, present, and reasonably foreseeable future projects. This impact would be **less than significant**.

Question C

As discussed throughout this IS, construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly. The proposed project is being implemented for the specific purpose of improving recreational opportunities, access, and connectivity within the regional bike trail network. Furthermore, mitigation measures are provided as necessary to reduce the proposed project's potentially significant effects on air quality, biological resources, cultural resources, geology and soils, hazards, hydrology and water quality, and tribal cultural resources to less-than-significant levels. Thus, construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly and would improve the quality of life for humans by improving recreational opportunities and access to the regional bike trail network. There would be **no impact**.

SECTION IV - ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this project, but would be mitigated to a less-than-significant level with implementation of mitigation.

	Aesthetics	X	Hazards
X	Air Quality		Noise
X	Biological Resources		Public Services
X	Cultural Resources		Recreation
	Energy		Transportation/Circulation
X	Geology and Soils	X	Tribal Cultural Resources
X	Hydrology and Water Quality		Utilities and Service Systems
	None Identified		

SECTION V - DETERMINATION

On the basis of the initial study:

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the proposed project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (CEQA Guidelines Section 15178(b))

Signature

Oct. 18, 2018
Date

Scott Johnson
Printed Name

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APPENDIX A. REPRESENTATIVE PHOTOS

Photo 1: View facing west across upland area of Segment 2 from near Sutter's Landing Regional Park

Photo 2: View facing east towards Business 80 Bridge. Typical riparian vegetation at left, and grassy levee slope at right. Proposed trail would follow existing gravel toe road at this location.

Photo 3: Facing west towards Business 80 bridge. The proposed trail would be on the slope of the levee here due to the lack of levee toe road.

Photo 4: Facing east on Segment 4. The proposed trail would require vegetation removal at this location due to narrow width of existing track on levee toe.

Photo 5: Facing east in the Paradise Beach Area. View of riparian vegetation to the left and levee slope to the right. Proposed trail would follow existing toe road in this location.

Photo 6: Facing west near Paradise Beach access at Glenn Hall Park.

Photo 7: Facing east toward connection to existing trail at H Street.

APPENDIX B. AIR QUALITY MODELING ASSUMPTIONS AND RESULTS

Two Rivers Trail Phase II: Section 3-6

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	3.40	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Two Rivers Trail Phase II: Section 3-6 - Sacramento County, Summer

Project Characteristics -

Land Use - Proposed project would create approximately 3.4 miles of new Class 1 bicycle and pedestrian trail.

Construction Phase - Project is proposed to last 100 days

Off-road Equipment - Off-Highway Trucks are Concrete Truck and Concrete Pump Truck

Trips and VMT - based on proposed project description

On-road Fugitive Dust - Assuming 2% not paved if moving onsite

Grading - Assume 16ft wide and 2.25 miles long path which is equal to 4.4 acres of grading

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products -

Area Coating -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	0.00	100.00
tblConstructionPhase	PhaseEndDate	5/31/2020	10/16/2020
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

Two Rivers Trail Phase II: Section 3-6 - Sacramento County, Summer

tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00
tblRoadDust	CARB_PM_VMT	True	False
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	820.00
tblTripsAndVMT	HaulingTripNumber	0.00	133.00
tblTripsAndVMT	HaulingTripNumber	0.00	717.00
tblTripsAndVMT	HaulingTripNumber	0.00	179.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00

tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	7.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.2826	42.8512	28.0796	0.0863	49.4579	1.7056	51.1635	5.1522	1.5820	6.7341	0.0000	8,574.4580	8,574.4580	1.8542	0.0000	8,620.8127
Maximum	**4.2826**	**42.8512**	**28.0796**	**0.0863**	**49.4579**	**1.7056**	**51.1635**	**5.1522**	**1.5820**	**6.7341**	**0.0000**	**8,574.4580**	**8,574.4580**	**1.8542**	**0.0000**	**8,620.8127**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.2826	42.8512	28.0796	0.0863	49.4579	1.7056	51.1635	5.1522	1.5820	6.7341	0.0000	8,574.4580	8,574.4580	1.8542	0.0000	8,620.8127
Maximum	**4.2826**	**42.8512**	**28.0796**	**0.0863**	**49.4579**	**1.7056**	**51.1635**	**5.1522**	**1.5820**	**6.7341**	**0.0000**	**8,574.4580**	**8,574.4580**	**1.8542**	**0.0000**	**8,620.8127**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**0.0000**	**7.9000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**0.0000**	**7.9000e-004**

Two Rivers Trail Phase II: Section 3-6 - Sacramento County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clearing, Grubbing, Excavation, and Fill	Building Construction	6/1/2020	10/16/2020	5	100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clearing, Grubbing, Excavation, and Fill	Air Compressors	1	8.00	78	0.48
Clearing, Grubbing, Excavation, and Fill	Bore/Drill Rigs	1	8.00	221	0.50
Clearing, Grubbing, Excavation, and Fill	Excavators	1	6.00	158	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Rubber Tired Dozers	1	8.00	247	0.40
Clearing, Grubbing, Excavation, and Fill	Sweepers/Scrubbers	1	8.00	64	0.46
Clearing, Grubbing, Excavation, and Fill	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	820.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	133.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	717.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	179.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	7.00	1.00	10.00	15.00	9.00	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clearing, Grubbing, Excavation, and Fill - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0467	0.0000	0.0467	5.0400e-003	0.0000	5.0400e-003			0.0000			0.0000
Off-Road	3.6693	35.9870	22.9924	0.0578		1.6728	1.6728		1.5508	1.5508		5,591.6912	5,591.6912	1.7162		5,634.5950
Total	**3.6693**	**35.9870**	**22.9924**	**0.0578**	**0.0467**	**1.6728**	**1.7195**	**5.0400e-003**	**1.5508**	**1.5559**		**5,591.6912**	**5,591.6912**	**1.7162**		**5,634.5950**

3.2 Clearing, Grubbing, Excavation, and Fill - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1682	5.9823	1.4095	0.0180	14.0924	0.0232	14.1156	1.4757	0.0222	1.4979		1,926.8689	1,926.8689	0.1047		1,929.4856
Vendor	0.0231	0.6373	0.1746	1.6200e-003	1.3655	3.8600e-003	1.3694	0.1440	3.6900e-003	0.1477		171.9740	171.9740	8.6700e-003		172.1908
Worker	0.4220	0.2446	3.5031	8.8800e-003	33.9533	5.7100e-003	33.9590	3.5274	5.2600e-003	3.5327		883.9240	883.9240	0.0247		884.5413
Total	**0.6133**	**6.8642**	**5.0872**	**0.0285**	**49.4113**	**0.0328**	**49.4440**	**5.1471**	**0.0311**	**5.1783**		**2,982.7669**	**2,982.7669**	**0.1380**		**2,986.2177**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0467	0.0000	0.0467	5.0400e-003	0.0000	5.0400e-003			0.0000			0.0000
Off-Road	3.6693	35.9870	22.9924	0.0578		1.6728	1.6728		1.5508	1.5508	0.0000	5,591.6912	5,591.6912	1.7162		5,634.5950
Total	**3.6693**	**35.9870**	**22.9924**	**0.0578**	**0.0467**	**1.6728**	**1.7195**	**5.0400e-003**	**1.5508**	**1.5559**	**0.0000**	**5,591.6912**	**5,591.6912**	**1.7162**		**5,634.5950**

3.2 Clearing, Grubbing, Excavation, and Fill - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1682	5.9823	1.4095	0.0180	14.0924	0.0232	14.1156	1.4757	0.0222	1.4979		1,926.8689	1,926.8689	0.1047		1,929.4856
Vendor	0.0231	0.6373	0.1746	1.6200e-003	1.3655	3.8600e-003	1.3694	0.1440	3.6900e-003	0.1477		171.9740	171.9740	8.6700e-003		172.1908
Worker	0.4220	0.2446	3.5031	8.8800e-003	33.9533	5.7100e-003	33.9590	3.5274	5.2600e-003	3.5327		883.9240	883.9240	0.0247		884.5413
Total	**0.6133**	**6.8642**	**5.0872**	**0.0285**	**49.4113**	**0.0328**	**49.4440**	**5.1471**	**0.0311**	**5.1783**		**2,982.7669**	**2,982.7669**	**0.1380**		**2,986.2177**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Unmitigated	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**		**7.9000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**		**7.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Two Rivers Trail Phase II: Section 3-6

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	3.40	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2021
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed project would create approximately 3.4 miles of new Class 1 bicycle and pedestrian trail.

Construction Phase - Project is proposed to last 100 days

Off-road Equipment - Off-Highway Trucks are Concrete Truck and Concrete Pump Truck

Trips and VMT - based on proposed project description

On-road Fugitive Dust - Assuming 2% not paved if moving onsite

Grading - Assume 16ft wide and 2.25 miles long path which is equal to 4.4 acres of grading

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products -

Area Coating -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	0.00	100.00
tblConstructionPhase	PhaseEndDate	5/31/2020	10/16/2020
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

Two Rivers Trail Phase II: Section 3-6 - Sacramento County, Annual

tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00
tblRoadDust	CARB_PM_VMT	True	False
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	820.00
tblTripsAndVMT	HaulingTripNumber	0.00	133.00
tblTripsAndVMT	HaulingTripNumber	0.00	717.00
tblTripsAndVMT	HaulingTripNumber	0.00	179.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00

tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	7.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2120	2.1566	1.3761	4.2700e-003	2.0884	0.0853	2.1737	0.2189	0.0791	0.2980	0.0000	384.5293	384.5293	0.0841	0.0000	386.6307
Maximum	**0.2120**	**2.1566**	**1.3761**	**4.2700e-003**	**2.0884**	**0.0853**	**2.1737**	**0.2189**	**0.0791**	**0.2980**	**0.0000**	**384.5293**	**384.5293**	**0.0841**	**0.0000**	**386.6307**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2120	2.1566	1.3761	4.2700e-003	2.0884	0.0853	2.1737	0.2189	0.0791	0.2980	0.0000	384.5290	384.5290	0.0841	0.0000	386.6304
Maximum	**0.2120**	**2.1566**	**1.3761**	**4.2700e-003**	**2.0884**	**0.0853**	**2.1737**	**0.2189**	**0.0791**	**0.2980**	**0.0000**	**384.5290**	**384.5290**	**0.0841**	**0.0000**	**386.6304**

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2020	8-31-2020	1.5487	1.5487
2	9-1-2020	9-30-2020	0.5050	0.5050
		Highest	1.5487	1.5487

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clearing, Grubbing, Excavation, and Fill	Building Construction	6/1/2020	10/16/2020	5	100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clearing, Grubbing, Excavation, and Fill	Air Compressors	1	8.00	78	0.48
Clearing, Grubbing, Excavation, and Fill	Bore/Drill Rigs	1	8.00	221	0.50
Clearing, Grubbing, Excavation, and Fill	Excavators	1	6.00	158	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Rubber Tired Dozers	1	8.00	247	0.40
Clearing, Grubbing, Excavation, and Fill	Sweepers/Scrubbers	1	8.00	64	0.46
Clearing, Grubbing, Excavation, and Fill	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	820.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	133.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	717.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	179.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	7.00	1.00	10.00	15.00	9.00	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clearing, Grubbing, Excavation, and Fill - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3300e-003	0.0000	2.3300e-003	2.5000e-004	0.0000	2.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1835	1.7994	1.1496	2.8900e-003		0.0836	0.0836		0.0775	0.0775	0.0000	253.6348	253.6348	0.0778	0.0000	255.5809
Total	**0.1835**	**1.7994**	**1.1496**	**2.8900e-003**	**2.3300e-003**	**0.0836**	**0.0860**	**2.5000e-004**	**0.0775**	**0.0778**	**0.0000**	**253.6348**	**253.6348**	**0.0778**	**0.0000**	**255.5809**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.4900e-003	0.3110	0.0718	8.9000e-004	0.5952	1.1700e-003	0.5964	0.0628	1.1200e-003	0.0639	0.0000	86.9396	86.9396	4.8200e-003	0.0000	87.0601
Vendor	1.1700e-003	0.0328	9.1500e-003	8.0000e-005	0.0577	1.9000e-004	0.0579	6.1400e-003	1.9000e-004	6.3200e-003	0.0000	7.7363	7.7363	4.0000e-004	0.0000	7.7465
Worker	0.0188	0.0135	0.1455	4.0000e-004	1.4331	2.9000e-004	1.4334	0.1498	2.6000e-004	0.1500	0.0000	36.2186	36.2186	9.9000e-004	0.0000	36.2432
Total	**0.0285**	**0.3572**	**0.2265**	**1.3700e-003**	**2.0861**	**1.6500e-003**	**2.0877**	**0.2187**	**1.5700e-003**	**0.2203**	**0.0000**	**130.8945**	**130.8945**	**6.2100e-003**	**0.0000**	**131.0498**

3.2 Clearing, Grubbing, Excavation, and Fill - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3300e-003	0.0000	2.3300e-003	2.5000e-004	0.0000	2.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1835	1.7994	1.1496	2.8900e-003		0.0836	0.0836		0.0775	0.0775	0.0000	253.6345	253.6345	0.0778	0.0000	255.5806
Total	**0.1835**	**1.7994**	**1.1496**	**2.8900e-003**	**2.3300e-003**	**0.0836**	**0.0860**	**2.5000e-004**	**0.0775**	**0.0778**	**0.0000**	**253.6345**	**253.6345**	**0.0778**	**0.0000**	**255.5806**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.4900e-003	0.3110	0.0718	8.9000e-004	0.5952	1.1700e-003	0.5964	0.0628	1.1200e-003	0.0639	0.0000	86.9396	86.9396	4.8200e-003	0.0000	87.0601
Vendor	1.1700e-003	0.0328	9.1500e-003	8.0000e-005	0.0577	1.9000e-004	0.0579	6.1400e-003	1.9000e-004	6.3200e-003	0.0000	7.7363	7.7363	4.0000e-004	0.0000	7.7465
Worker	0.0188	0.0135	0.1455	4.0000e-004	1.4331	2.9000e-004	1.4334	0.1498	2.6000e-004	0.1500	0.0000	36.2186	36.2186	9.9000e-004	0.0000	36.2432
Total	**0.0285**	**0.3572**	**0.2265**	**1.3700e-003**	**2.0861**	**1.6500e-003**	**2.0877**	**0.2187**	**1.5700e-003**	**0.2203**	**0.0000**	**130.8945**	**130.8945**	**6.2100e-003**	**0.0000**	**131.0498**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.555851	0.039752	0.205040	0.120748	0.020349	0.005402	0.018507	0.022668	0.002052	0.002157	0.005939	0.000618	0.000915

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Unmitigated	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Two Rivers Trail Phase II: Section 1-2

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	3.40	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2031
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Proposed project would create approximately 3.4 miles of new Class 1 bicycle and pedestrian trail.

Construction Phase - Project is proposed to last 60 days

Off-road Equipment - Off-Highway Trucks are Concrete Truck and Concrete Pump Truck

Trips and VMT - based on proposed project description

On-road Fugitive Dust - Assuming 2% not paved if moving onsite

Grading - Assume 16ft wide and 1.1 miles long path which is equal to 2.1 acres of grading

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products -

Area Coating -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	0.00	60.00
tblConstructionPhase	PhaseEndDate	6/2/2030	8/23/2030
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

Two Rivers Trail Phase II: Section 1-2 - Sacramento County, Summer

tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00
tblRoadDust	CARB_PM_VMT	True	False
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	133.00
tblTripsAndVMT	HaulingTripNumber	0.00	335.00
tblTripsAndVMT	HaulingTripNumber	0.00	84.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00

tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	7.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2030	2.9603	12.5432	22.2334	0.0857	46.6510	0.3174	46.9684	4.8580	0.3169	5.1749	0.0000	8,846.1455	8,846.1455	0.3231	0.0000	8,854.2219
Maximum	**2.9603**	**12.5432**	**22.2334**	**0.0857**	**46.6510**	**0.3174**	**46.9684**	**4.8580**	**0.3169**	**5.1749**	**0.0000**	**8,846.1455**	**8,846.1455**	**0.3231**	**0.0000**	**8,854.2219**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2030	2.9603	12.5432	22.2334	0.0857	46.6510	0.3174	46.9684	4.8580	0.3169	5.1749	0.0000	8,846.1455	8,846.1455	0.3231	0.0000	8,854.2219
Maximum	**2.9603**	**12.5432**	**22.2334**	**0.0857**	**46.6510**	**0.3174**	**46.9684**	**4.8580**	**0.3169**	**5.1749**	**0.0000**	**8,846.1455**	**8,846.1455**	**0.3231**	**0.0000**	**8,854.2219**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**0.0000**	**7.9000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**	**0.0000**	**7.9000e-004**

Two Rivers Trail Phase II: Section 1-2 - Sacramento County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clearing, Grubbing, Excavation, and Fill	Building Construction	6/3/2030	8/23/2030	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clearing, Grubbing, Excavation, and Fill	Air Compressors	1	8.00	78	0.48
Clearing, Grubbing, Excavation, and Fill	Bore/Drill Rigs	1	8.00	221	0.50
Clearing, Grubbing, Excavation, and Fill	Excavators	1	6.00	158	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Rubber Tired Dozers	1	8.00	247	0.40
Clearing, Grubbing, Excavation, and Fill	Sweepers/Scrubbers	1	8.00	64	0.46
Clearing, Grubbing, Excavation, and Fill	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	333.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	133.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	335.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	84.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	7.00	1.00	10.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clearing, Grubbing, Excavation, and Fill - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0371	0.0000	0.0371	4.0100e-003	0.0000	4.0100e-003			0.0000			0.0000
Off-Road	2.6464	9.5886	19.6046	0.0647		0.3076	0.3076		0.3076	0.3076		6,641.4924	6,641.4924	0.2335		6,647.3300
Total	**2.6464**	**9.5886**	**19.6046**	**0.0647**	**0.0371**	**0.3076**	**0.3447**	**4.0100e-003**	**0.3076**	**0.3116**		**6,641.4924**	**6,641.4924**	**0.2335**		**6,647.3300**

3.2 Clearing, Grubbing, Excavation, and Fill - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0798	2.4612	0.8408	0.0132	11.2951	5.5300e-003	11.3006	1.1826	5.2900e-003	1.1879		1,422.0710	1,422.0710	0.0735		1,423.9080
Vendor	0.0108	0.3985	0.0931	1.5100e-003	1.3655	5.4000e-004	1.3660	0.1440	5.1000e-004	0.1445		160.6209	160.6209	6.7400e-003		160.7893
Worker	0.2234	0.0950	1.6949	6.2300e-003	33.9533	3.7600e-003	33.9571	3.5274	3.4600e-003	3.5309		621.9611	621.9611	9.3400e-003		622.1946
Total	**0.3139**	**2.9547**	**2.6288**	**0.0209**	**46.6139**	**9.8300e-003**	**46.6237**	**4.8540**	**9.2600e-003**	**4.8633**		**2,204.6531**	**2,204.6531**	**0.0896**		**2,206.8919**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0371	0.0000	0.0371	4.0100e-003	0.0000	4.0100e-003			0.0000			0.0000
Off-Road	2.6464	9.5886	19.6046	0.0647		0.3076	0.3076		0.3076	0.3076	0.0000	6,641.4924	6,641.4924	0.2335		6,647.3300
Total	**2.6464**	**9.5886**	**19.6046**	**0.0647**	**0.0371**	**0.3076**	**0.3447**	**4.0100e-003**	**0.3076**	**0.3116**	**0.0000**	**6,641.4924**	**6,641.4924**	**0.2335**		**6,647.3300**

3.2 Clearing, Grubbing, Excavation, and Fill - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0798	2.4612	0.8408	0.0132	11.2951	5.5300e-003	11.3006	1.1826	5.2900e-003	1.1879		1,422.0710	1,422.0710	0.0735		1,423.9080
Vendor	0.0108	0.3985	0.0931	1.5100e-003	1.3655	5.4000e-004	1.3660	0.1440	5.1000e-004	0.1445		160.6209	160.6209	6.7400e-003		160.7893
Worker	0.2234	0.0950	1.6949	6.2300e-003	33.9533	3.7600e-003	33.9571	3.5274	3.4600e-003	3.5309		621.9611	621.9611	9.3400e-003		622.1946
Total	**0.3139**	**2.9547**	**2.6288**	**0.0209**	**46.6139**	**9.8300e-003**	**46.6237**	**4.8540**	**9.2600e-003**	**4.8633**		**2,204.6531**	**2,204.6531**	**0.0896**		**2,206.8919**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.577543	0.034512	0.211971	0.105609	0.011838	0.004411	0.018435	0.025668	0.001868	0.001481	0.005453	0.000608	0.000603

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Unmitigated	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**		**7.9000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		7.4000e-004	7.4000e-004	0.0000		7.9000e-004
Total	**3.0000e-005**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**7.4000e-004**	**7.4000e-004**	**0.0000**		**7.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Two Rivers Trail Phase II: Section 1-2

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	3.40	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2031
Utility Company					
CO2 Intensity (lb/MWhr)	0	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Two Rivers Trail Phase II: Section 1-2 - Sacramento County, Annual

Project Characteristics -

Land Use - Proposed project would create approximately 3.4 miles of new Class 1 bicycle and pedestrian trail.

Construction Phase - Project is proposed to last 60 days

Off-road Equipment - Off-Highway Trucks are Concrete Truck and Concrete Pump Truck

Trips and VMT - based on proposed project description

On-road Fugitive Dust - Assuming 2% not paved if moving onsite

Grading - Assume 16ft wide and 1.1 miles long path which is equal to 2.1 acres of grading

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products -

Area Coating -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	40
tblConstructionPhase	NumDays	0.00	60.00
tblConstructionPhase	PhaseEndDate	6/2/2030	8/23/2030
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

Two Rivers Trail Phase II: Section 1-2 - Sacramento County, Annual

tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOffRoadEquipment	PhaseName		Clearing, Grubbing, Excavation, and Fill
tblOnRoadDust	HaulingPercentPave	100.00	98.00
tblOnRoadDust	VendorPercentPave	100.00	98.00
tblOnRoadDust	WorkerPercentPave	100.00	98.00
tblRoadDust	CARB_PM_VMT	True	False
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripLength	20.00	25.00
tblTripsAndVMT	HaulingTripNumber	0.00	333.00
tblTripsAndVMT	HaulingTripNumber	0.00	133.00
tblTripsAndVMT	HaulingTripNumber	0.00	335.00
tblTripsAndVMT	HaulingTripNumber	0.00	84.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripLength	6.50	9.00

tblTripsAndVMT	VendorTripLength	6.50	9.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripLength	10.00	15.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	17.00
tblTripsAndVMT	WorkerTripNumber	0.00	7.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2030	0.0882	0.3790	0.6583	2.5500e-003	1.1819	9.5200e-003	1.1914	0.1239	9.5100e-003	0.1334	0.0000	238.8789	238.8789	8.7900e-003	0.0000	239.0987
Maximum	**0.0882**	**0.3790**	**0.6583**	**2.5500e-003**	**1.1819**	**9.5200e-003**	**1.1914**	**0.1239**	**9.5100e-003**	**0.1334**	**0.0000**	**238.8789**	**238.8789**	**8.7900e-003**	**0.0000**	**239.0987**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2030	0.0882	0.3790	0.6583	2.5500e-003	1.1819	9.5200e-003	1.1914	0.1239	9.5100e-003	0.1334	0.0000	238.8786	238.8786	8.7900e-003	0.0000	239.0985
Maximum	**0.0882**	**0.3790**	**0.6583**	**2.5500e-003**	**1.1819**	**9.5200e-003**	**1.1914**	**0.1239**	**9.5100e-003**	**0.1334**	**0.0000**	**238.8786**	**238.8786**	**8.7900e-003**	**0.0000**	**239.0985**

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

Two Rivers Trail Phase II: Section 1-2 - Sacramento County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2030	9-2-2030	0.4540	0.4540
		Highest	0.4540	0.4540

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clearing, Grubbing, Excavation, and Fill	Building Construction	6/3/2030	8/23/2030	5	60	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clearing, Grubbing, Excavation, and Fill	Air Compressors	1	8.00	78	0.48
Clearing, Grubbing, Excavation, and Fill	Bore/Drill Rigs	1	8.00	221	0.50
Clearing, Grubbing, Excavation, and Fill	Excavators	1	6.00	158	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Off-Highway Trucks	1	8.00	402	0.38
Clearing, Grubbing, Excavation, and Fill	Rubber Tired Dozers	1	8.00	247	0.40
Clearing, Grubbing, Excavation, and Fill	Sweepers/Scrubbers	1	8.00	64	0.46
Clearing, Grubbing, Excavation, and Fill	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	333.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	133.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	335.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	17.00	1.00	84.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT
Clearing, Grubbing, Excavation, and Fill	8	7.00	1.00	10.00	15.00	9.00	25.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Clearing, Grubbing, Excavation, and Fill - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1100e-003	0.0000	1.1100e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0794	0.2877	0.5881	1.9400e-003		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	180.7518	180.7518	6.3500e-003	0.0000	180.9107
Total	**0.0794**	**0.2877**	**0.5881**	**1.9400e-003**	**1.1100e-003**	**9.2300e-003**	**0.0103**	**1.2000e-004**	**9.2300e-003**	**9.3500e-003**	**0.0000**	**180.7518**	**180.7518**	**6.3500e-003**	**0.0000**	**180.9107**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4100e-003	0.0760	0.0256	3.9000e-004	0.2862	1.7000e-004	0.2864	0.0302	1.6000e-004	0.0304	0.0000	38.5011	38.5011	2.0300e-003	0.0000	38.5518
Vendor	3.3000e-004	0.0122	2.9300e-003	4.0000e-005	0.0346	2.0000e-005	0.0346	3.6800e-003	2.0000e-005	3.7000e-003	0.0000	4.3362	4.3362	1.9000e-004	0.0000	4.3409
Worker	6.0600e-003	3.1400e-003	0.0416	1.7000e-004	0.8599	1.1000e-004	0.8600	0.0899	1.0000e-004	0.0900	0.0000	15.2897	15.2897	2.2000e-004	0.0000	15.2953
Total	**8.8000e-003**	**0.0913**	**0.0701**	**6.0000e-004**	**1.1807**	**3.0000e-004**	**1.1810**	**0.1237**	**2.8000e-004**	**0.1240**	**0.0000**	**58.1270**	**58.1270**	**2.4400e-003**	**0.0000**	**58.1880**

3.2 Clearing, Grubbing, Excavation, and Fill - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1100e-003	0.0000	1.1100e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0794	0.2877	0.5881	1.9400e-003		9.2300e-003	9.2300e-003		9.2300e-003	9.2300e-003	0.0000	180.7516	180.7516	6.3500e-003	0.0000	180.9105
Total	**0.0794**	**0.2877**	**0.5881**	**1.9400e-003**	**1.1100e-003**	**9.2300e-003**	**0.0103**	**1.2000e-004**	**9.2300e-003**	**9.3500e-003**	**0.0000**	**180.7516**	**180.7516**	**6.3500e-003**	**0.0000**	**180.9105**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4100e-003	0.0760	0.0256	3.9000e-004	0.2862	1.7000e-004	0.2864	0.0302	1.6000e-004	0.0304	0.0000	38.5011	38.5011	2.0300e-003	0.0000	38.5518
Vendor	3.3000e-004	0.0122	2.9300e-003	4.0000e-005	0.0346	2.0000e-005	0.0346	3.6800e-003	2.0000e-005	3.7000e-003	0.0000	4.3362	4.3362	1.9000e-004	0.0000	4.3409
Worker	6.0600e-003	3.1400e-003	0.0416	1.7000e-004	0.8599	1.1000e-004	0.8600	0.0899	1.0000e-004	0.0900	0.0000	15.2897	15.2897	2.2000e-004	0.0000	15.2953
Total	**8.8000e-003**	**0.0913**	**0.0701**	**6.0000e-004**	**1.1807**	**3.0000e-004**	**1.1810**	**0.1237**	**2.8000e-004**	**0.1240**	**0.0000**	**58.1270**	**58.1270**	**2.4400e-003**	**0.0000**	**58.1880**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.577543	0.034512	0.211971	0.105609	0.011838	0.004411	0.018435	0.025668	0.001868	0.001481	0.005453	0.000608	0.000603

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Unmitigated	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-005	8.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.0000**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C. HABITAT MAPS (SEGMENTS 3 THROUGH 6)

TWO RIVERS TRAIL PHASE II PROJECT

Biological Study Area
Ordinary High Water Mark (OHWM)
Elderberry Shrubs[1]

Segments 3-6 Project Footprint
Permanent Impacts
Temporary Impacts

Vegetation Classification
Annual Grassland
Mixed Scrub
Riverine
Ruderal
Urban
Valley Foothill Riparian

Trees (Limited to trees in the Project Footprint)[2]
Black Locust
Black Walnut
Box Elder
Oak
Cottonwood
Sycamore
Tree of Heaven
Willow

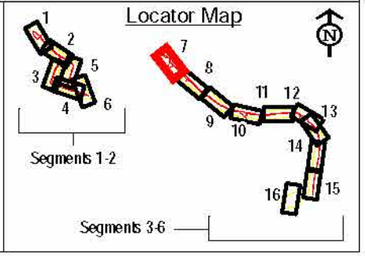
[1] Elderberry shrubs mapped in the Project Footprint and within 165-feet of the Project Footprint.

[2] Trees were only mapped within the Project Footprint in Segments 3-6

0 50 100 feet
1 inch = 100 feet

Sources:
- City of Sacramento, 2018
- AWE 2018
- ESRI Aerial Imagery, August 9, 2017

Locator Map



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0 50 100 feet
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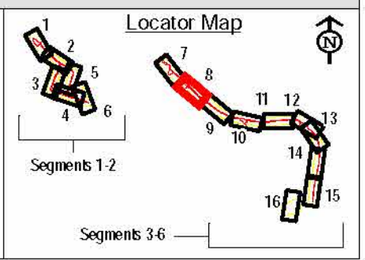
- AWE 2018
- ESRI Aerial Imagery, August 9, 2017

Locator Map



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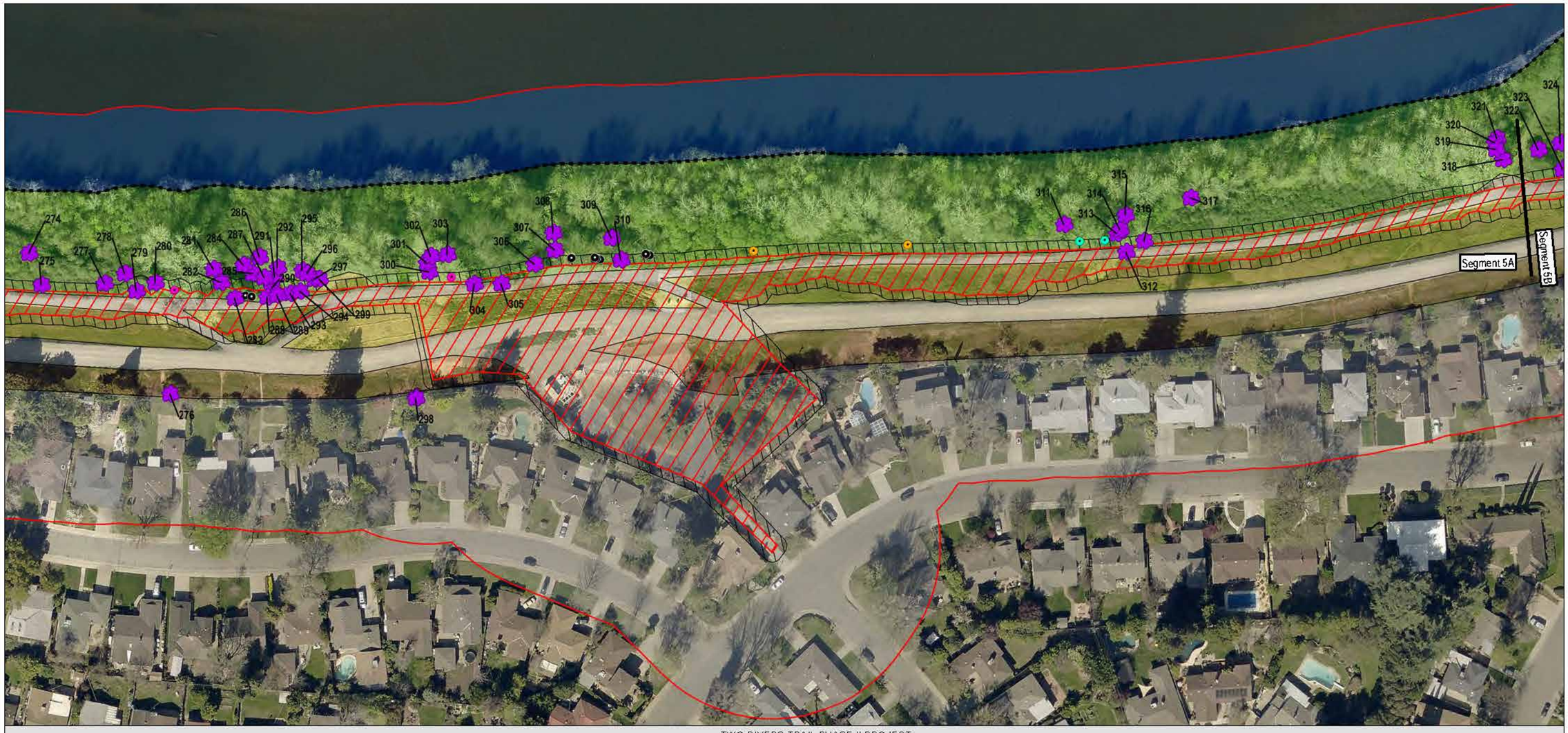
- ESRI Aerial Imagery, August 9, 2017

Locator Map
Segments 1-2
Segments 3-6



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0 50 100 feet
1 inch = 100 feet

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Locator Map
Segments 1-2
Segments 3-6

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Elderberry Shrubs[1]

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1 inch = 100 feet

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Locator Map

Segments 1-2

Segments 3-6

TWO RIVERS TRAIL PHASE II PROJECT

Biological Study Area
Ordinary High Water Mark (OHWM)
Elderberry Shrubs[1]

Segments 3-6 Project Footprint
Permanent Impacts
Temporary Impacts

Vegetation Classification
Annual Grassland
Mixed Scrub
Riverine
Ruderal
Urban
Valley Foothill Riparian

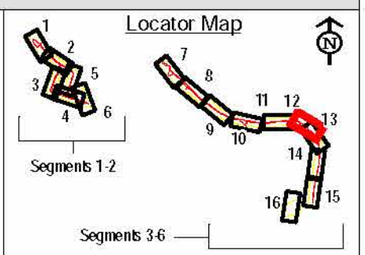
Trees (Limited to trees in the Project Footprint)[2]
Black Locust
Black Walnut
Box Elder
Oak
Cottonwood
Sycamore
Tree of Heaven
Willow

[1] Elderberry shrubs mapped in the Project Footprint and within 165-feet of the Project Footprint.

[2] Trees were only mapped within the Project Footprint in Segments 3-6

0 50 100 feet
1 inch = 100 feet

Sources:
- City of Sacramento, 2018
- AWE 2018
- ESRI Aerial Imagery, August 9, 2017

Locator Map


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Locator Map
Segments 1-2
Segments 3-6

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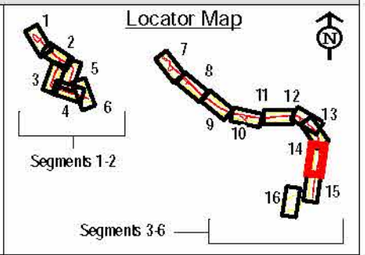

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APPENDIX D. PHASE I ENVIRONMENTAL SITE ASSESSMENT

Download from the City website as a separate file.