CITY OF REDDING
777 CYPRESS AVENUE, REDDING, CA 96001
P.O. BOX 496071, REDDING, CA 96049-6071

PUBLIC WORKS
ENGINEERING DIVISION
530.225.4170
530.245.7024

NOTICE OF INTENT TO ADOPT
A MITIGATED NEGATIVE DECLARATION

The City of Redding (City) is proposing the Westside Sewer Interceptor Phase 3 Project (project). The project is located between Cascade Park and the Clear Creek Wastewater Treatment Plant, near the Crown Estates neighborhood in Redding (Shasta County), California. The purpose of this project is to provide additional capacity to accommodate existing and planned development wastewater flows.

The proposed project would provide 4,200 linear feet of new wastewater pipeline, 2 concrete junction structures, and 10 new maintenance holes. In order to construct the project, the pipeline would be installed across Clear Creek, Olney Creek, and one unnamed channel. The project will require earthwork, vegetation removal, and wastewater utility installation. The majority of work will occur on City property; however, temporary permits to enter may be needed for staging areas and creek crossings. It is anticipated that construction would take two seasons and is planned for 2023.

The City of Redding Public Works Department has reviewed the project and, based upon the whole record before the City (including the Initial Study and any supporting documentation), is recommending that a Mitigated Negative Declaration be adopted pursuant to the California Environmental Quality Act.

All interested persons are invited to comment in writing on the draft Mitigated Negative Declaration to the Public Works Department prior to the end of the public review period. **The comment period begins November 18, 2021 and ends December 19, 2021.** The City Council will consider adopting the Mitigated Negative Declaration at 6 p.m., Tuesday, January 18, 2022, in the City Council Chambers located at 777 Cypress Avenue, Redding, California. Subsequent notification will be made for all public hearings scheduled for consideration of the environmental document and project approval. Adoption of the Mitigated Negative Declaration will conclude the environmental review of the project.

The Initial Study, information concerning the project, and the draft Mitigated Negative Declaration are available for public review from 8 a.m. to 5 p.m. weekdays at the Public Works Department, 777 Cypress Avenue, Redding, CA 96001 (telephone 530-225-4170). The documents can also be viewed online at: http://www.cityofredding.org/departments/public-works/environmental-management. For more information, please contact Amber Kelley, Environmental Compliance Manager, at the above address.

Amber Kelley
Environmental Compliance Manager

Dated: November 12, 2021

MITIGATED NEGATIVE DECLARATION

WESTSIDE SEWER INTERCEPTOR PHASE 3 PROJECT (STATE CLEARINGHOUSE NO. 2021XXXXXX)

SUBJECT

Westside Sewer Interceptor Phase 3 Project

PROJECT DESCRIPTION

The City of Redding (City) is proposing to construct a new 48-inch diameter trunk sewer pipeline to increase the wastewater collection system hydraulic capacity. The existing 42-inch diameter pipeline conveys wastewater from a diversion structure near Girvan Road to the Clear Creek Wastewater Treatment Plant (CCWWTP). The proposed new pipeline would provide additional capacity to accommodate existing and planned development wastewater flows. The additional capacity would also significantly reduce the risk of sanitary sewer overflows during wet weather events.

The new 4,200-foot pipeline would begin at the existing diversion structure located at Girvan Road and terminate at the CCWWTP's existing headworks pump station wet well along the south bank of Clear Creek. The pipeline would be sized to provide a maximum design flow of 30 million gallons per day to serve the existing and planned development in the area. The pipeline includes a 20-foot-wide by 20-foot-long by 20-foot-deep concrete junction structure at the north end, seven maintenance holes placed approximately every 600 feet along the alignment, and a second 20-foot-wide by 20-foot-long by 16-foot-deep concrete junction structure approximately 100 feet north of the Clear Creek crossing. One new maintenance hole would be constructed on the existing 42-inch pipe to improve inspection and maintenance access (located near the end of Garnet Ct.). Two new maintenance holes would be constructed to connect existing sewer lines that serve nearby properties to both the existing and new pipelines. Construction is scheduled to start in the summer of 2023 and the project is anticipated to take approximately 24 months.

ENVIRONMENTAL SETTING

The project area occurs on developed land within the City of Redding including Cascade Park and the CCWWTP. The project area also crosses undeveloped land adjacent to the Sacramento River which includes valley oak woodlands, riparian habitat, Olney Creek, Clear Creek and an unnamed channel between Cascade Park and the CCWWTP. Surrounding land uses include residential to the north, west, and south. The Sacramento River runs along the east side of the project area.

FINDINGS AND DETERMINATION

The City of Redding conducted an Initial Study (attached) that determined that the proposed project could have significant environmental effects on biological resources and water quality. Use of specific mitigation measures identified below will avoid or mitigate the potentially significant environmental effects identified, and the preparation of an environmental impact report will not be required. If there are

substantial changes that alter the character or impacts of the proposed project, another environmental impact determination will be necessary.

Prior to approval of the project, the lead agency may conclude, at a public hearing, that certain mitigation measures identified in the Mitigated Negative Declaration are infeasible or undesirable. In accordance with CEQA Section 15074.1, the lead agency may delete those mitigation measures and substitute other measures that it determines are equivalent or more effective. The lead agency would adopt written findings that the new measure(s) is equivalent or more effective in mitigating or avoiding potential significant effects and that it would not cause any potentially significant effect on the environment.

1. Based on the whole record (including the Initial Study and any supporting documentation) and the mitigation measures incorporated into the project, the City of Redding has determined that there is no substantial evidence that the project will have a significant effect on the environment.

2. The Mitigated Negative Declaration, with its supporting documentation, reflects the independent judgment and analysis of the lead agency, which is the City of Redding.

DOCUMENTATION

The attached Initial Study documents the reasons to support the above determination.

MITIGATION MEASURES

The following mitigation measures will be incorporated into the project to minimize potential effects on biological resources and water quality:

MM-1. Equipment operating within the stream channels will use non-toxic vegetable oil for operating hydraulic equipment instead of conventional hydraulic fluids.

MM-2. The City will hire a qualified water quality professional to monitor turbidity and suspended sediment levels at locations 50 feet upstream and 300 to 500 feet downstream from construction during any in-channel activities in Olney Creek or Clear Creek, when and where work has the greatest likelihood to affect water quality. Water quality monitoring will occur hourly throughout each day during in-channel excavation. A detailed turbidity monitoring work plan will be prepared by the Contractor for submittal to the City. Turbidity levels caused by construction activities and measured downstream from the work area will remain within the objectives defined in the Basin Plan. Turbidity, settleable solids, and other water quality results will be reported in real-time via automated dataloggers, or at least daily, to the City construction manager and relayed to the National Marine Fisheries Service (NMFS), as deemed necessary by a qualified biologist and/or the City. In conjunction with daily turbidity monitoring, if it becomes necessary to manage turbidity to meet water quality objectives, silt curtains will be installed under the supervision of a qualified biologist immediately downstream of in-water work areas to minimize the amount of turbid water escaping from the construction site and to prevent suspended sediment from drifting outside of the immediate project work site. Silt curtains will be kept in proper working order and allow fish that may enter the curtained area adequate room to exit the area freely.

MM-3. Seasonal work periods for the three channels will be adhered to as follows:

- Clear Creek: September 1 through October 31
- Olney Creek and the unnamed channel: July 1 to November 1

MM-4. To reduce the potential for adverse effects on listed species due to crushing or other impacts during in-channel construction in Clear Creek, Olney Creek, and the unnamed channel prior to beginning construction, the areas will be visually inspected for fish presence by a qualified biologist. If presence of fish is noted, they will be herded away from the work area using seines if possible. Block nets will be installed immediately behind seine hauls to exclude fish from re-entering work areas during in-channel work. If cofferdams or turbidity curtains must completely enclose and isolate work areas, then fish salvage and relocation to outside of the work areas will be conducted by qualified fisheries biologists. Additionally, during excavation and placement of fill materials within the active channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile fish away from the work area. All temporary stream diversion and backfill material within the channel will consist of washed material that meets the California Department of Transportation Gravel Cleanliness Specification #85, which is based on criteria meeting Clean Water Act standards.

MM-5. In Clear Creek, most of the trenching and pipeline installation will occur within semi-isolated coffer-dammed work areas to manage upstream shoring and downstream turbidity, but would not be completely enclosed, allowing any fish entering the work area to readily exit it. However, in the event that some portions of the in-channel pipeline installation need to be completely isolated and dewatered for pipe joining and concrete curing, fish salvage and relocation outside of the cofferdam enclosures would be performed by an NMFS and California Department of Fish & Wildlife (CDFW) approved biologist.

MM-6. Any withdrawals/movement of water from creek channels will use pump intakes with screens meeting NMFS and CDFW criteria to prevent entrainment injury and impingement of fish. The NMFS Anadromous Salmonid Passage Facility Design (2011) guidelines include specific criteria for end-of-pipe screens and screen materials for use in streams and rivers:

- Location: If applicable, end-of-pipe screens must be placed in locations with sufficient ambient velocity to sweep away debris removed by the screen face or designed in a manner to prevent debris re-impingement and provide for debris removal.
- Escape Route: A clear escape route should exist for fish that approach the intake volitionally or otherwise.
- Screen Material Guidelines: The percent open area for any screen material must be at least 27%. Circular screen face openings must not exceed 3/32-inch diameter. Perforated plate must be smooth to the touch with openings punched through in the direction of approaching flow. Slotted or rectangular screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction. Square screen face openings must not exceed 3/32 inch on a side. The screen material must be corrosion resistant and sufficiently durable to maintain a smooth uniform surface with long term use. Other components of the screen facility (e.g., seals) must not include gaps greater than the maximum screen opening defined above.

MM-7. All equipment used for off-road construction activities will be weed free prior to entering the project area. Construction equipment will be properly disinfected or cleaned according to guidance

provided by the State of California Aquatic Invasive Species Management Plan (CDFG 2008) prior to in-channel work to prevent the spread of aquatic invasive species.

MM-8. Mature trees such as cottonwoods, alders, and valley oaks located in SRA habitat near construction areas will be flagged and avoided as much as possible during construction. Vegetation may be trimmed only as needed.

MM-9. The construction limits will be clearly identified prior to construction and all areas containing elderberry shrubs to be avoided during construction will be fenced off or flagged. For elderberry shrubs occurring within or immediately adjacent to work locations, a 20-foot avoidance buffer will be established around the driplines of the shrubs to help protect the shrubs and their root zones during project activities. The avoidance buffers will be maintained for the duration of work activities in the area. Additionally, no trimming of elderberry shrubs will occur, and no removal of vegetation within the dripline of an elderberry shrub will occur.

MM-10. To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of VELB (March-July).

MM-11. A qualified biologist will perform preconstruction surveys for western pond turtle and their nests prior to initiation of work in riparian habitat or streams, including vegetation removal. If western pond turtles or their nests are encountered in the project area during construction and could be harmed by construction activities, work will stop immediately in the area and CDFW will be notified. Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the construction impact zone.

MM-12. If construction occurs during the nesting season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey to locate active bird nests. The pre-construction survey will be performed no more than 7 days prior to the implementation of construction activities. If a lapse in construction activities occurs for 7 days or longer, another pre-construction survey will be performed. If an active nest is found, a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

MM-13. To the extent practicable, removal of large trees with cavities, crevices, or snags shall occur before maternity colonies form (i.e., prior to March 1) or after young are volant (i.e., after August 15). If construction (including the removal of large trees) occurs during the non-volant season (March 1 through August 15), a qualified biologist shall conduct a pre-construction survey of the project area to locate maternity colonies and identify measures to protect the colonies from disturbance. The pre-construction survey will be performed no more than seven days prior to the implementation of construction activities. If a lapse in construction activities for seven days or longer occurs between those dates, another pre-construction survey will be performed. If a maternity colony is found a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

M-14. To the extent practicable, removal of vegetation will occur outside of the ring-tailed cat maternal denning period (May 1–June 30). If vegetation removal is to occur during the maternal denning period (May 1–June 30), a qualified biologist will conduct a preconstruction survey of the project area to locate maternity dens. The preconstruction survey will be performed no more than seven days prior to the

vegetation removal. If a maternity den is found, a qualified biologist (in consultation with the City and CDFW) will develop measures to protect the maternity den from disturbance.

MM-15. Any trees greater than 6 inches diameter at breast height, determined to be contributing to shaded riverine aquatic habitat that are removed during project activities will be replaced on site, but outside of the permanent utility corridor The amount of habitat created/restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant impacted).

Woody riparian vegetation greater than 6 inches diameter at breast height, that does not contribute to shaded riverine aquatic habitat, that is removed during project activities would be compensated for through the establishment of onsite mitigation areas outside the permanent easement, the purchase of credits from a mitigation bank or in-lieu fee program, or a combination of the three. The amount of habitat created or restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant permanently impacted). Any onsite mitigation will be maintained and monitored for a period of three years.

MM-16. Temporary impacts to wetlands and perennial stream will consist of returning the wetland areas to pre-construction grade and stream banks to pre-construction contours. Permanent impacts to riparian wetland will be mitigated at a 3:1 ratio through the purchase of wetland credit at an approved mitigation bank, or through the purchase of in-lieu fee credit.

PUBLIC REVIEW DISTRIBUTION

Draft copies or notice of this Mitigated Negative Declaration were distributed to:

- State Clearinghouse
- Shasta County Clerk
- California Department of Transportation District 2
- California Department of Fish and Wildlife District 1
- Central Valley Regional Water Quality Control Board
- California Native Plant Society
- California Highway Patrol
- Native American Heritage Commission
- State Office of Historic Preservation
- All property owners within 300 feet of the property boundary

PUBLIC REVIEW

(X) Draft document referred for comments 11/18/2021–12/19/2021
Date

( ) No comments were received during the public review period.

( ) Comments were received but did not address the draft Mitigated Negative Declaration findings or the accuracy/completeness of the Initial Study. No response is necessary. The letters are attached.

( ) Comments addressing the findings of the draft Mitigated Negative Declaration and/or accuracy or completeness of the Initial Study were received during the public review period. The letters and responses follow (see Attachment D, Response to Comments).

Copies of the Mitigated Negative Declaration, the Initial Study, documentation materials, and the Mitigation Monitoring Program may be obtained at the Public Works Department, Engineering Division, City of Redding, 777 Cypress Avenue, Redding, CA 96001. Contact: Amber Kelley, Environmental Compliance Manager, (530) 225-4046 or akelley@cityofredding.org.

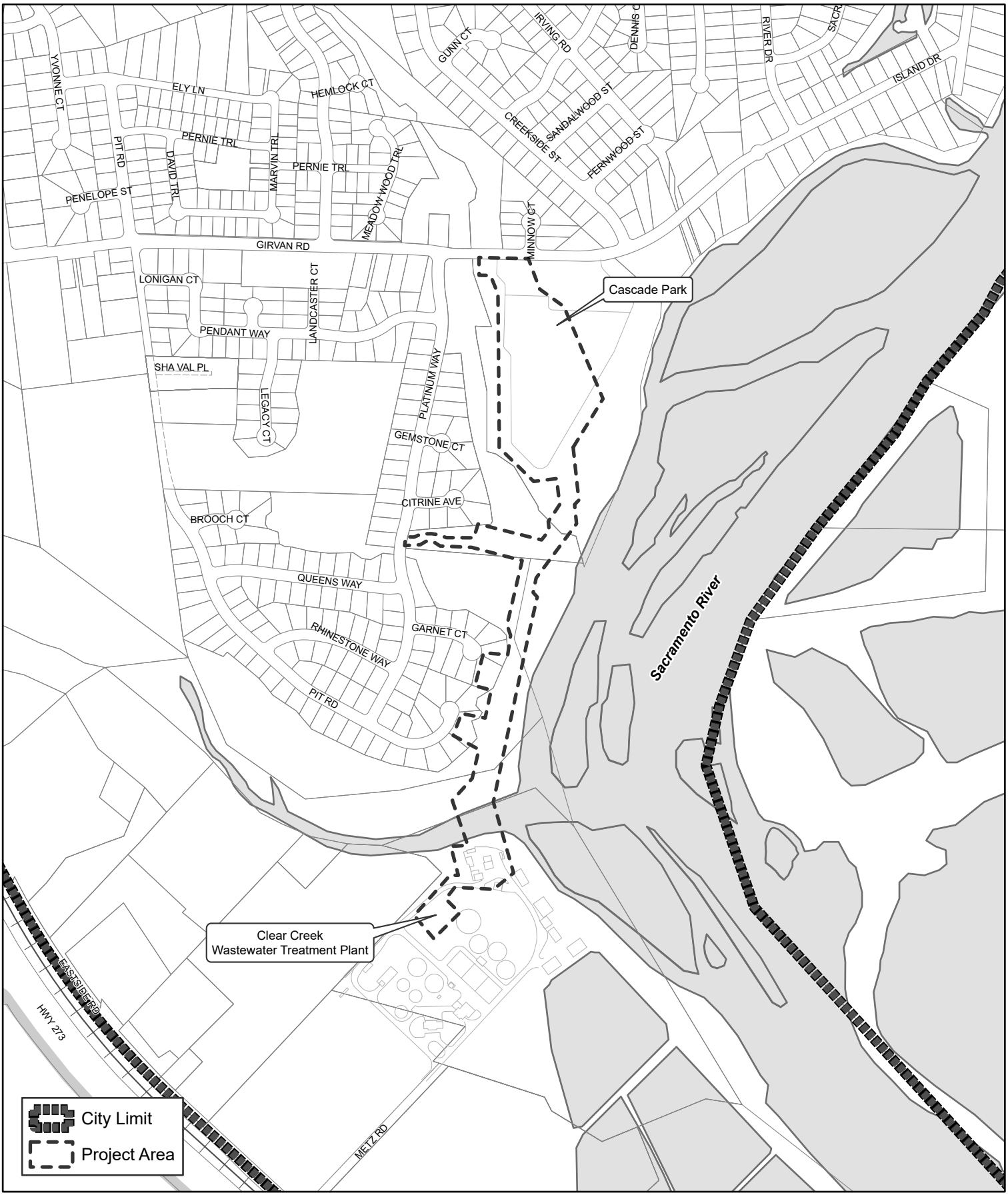
Date of
Draft Report: November 12, 2021 By: Amber Kelley
Name/ Title: Amber Kelley
Environmental Compliance Manager

Date of
Final Report _____

Attachments:
A. Project Location Map
B. Initial Study
C. Mitigation Monitoring and Environmental Commitment Program
D. Comments and Response to Comments (if any)

ATTACHMENT A

Project Location Map



N W E S	**GIS DIVISION** INFORMATION TECHNOLOGY DEPARTMENT	**LOCATION MAP**	MTG. DATE:
	DATE PRODUCED: NOVEMBER 15, 2021	Westside Sewer Interceptor Phase 3 Project City of Redding	ITEM:
	0 200 400 Feet		ATTACHMENT:
P:\Environmental Management\ProProjects\WestsideSewerProject.aprx			

ATTACHMENT B

Initial Study

CALIFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY-DRAFT

Westside Sewer Interceptor Phase 3

Prepared by:

CITY OF REDDING
Public Works Department
777 Cypress Avenue
Redding, California 96001

November 2021

CITY OF REDDING
ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Westside Sewer Interceptor Phase 3 (proposed project)

2. **Lead agency name and address:**

   CITY OF REDDING
   Public Works Department
   777 Cypress Avenue
   Redding, CA 96001

3. **Contact Person and Phone Number:** Amber Kelley, Environmental Compliance Manager, (530) 225-4046

4. **Project Location:**

   The **proposed project** is in southern Redding, Shasta County, California. The project area begins near Girvan Road, just east of Olney Creek in Cascade Park, and extends south along the east side of the Crown Estates neighborhood toward the Clear Creek Wastewater Treatment Plant (CCWWTP) (see Figures 1a and 1b) (all figures are located in Attachment A at the end of this report). The approximately 12-acre project area encompasses a 60- to 100-foot-wide corridor along the new pipeline alignment and four potential staging areas varying from 0.4 to 0.6 acres each. The project area includes crossings of Olney Creek, an unnamed local drainage channel, and Clear Creek.

   The project area is located in the Enterprise, California, 7.5-minute U.S. Geological Survey (USGS) quadrangle in Township 30N, Range 5W, Section 30. The starting point of the project is located at approximately 40°30'46.28"N and 122°22'6.70"W.

5. **Applicant's Name and Address:**

   CITY OF REDDING
   Public Works Department
   777 Cypress Avenue
   Redding, CA 96001

   Representative's Name and Address:

   Amber Kelley
   CITY OF REDDING
   Public Works Department
   777 Cypress Avenue
   Redding, CA 96001

6. **General Plan Designation:**

   - Greenway (GWY)
   - Parkland (PK)
   - Residential – 2 to 3.5 Dwelling Units Per Acre (2 to 3.5)

7. Zoning:

- Public Facility (PF)
- Residential Single Family 3 Unit Per Acre (RS-3)
- Open Space (OS)

8. Description of Project:

The City of Redding (City) is proposing to construct a new 48-inch diameter trunk sewer pipeline to increase the wastewater collection system hydraulic capacity. The existing 42-inch diameter pipeline conveys wastewater from a diversion structure near Girvan Road to the CCWWTP. The proposed new pipeline would provide additional capacity to accommodate existing and planned development wastewater flows. The additional capacity would also significantly reduce the risk of sanitary sewer overflows during wet weather events.

The new 4,200-foot pipeline would begin at the existing diversion structure located at Girvan Road and terminate at the CCWWTP's existing headworks pump station wet well along the south bank of Clear Creek. The pipeline would be sized to provide a maximum design flow of 30 million gallons per day to serve the existing and planned development in the area.

The pipeline includes a 20-foot-wide by 20-foot-long by 20-foot-deep concrete junction structure at the north end, seven maintenance holes placed approximately every 600 feet along the alignment, and a second 20-foot-wide by 20-foot-long by 16-foot-deep concrete junction structure approximately 100 feet north of the Clear Creek crossing. One new maintenance hole would be constructed on the existing 42-inch pipe to improve inspection and maintenance access (located near the end of Garnet Ct.). Two new maintenance holes would be constructed to connect existing sewer lines that serve nearby properties to both the existing and new pipelines (see Figures 1a and 1b).

Construction for the entire proposed project is anticipated to take approximately 24 months and would start in summer 2023 once all environmental approvals have been obtained. Generally, construction would be limited to 7AM to 7PM on weekdays. Special hours or extra workdays would be considered for special circumstances. Construction access would be primarily through Girvan Road, Platinum Way, and Pit Road.

Staging of equipment and materials for construction would be within the temporary and permanent easements along the proposed pipeline alignment and in designated areas on City-owned property. Four potential staging areas (varying from 0.4 to 0.6 acre each) have been identified. The contractor would coordinate with the property owner to obtain authorization for the staging area.

The Olney Creek and unnamed channel crossings would be constructed using cofferdams upstream and downstream of each crossing, diverting creek flows via pump or gravity flow, dewatering the construction area, and installing the new pipeline using open-cut trenching (Figures 2 and 3). Once construction is complete, the cofferdams would be removed, and the streambed and banks would be restored. The anticipated construction duration for these two creek crossings is up to 40 days each.

The Clear Creek crossing would be constructed without significant dewatering of the construction area. The banks would be excavated to provide a gentle ramp down to the water's edge. A combination of impervious and porous cofferdams would be installed upstream and downstream of the pipeline alignment. The cofferdams would prevent the migration of solids from the construction area but are not intended to keep the excavated area completely free of water. The cofferdams would consist of large concrete blocks that rest on the creek bottom or driven piles, or a combination of both. Driven piles may be installed via hammer, vibration, or pushed into place.

Pipe installation in Clear Creek would be accomplished in two phases consisting of construction from about the center of the channel to the north bank and then reversing to the south bank. During construction, the portion of the creek left undisturbed would accommodate the natural flow of Clear Creek and allow for fish passage.

An elevated work platform would be constructed across the creek and adjacent to the cofferdam area (Figures 4 and 5). The platform would be held up by concrete blocks resting on the creek bottom. The elevated platform would provide a working area for the excavator and haul trucks. The isolated portion of the streambed would be excavated for pipe installation and then backfilled with specialized concrete that can be installed underwater. Select segments of the trench may be isolated with impervious cofferdams to reduce water intrusion and promote successful joining of pipe segments and backfilling with specialized concrete. The concrete backfill would be covered with washed material that meets the California Department of Transportation Gravel Cleanliness Specification #85, which is based on criteria meeting Clean Water Act standards to restore the bed to the original streambed elevation. The cofferdam would be disassembled and moved to the other half of the creek and the process repeated. The banks would be restored at the end of construction activities. Anticipated duration for this proposed creek crossing is up to 90 days.

9. Surrounding Land Uses and Setting:

Surrounding land uses comprise a public park (Cascade Park), single family residences to the west, and the CCWWTP to the south.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- State Historic Preservation Officer
- California Department of Fish and Wildlife
- California Regional Water Quality Control Board
- Central Valley Flood Protection Board
- City of Redding

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The City consulted with the Native American Heritage Commission (NAHC) and local Native American groups and individuals pursuant to Public Resources Code Section 21080.3. This consultation included contacting the local Native American individuals identified by the NAHC via letters, emails, and follow-up phone calls. One local Native American tribe responded, and consultation is ongoing. Additionally, NAHC conducted a review of its Sacred Lands database for culturally significant properties and responded that there are no records for the project area.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project.

	Aesthetics		Agricultural and Forestry Resources		Air Quality
X	Biological Resources		Cultural Resources		Energy
	Geology/Soils		Greenhouse Gas Emissions		Hazards & Hazardous Materials
X	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
	Noise		Population/Housing		Public Services
	Recreation		Transportation		Tribal Cultural Resources
	Utilities/Service Systems		Wildfire	X	Mandatory Findings of Significance

DETERMINATION (TO BE COMPLETED BY THE LEAD AGENCY)

Based on the initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR of NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Copies of the Initial Study and related materials and documentation may be obtained at the Engineering Division of the Public Works Department, 777 Cypress Avenue, Redding, CA 96001. Contact Amber Kelley at (530) 225-4046 or akelley@cityofredding.org.

Amber Kelley
Environmental Compliance Manager
Public Works – Engineering

Date

EVALUATION OF ENVIRONMENTAL IMPACTS

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities/Service Systems
- Wildfire
- Mandatory Findings of Significance

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the State of California's *CEQA Guidelines* and used by the City of Redding in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to analyze the development's impacts more fully and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No Impact.** The development will not have any measurable environmental impact on the environment.

- **Less-Than-Significant Impact.** The development will have the potential for impacting the environment although this impact will be below established thresholds that are significant.

- **Less-Than- Significant with Mitigation Incorporated.** The development will have the potential to generate impacts which may be considered as a significant effect on the environment; however, mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.

- **Potentially Significant Impact.** The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less-than-significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required so that impacts may be avoided or reduced to insignificant levels.

Prior environmental evaluations applicable to all or part of the project site:

- Biological Resources Assessment
- Cultural Resources Inventory Report
- Biological Assessment – Valley Elderberry Longhorn Beetle
- Biological Assessment/Essential Fish Habitat Assessment
- Wetland Delineation
- Tree Assessment and Characterization Report

List of Attachments/References

Appendix A. Figures
Figure 1 – Project Location and Design Features
Figure 2 – Olney Creek Crossing
Figure 3 – Unnamed Channel Crossing
Figure 4 – Clear Creek Crossing
Figure 5 – Clear Creek Work Bridge
Figure 6 – Project Impacts – Land Cover Types and Vegetation Communities
Figure 7 – Project Impacts – Potential Waters of the United States

I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views the site and its surroundings (public views are those that are experience from publicly accessible vantage point).? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

a) During the construction period, construction workers, vehicles, and equipment, including heavy machinery, would be present and visible from nearby residents and recreationalists at Cascade Park. Construction activities would include excavation of the pipeline alignment and junction structures, placement of project features, and backfill and restoration of disturbed areas. The majority of the project features would be underground. Once construction is completed, the project area would be restored to pre-project conditions. Above-ground features would include access hatches and manholes; however, these features would be situated along the right-of-way and would not be noticeable to park users or residents in the area. The proposed project would not represent a significant change to scenic vistas or the overall scenic quality of the area. The impact would be less than significant.

b) The proposed project is not located near a state-designated scenic highway (California Department of Transportation 2019) and would, therefore, have no impacts.

c) The proposed project would be compatible with the existing visual character of the property and its surroundings. Project components would be consistent with the surrounding visual environment, which has been subjected to urban development and recreational open space uses. Further, construction staging areas would be temporary, and the area would be restored to pre-project conditions: natural regrowth of vegetation would be allowed to occur. The proposed project would not conflict with the City's goal to maintain a "proper balance between development areas and the natural environment" (City of Redding 2009); therefore, impacts of

the proposed project on the existing visual character and quality of existing views would be less than significant.

d) Construction of the proposed project may involve the use of temporary safety and security lighting in staging areas. Temporary construction lighting will comply with the City's Zoning Ordinance light standards that require light shielding (City of Redding 2019). Although there are a few homes adjacent to parts of the project area, none would be impacted using these types of lights. Construction equipment, machinery, and bright colored traffic control signage may temporarily increase light and glare in the project area during construction. Operational lighting would not be required for the proposed project. Impacts on day or nighttime views in the area because of project lighting would be less than significant.

Documentation

- California Department of Transportation. 2019. California Scenic Highway Mapping System – Shasta County. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. June.
- City of Redding. 2019. Municipal Code – Zoning Ordinance Chapter 18.40.090. March.
- City of Redding. 2009. General Plan – Community Development and Design Element.

Mitigation

No mitigation required.

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural, Land Evaluation and Site Assessment Mode (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided bin Forest Protocols adopted by the California Air Resources Board. Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Convert Prime Farmland, Unique Farmland, or Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural, Land Evaluation and Site Assessment Mode (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided bin Forest Protocols adopted by the California Air Resources Board. Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a-e) The project area does not include any designated farmland or timberlands. According to the California Department of Conservation's Farmland Mapping and Monitoring Program, no lands within the project area are under Williamson Act contracts and no lands are mapped as "Important Farmlands." The proposed project would not convert any farmland to non-agricultural use, or any forestland to non-forest use; therefore, there would be no impact.

Documentation

- City of Redding. 2009. General Plan – Natural Resources Element.
- City of Redding. 2019. GIS Parcel and Zoning Map Viewer.
- California Department of Conservation. 2016. Farmland Mapping and Monitoring Program, Shasta County Important Farmland.

Mitigation

No mitigation required.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Discussion

a,b) City standards implemented through the Grading Ordinance and Uniform Building Code require implementation of conservation measures and best management practices (BMPs) that contribute to achieving the City's goal of at least a 20% reduction in emissions or the best reduction otherwise feasible. The following standard conservation measures and BMPs will be used during construction to limit dust and particulate matter less than 10 microns in diameter (PM_{10}) emissions:

- **AQ-1.** Nontoxic soil stabilizers shall be applied according to manufacturer's specification to all inactive construction areas.
- **AQ-2.** All grading operations shall be suspended when winds (as instantaneous gusts) exceed 20 miles per hour.
- **AQ-3.** Water all stockpiles, access roads, and disturbed or exposed areas, as necessary, to prevent airborne dust.
- **AQ-4.** Pursuant to the California Vehicle Code (Section 23114(e)(4)) (California Legislative Information 2016), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- **AQ-5.** All public roadways used by the project contractor shall be maintained free from dust, dirt, and debris caused by construction activities. Streets shall be swept at the end of the day if visible soil materials are carried onto adjacent public paved roads.

Shasta County, including the far northern Sacramento Valley, currently exceeds the state's ambient standards for ozone (smog) (CARB 2019). Consequently, these pollutants are the focus of local air quality policy, especially when related to land use and transportation planning. Even with application of measures to reduce emissions for individual projects, cumulative impacts are unavoidable when ozone emissions are involved. For example, the primary source of emissions contributing to ozone is from vehicles. Any project that generates vehicle trips has the potential to incrementally contribute to the problem. The Environmental Impact Report for the City's *General Plan* acknowledged this dilemma; and as a result, the City Council adopted *Findings* and a *Statement of Overriding Considerations* for impacts on air quality resulting from growth supported under the General Plan (City of Redding 2009).

Construction equipment would result in limited temporary emissions of Reactive Organic Gases (ROG) and oxides of nitrogen (NOx), which are ozone precursors, and inhalable PM_{10}. The proposed project would be under construction for approximately 24 months. Because the proposed project is a pipeline with a relatively narrow linear footprint requiring limited construction activities and equipment for its construction, it would be classified as a minor project in accordance with the City's General Plan findings. The adherence to standards and BMPs set forth by the City further illustrates the size and scope of construction activities that would result in unmitigated emissions less than the 25 pounds per day of NOx, 25 pounds per day of ROG, and 80 pounds per day of PM_{10} Level "A" mitigation thresholds identified as part of the City's General Plan. The proposed project would be consistent with the City's emission-reduction goals of 20 to 25% established in the Air Quality Element of the General Plan.

The proposed project would have no impact on air quality plans or policies. The proposed project's cumulative contribution to criteria pollutants in a non-attainment area would be less than significant with the use of the conservation measures and BMPs (AQ-1 through AQ-6) previously described).

c,d) Construction vehicles would generate fugitive dust and diesel exhaust emissions. There are approximately 40 residences that would be adjacent to construction activities with several that could be as close as 100 feet from the construction area. Additionally, recreational users at Cascade Park could be considered sensitive receptors; however, these receptors would have limited exposure since use of the park occurs in intermittent phases (rather than prolonged exposure). Impacts on the neighboring residents as well as park users because of construction emissions would be temporary, localized, and minor. Construction activities would occur in a linear nature, and no sensitive receptors would be substantially affected for prolonged periods of time. Adherence with City specifications outlined in BMPs AQ-1 through AQ-6 would further reduce overall emissions exposure to residents and park users. No operational emissions, including odor, would result from the proposed project. There are no other sensitive receptors (e.g., hospitals, schools) in the immediate project vicinity. Therefore, impacts would be less than significant.

Documentation

- California Air Resources Board (CARB). 2019. Area Designation Maps/State and National. Accessed at: https://www.arb.ca.gov/desig/adm/adm.htm. June.
- City of Redding. 2009. General Plan, Air Quality Element.

- City of Redding. 2000. CEQA Findings of Fact and Statement of Overriding Considerations for the City of Redding General Plan Final Environmental Impact Report, as adopted by the Redding City Council on October 3, 2000, by Resolution 2000-166.
- Shasta County Air Quality Management District. 2003. Protocol for Review, Land Use Permitting Activities, Procedures for Implementing the California Environmental Quality Act. November.
- Shasta County Air Quality Management District. 2003. Environmental Review Guidelines, Procedures for Implementing the California Environmental Quality Act. November.

Mitigation

No mitigation required.

IV. BIOLOGICAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local of regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community, Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

Discussion

a) A biological resources assessment report (Stantec 2020a), included as Attachment B, was prepared to examine biological resources and special-status species that occur or have the potential to occur based on habitat conditions in the project area and vicinity. Following is a summary of special-status species with the potential to occur within the project area.

Special-status Plants

Based on database and information review, habitat for eight special-status plant species having California Rare Plant Rank (CRPR) designations including one state listed plant is present in the project area and vicinity:

- Watershield (*Brasenia schreberi*), CRPR 2B.3[1]
- Pink creamsacs (*Castilleja rubicundula var. rubicundula*), CRPR 1B.2
- Silky cryptantha (*Cryptantha crinita*), CRPR 1B.2
- Boggs lake hedge-hyssop (*Gratiola heterosepala*), CRPR 1B.2, state listed as endangered
- Red Bluff dwarf rush (*Juncus leiospermus var. leiospermus*), 1B.1
- Santa Lucia dwarf rush (*Juncus luciensis*), 1B.2
- Ahart's paronychia (*Paronychia ahartii*), 1B.2
- Sanford's arrowhead (*Sagittaria sanfordii*), 1B.2

Based on botanical surveys conducted on June 1 and June 27, 2018, no special-status plants were found to occur within the project area (Stantec 2020a); therefore, implementation of the proposed project would not impact special-status plant species.

Special Status Fish

The following federal and state listed fish species have the potential to occur in or adjacent to the project area:

- Central Valley steelhead distinct population segment (DPS) (*Oncorhynchus mykiss irideus*)
  federally listed as threatened, critical habitat

[1] California Rare Plant Ranks:
1B Plants rare, threatened, or endangered in California and elsewhere.
2B Plants rare, threatened, or endangered in California but more common elsewhere.
xx.1 Seriously threatened in California.
xx.2 Moderately threatened in California.
xx.3 Not very threatened in California.

- Central Valley spring-run evolutionary significant unit (ESU) Chinook salmon (*Oncorhynchus tshawytscha*)
  federally listed as threatened, critical habitat, state listed as threatened
- Pacific Southern DPS green sturgeon (*Acipenser medirostris*)
  federally listed as threatened, state species of special concern
- Sacramento River Winter-run ESU Chinook salmon (*Oncorhynchus tshawytscha*)
  federally listed as endangered, critical habitat, state listed as endangered
- Central Valley fall/late-fall run Chinook salmon ESU (*Oncorhynchus tshawytscha*)
  state species of special concern
- Hardhead (*Mylopharodon conocephalus*)
  state species of special concern
- River lamprey (*Lampetra ayresii*)
  state species of special concern

The proposed project crosses Clear Creek and Olney Creek, both of which are tributaries to the Sacramento River and provide aquatic habitat for special-status fish. Olney Creek is seasonally suitable for federally listed salmonids; however, it is mainly used for adult and juvenile migration. In contrast, Clear Creek is perennial with flows controlled by releases at Whiskeytown Dam and provides year-round suitable adult migration and spawning habitats for listed salmonids as well as juvenile rearing and migration habitats. Green sturgeon is unlikely to occur directly in the project area; however, they are known to occur in the mainstem of the Sacramento River upstream and downstream of the project area.

A Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) was prepared to assess the potential for the proposed project to impact listed fish (Stantec 2020b). Potential impacts on listed salmonids and sturgeon caused by construction activities include, but are not limited to, spills and discharges of hazardous materials, mainly fuels, lubricants, and uncured concrete from construction activities; introduction of invasive species; increases in turbidity from in-channel activities (installation of coffer dams, work platforms, trench excavation, and pipe installation); removal of riparian vegetation and bank disturbances; and a low potential for direct physical injury during installation of work platform supports and cofferdams, and from fish salvage measures (needed only if complete enclosure of work areas with cofferdams is required).

Impacts on listed fish are not anticipated to occur during the portion of work that would be conducted in Olney Creek and the unnamed channel as the proposed in-channel construction window (July 1 to November 1) occurs at a time when high-water temperature and low creek flows make both Olney Creek and the unnamed channel unsuitable to support listed fish. Clear Creek has the ability to support listed fish year-round and the portion of work that would occur in Clear Creek could impact special-status fish species. The BA/EFHA findings conclude that the proposed project may affect, and is likely to adversely affect Central Valley spring-run ESU Chinook salmon, Sacramento River winter-run ESU Chinook salmon, and Central Valley DPS steelhead; and may affect, is not likely to adversely affect the southern DPS green sturgeon. The findings also conclude that the proposed project may affect, is likely to adversely affect, designated critical habitat for the Sacramento River winter-run ESU Chinook salmon, the Central Valley spring-run ESU Chinook salmon, the Central Valley DPS steelhead, and the southern DPS green sturgeon. Additionally, it is determined that the

Proposed Action may adversely affect EFH within the project area for Pacific salmon. As the federal lead agency for the proposed project, the U.S. Army Corps of Engineers has reviewed the BA/EFHA and will initiate Section 7 consultation with the National Marine Fisheries Service.

Mitigation Measures MM-1 through MM-8, as well as MM-15 and MM-16 will be implemented to avoid or minimize impacts on special-status fish and/or their habitat during construction. With implementation of the measures, impacts on listed fish would be less than significant. In addition, standard conservation measures and BMPs HAZ-1 through HAZ-5 (included in Section VIII, Hazards and Hazardous Materials) and BIO-1 through BIO-3 are incorporated into all projects that require earthwork and work near streams.

BIO-1. A Stormwater Pollution Prevention Plan (SWPPP), as required by the City of Redding Stormwater Quality Management and Discharge Control Ordinance, will be prepared to address BMPs that will be used to prevent erosion and sediment loss within the project site. BMPs such as silt fence, mulching and seeding, and straw wattles will be placed where needed to prevent sediment from leaving the site during and after construction.

BIO-2. Appropriate sediment control measures (e.g., silt fences, straw wattles) shall be in place prior to the onset of construction activities near waters of the United States and in project areas where there is a potential for surface runoff to drain into waters of the United States. Sediment control measures shall be monitored and maintained until construction activities have ceased.

BIO-3. High visibility fencing, flagging, or markers will be installed along the edges of the work zone near waters of the United States and riparian areas to prevent unauthorized access.

Special-status Wildlife

The following federal and state listed wildlife species have the potential to occur in or adjacent to the project area:

- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
  federally listed as threatened.
- Western pond turtle (*Emys marmorata*)
  state species of special concern
- Bald Eagle (*Haliaeetus leucocephalus*)
  federally listed as delisted, state listed as endangered, state listed as fully protected.
- White-tailed kite (*Elanus leucurus*)
  state listed as fully protected
- Yellow-breasted chat (*Icteria virens*)
  state species of special concern
- Yellow warbler (*Dondroica petechia*)
  state species of special concern
- Pallid bat (*Antrozous pallidus*)
  state species of special concern
- Western red bat (*Lasiurus blossevilla*)
  state species of special concern

- Ring-tailed cat (*Bassariscus astutus*)
  state listed as fully protected

Valley Elderberry Longhorn Beetle (VELB). Elderberry shrubs were observed in the project area and vicinity during the botanical survey. A total of 74 elderberry stems greater than 1-inch were mapped at 14 locations. Three stems had potential VELB exit holes.

The proposed project was designed to avoid direct impacts on VELB by maintaining at least a 20-foot buffer from the dripline of all elderberry shrubs. Indirect impacts could occur as elderberry shrubs occur within 165 feet of the project area (Stantec 2020c) and could impact VELB. A Biological Assessment was prepared for VELB, and the findings conclude that the proposed project may affect, and is not likely to adversely affect VELB. The findings also conclude that the proposed project will have no effect on designated critical habitat for VELB. As the federal lead agency for the proposed project, the U.S. Army Corps of Engineers has reviewed the Biological Assessment and will initiate Section 7 consultation with the U.S. Fish and Wildlife Service. Implementation of Mitigation Measures MM-9 and MM-10 would reduce impacts on VELB to a less-than-significant level.

Western pond turtle. Clear Creek and Olney Creek provide potential aquatic habitat for the western pond turtle, and upland habitats in the project area may be used for nesting. Use of heavy machinery could result in direct impacts such as injury or mortality of western pond turtle if individuals are present in the project area during construction. Nesting could be indirectly impacted by vegetation removal in upland habitats. Discharge of sediment into Olney Creek and Clear Creek could also indirectly impact this species. Implementation of Mitigation Measure MM-11 will reduce impacts on western pond turtle to a less-than-significant level.

Special-Status and Migratory Birds and Raptors. The project area and vicinity provide nesting and foraging habitat for various birds, including raptor species. Special-status bird species that could use these habitats include bald eagle, white-tailed kite, yellow-breasted chat, and yellow-warbler. Construction activities (e.g., vegetation removal, ground disturbance, and equipment noise) would occur during the avian breeding season (generally February through August, depending on the species) and could disturb nesting birds in or adjacent to the project area, resulting in the loss of fertile eggs or nestlings or nest abandonment.

Foraging birds and individuals present in or adjacent to the project area outside of the avian breeding season would not be adversely impacted by construction activities due to their high mobility and available habitat outside of the project area. Mitigation Measure MM-12 will reduce the potential impacts on birds to a less-than-significant level.

Special-status Bats. Cavities in trees and snags in the project area provide potential roosting and maternity colony habitat for pallid bat, and mature cottonwood trees in the project area provide potential roosting habitat for western red bat. However, no evidence of bat roosting was observed during field surveys. Additionally, the oak woodlands, open grasslands, and riparian habitats in and near the vicinity of the project area provide potential foraging habitat for bats.

Bat species may roost individually or in small groups in tree cavities, man-made structures, or dense vegetation. Due to the ability of individual bats to move away from disturbance, direct

impacts on bats are not expected when the bats are not in a maternity colony. Pallid bats may form maternity colonies in large cottonwoods in the project area, and western red bat may use large cottonwoods as maternity roosts in the riparian habitat in the project area. Direct impacts would occur if a tree is removed that contains a maternity colony or roost, resulting in mortality or injury of individuals. Mitigation Measure MM-13 will reduce the potential impacts on bats to a less-than-significant level.

Ring-tailed Cat. Riparian habitats within the project area and vicinity provide habitat for ring-tailed cat and cavities in trees and snags provide potential denning habitat for ring-tailed cat.

Direct impacts on ring-tailed cat could result from vegetation removal if it takes place during the maternal denning period (May 1–June 30). Ring-tailed cat using dens within vegetation slated for removal could perish if vegetation is removed while it is occupied by the animal.

Temporary noise disturbance generated by construction could indirectly affect ring-tailed cats. Since female ring-tailed cats commonly use multiple dens when raising their kits and move kits when disturbed, females using dens outside the area of ground disturbance would likely move kits to an alternate den if disturbed by construction activities. Implementation of Mitigation Measure MM-14 would reduce the potential impacts on ring-tailed cat to a less-than-significant level.

b) The project area includes designated critical habitat for Central Valley steelhead DPS, Central Valley spring-run Chinook salmon ESU, Sacramento River winter-run Chinook salmon ESU, and the southern green sturgeon DPS. All aquatic habitats and associated riparian areas in the project area are critical habitat for Central Valley steelhead DPS and Central Valley spring-run Chinook salmon ESU. Only riparian habitat associated with the Sacramento River is designated critical habitat for Sacramento River winter-run Chinook salmon ESU and the southern green sturgeon DPS. The waterways within the project area provide elements of essential fish habitat (EFH) for Pacific salmon, including spawning for fall-run Chinook and seasonally suitable rearing and migration habitat for juvenile Chinook salmon.

The BA/EFHA included an assessment of the potential for the proposed project to impact critical habitat for listed fish and EFH for Pacific salmon (Stantec 2020b). Project activities that have the potential to impact critical habitat for listed fish and EFH for Pacific salmon include, but are not limited to, spills and discharges of hazardous materials, mainly fuels, lubricants and uncured concrete, from construction activities; increases in turbidity from in-channel activities (i.e., installation of coffer dams, work platforms, trench excavation, and pipe installation); introduction of invasive species; and removal of riparian vegetation (including shaded riverine aquatic [SRA] habitat) and bank disturbances. Specifically, the removal of riparian vegetation and disturbance on the banks of streams associated with the proposed project would impact critical habitat and EFH.

Other California Department of Fish and Wildlife (CDFW) sensitive natural communities (CDFW 2019) that occur in the project area include Fremont cottonwood forest, Oregon ash groves, valley oak woodlands; and riparian habitats including arroyo willow thickets, duckweed blooms, and sandbar willow thickets.

Construction activities occurring in upland areas would include the removal of vegetation within the construction easement (see Figure 6). Replanting with trees would not occur within the permanent easement due to concerns of root intrusion into the pipeline and maintenance access. Thus, impacts on sensitive natural communities and riparian habitat would be permanent in the permanent easement and temporary between the construction easement and the permanent easement. Temporary impacts on sensitive natural communities and riparian habitat would include arroyo willow thickets (0.21 acre), duckweed blooms (0.06 acre), Fremont cottonwood forest (0.43 acre), Oregon ash groves (0.01 acre), sandbar willow thickets (0.25 acre), and valley oak woodlands (1.54 acres). In addition to the temporary impacts, permanent impacts on sensitive natural communities and riparian habitat including arroyo willow thickets (0.04 acre), Fremont cottonwood forest (0.34 acre), sandbar willow thickets (0.22 acre), and valley oak woodlands (0.91 acre). Implementation of Mitigation Measure MM-15 will reduce impacts on sensitive natural communities, and impacts would be less than significant.

c) A total of 1.49 acres (276 linear feet) of potential waters of the United States occurs within the project area (Stantec 2020d) and includes riparian/fresh emergent wetland complex, riparian wetland, and perennial stream. Construction of the pipeline would temporarily impact Clear Creek, Olney Creek, an unnamed channel, and riparian wetlands that are associated with them (see Figures 7a and 7b). For Olney Creek and the unnamed channel, the construction area would be isolated by installation of cofferdams upstream and downstream of the crossings, and any flow would be diverted and pumped around the cofferdams. Once the new pipeline is installed, the site would be backfilled, the coffer dams would be removed, and the channels would be restored. For Clear Creek, the process would be similar but only half the stream would be blocked with coffer dams at a time to allow the water to continue to flow around the construction site in the other half of the stream. Prior to any temporary or permanent impacts on aquatic resources, all required permits/authorizations under section 401 of the Clean Water Act from the Regional Water Quality Control Board, under Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers, and Section 1600 of the California Department of Fish and Game Code will be obtained. All terms and conditions of the required permits and/or authorizations will be implemented.

   Temporary impacts would include riparian/fresh emergent wetland complex (0.09 acre), riparian wetland (0.52 acre), and perennial stream (0.63 acre). Permanent impacts would occur from construction of the permanent access road to Junction 2 and would affect riparian wetland (0.01 acre). Implementation of Mitigation Measure BIO-16 will reduce impacts on wetlands to a less-than-significant level.

d) Clear Creek and Olney Creek serve as migration corridors for fish in the project area. Listed fish have a known seasonal presence in Olney Creek and are potentially present in Clear Creek year-round. The proposed project was designed to maintain fish passage during construction in Clear Creek by blocking only half the stream at a time, allowing fish passage through the unblocked half of the stream throughout construction. Additionally, Mitigation Measure MM-3 requires that construction occur during seasonal work periods to avoid impacts on species and life stages of listed salmonid potentially present. With implementation of Mitigation Measure MM-3, impacts on fish migration and migration corridors would be less than significant.

e) The City of Redding has a Tree Management Ordinance (Chapter 18.45 of the Redding Municipal Code) that requires a tree removal permit prior to the removal of trees having a diameter at breast height (DBH) of 6 inches or more on vacant or undeveloped land. The ordinance also states, "A project will be designed to avoid and preserve trees to the extent practicable." A comprehensive review of the project area was conducted and potential candidate trees[2] and candidate groves of trees in the project area and vicinity were mapped (Stantec 2020e). In accordance with the City's Tree Management Ordinance, the proposed project is designed to minimize the removal of, and impacts on, candidate trees to the extent possible; however, it is expected that construction would occur near the critical root zone (CRZ) of candidate trees, and tree removal would be required. While minimization will be implemented, tree removal is exempt within utility rights of way in order to comply with applicable safety regulations and to prevent future damage and interruption of service. The proposed project would not conflict with any local policies or ordinances protecting biological resources and would therefore, have a less than significant effect.

f) There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan covering the project area, so there is no impact.

Documentation

- California Department of Fish and Wildlife. 2019. California Sensitive Natural Communities. Updated November 8, 2019.
- California Department of Fish and Wildlife. 2020. California Natural Diversity Database.
- City of Redding Municipal Code, Chapter 18.45, Tree Management Ordinance
- Stantec Consulting Services Inc. 2020a. Biological Resources Assessment.
- Stantec Consulting Services Inc. 2020b. Biological Assessment/Essential Fish Habitat Assessment.
- Stantec Consulting Services Inc. 2020c. Biological Assessment – Valley Elderberry Longhorn Beetle.
- Stantec Consulting Services Inc. 2020d. Delineation of the Waters of the United States.
- Stantec Consulting Services Inc. 2020e. Tree Assessment and Characterization Report.
- U.S. Fish and Wildlife Service. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle.

[2] A single healthy tree or group of healthy trees warranting consideration for preservation by virtue of its value to the community, the immediate neighborhood, or the natural environment in recognition of the existence of one or more of the following attributes:
- It is an outstanding specimen of its species in terms of aesthetic quality as determined by shape and branch structure;
- It is one of the largest or oldest trees in Redding that also has historical or neighborhood interest;
- It adds significantly to the environment of Redding because of its location, distinct form, unique species, or other identifying characteristics;
- It is in a location which is connected to a larger natural woodland system, such as a permanent open-space area, and which is likely to be self-supporting over time; and
- It serves a desirable function, such as buffering dissimilar land uses, or is a component of an overall landscape plan.

Mitigation

MM-1. Equipment operating within the stream channels will use non-toxic vegetable oil for operating hydraulic equipment instead of conventional hydraulic fluids.

MM-2. The City will hire a qualified water quality professional to monitor turbidity and suspended sediment levels at locations 50 feet upstream and 300 to 500 feet downstream from construction during any in-channel activities in Olney Creek or Clear Creek, when and where work has the greatest likelihood to affect water quality. Water quality monitoring will occur hourly throughout each day during in-channel excavation. A detailed turbidity monitoring work plan will be prepared by the Contractor for submittal to the City. Turbidity levels caused by construction activities and measured downstream from the work area will remain within the objectives defined in the Basin Plan. Turbidity, settleable solids, and other water quality results will be reported in real-time via automated dataloggers, or at least daily, to the City construction manager and relayed to the National Marine Fisheries Service (NMFS), as deemed necessary by a qualified biologist and/or the City. In conjunction with daily turbidity monitoring, if it becomes necessary to manage turbidity to meet water quality objectives, silt curtains will be installed under the supervision of a qualified biologist immediately downstream of in-water work areas to minimize the amount of turbid water escaping from the construction site and to prevent suspended sediment from drifting outside of the immediate project work site. Silt curtains will be kept in proper working order and allow fish that may enter the curtained area adequate room to exit the area freely.

MM-3. Seasonal work periods for the three channels will be adhered to as follows:

- Clear Creek: September 1 through October 31
- Olney Creek and the unnamed channel: July 1 to November 1

MM-4. To reduce the potential for adverse effects on listed species due to crushing or other impacts during in-channel construction in Clear Creek, Olney Creek, and the unnamed channel prior to beginning construction, the areas will be visually inspected for fish presence by a qualified biologist. If presence of fish is noted, they will be herded away from the work area using seines if possible. Block nets will be installed immediately behind seine hauls to exclude fish from re-entering work areas during in-channel work. If cofferdams or turbidity curtains must completely enclose and isolate work areas, then fish salvage and relocation to outside of the work areas will be conducted by qualified fisheries biologists. Additionally, during excavation and placement of fill materials within the active channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile fish away from the work area. All temporary stream diversion and backfill material within the channel will consist of washed material that meets the California Department of Transportation Gravel Cleanliness Specification #85, which is based on criteria meeting Clean Water Act standards.

MM-5. In Clear Creek, most of the trenching and pipeline installation will occur within semi-isolated coffer-dammed work areas to manage upstream shoring and downstream turbidity, but would not be completely enclosed, allowing any fish entering the work area to readily exit it. However, in the event that some portions of the in-channel pipeline installation need to be completely isolated and dewatered for pipe joining and concrete curing, fish salvage and relocation outside of the cofferdam enclosures would be performed by an NMFS- and CDFW-approved biologist.

MM-6. Any withdrawals/movement of water from creek channels will use pump intakes with screens meeting NMFS and CDFW criteria to prevent entrainment injury and impingement of fish. The NMFS Anadromous Salmonid Passage Facility Design (2011) guidelines include specific criteria for end-of-pipe screens and screen materials for use in streams and rivers:

- **Location**: If applicable, end-of-pipe screens must be placed in locations with sufficient ambient velocity to sweep away debris removed by the screen face or designed in a manner to prevent debris re-impingement and provide for debris removal.

- **Escape Route**: A clear escape route should exist for fish that approach the intake volitionally or otherwise.

- **Screen Material Guidelines**: The percent open area for any screen material must be at least 27%. Circular screen face openings must not exceed 3/32-inch diameter. Perforated plate must be smooth to the touch with openings punched through in the direction of approaching flow. Slotted or rectangular screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction. Square screen face openings must not exceed 3/32 inch on a side. The screen material must be corrosion resistant and sufficiently durable to maintain a smooth uniform surface with long term use. Other components of the screen facility (e.g., seals) must not include gaps greater than the maximum screen opening defined above.

MM-7. All equipment used for off-road construction activities will be weed free prior to entering the project area. Construction equipment will be properly disinfected or cleaned according to guidance provided by the State of California Aquatic Invasive Species Management Plan (CDFG 2008) prior to in-channel work to prevent the spread of aquatic invasive species.

MM-8. Mature trees such as cottonwoods, alders, and valley oaks located in SRA habitat near construction areas will be flagged and avoided as much as possible during construction. Vegetation may be trimmed only as needed.

MM-9. The construction limits will be clearly identified prior to construction and all areas containing elderberry shrubs to be avoided during construction will be fenced off or flagged. For elderberry shrubs occurring within or immediately adjacent to work locations, a 20-foot avoidance buffer will be established around the driplines of the shrubs to help protect the shrubs and their root zones during project activities. The avoidance buffers will be maintained for the duration of work activities in the area. Additionally, no trimming of elderberry shrubs will occur, and no removal of vegetation within the dripline of an elderberry shrub will occur.

MM-10. To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of VELB (March-July).

MM-11. A qualified biologist will perform preconstruction surveys for western pond turtle and their nests prior to initiation of work in riparian habitat or streams, including vegetation removal. If western pond turtles or their nests are encountered in the project area during construction and could be harmed by construction activities, work will stop immediately in the area and CDFW will be notified. Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the construction impact zone.

MM-12. If construction occurs during the nesting season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey to locate active bird nests. The pre-construction survey will be performed no more than 7 days prior to the implementation of construction activities. If a lapse in construction activities occurs for 7 days or longer, another pre-construction survey will be performed. If an active nest is found, a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

MM-13. To the extent practicable, removal of large trees with cavities, crevices, or snags shall occur before maternity colonies form (i.e., prior to March 1) or after young are volant (i.e., after August 15). If construction (including the removal of large trees) occurs during the non-volant season (March 1 through August 15), a qualified biologist shall conduct a pre-construction survey of the project area to locate maternity colonies and identify measures to protect the colonies from disturbance. The pre-construction survey will be performed no more than seven days prior to the implementation of construction activities. If a lapse in construction activities for seven days or longer occurs between those dates, another pre-construction survey will be performed. If a maternity colony is found a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

M-14. To the extent practicable, removal of vegetation will occur outside of the ring-tailed cat maternal denning period (May 1–June 30). If vegetation removal is to occur during the maternal denning period (May 1–June 30), a qualified biologist will conduct a preconstruction survey of the project area to locate maternity dens. The preconstruction survey will be performed no more than seven days prior to the vegetation removal. If a maternity den is found, a qualified biologist (in consultation with the City and CDFW) will develop measures to protect the maternity den from disturbance.

MM-15. Any trees greater than 6 inches diameter at breast height, determined to be contributing to shaded riverine aquatic habitat that are removed during project activities will be replaced on site, but outside of the permanent utility corridor The amount of habitat created/restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant impacted).

Woody riparian vegetation greater than 6 inches diameter at breast height, that does not contribute to shaded riverine aquatic habitat, that is removed during project activities would be compensated for through the establishment of onsite mitigation areas outside the permanent easement, the purchase of credits from a mitigation bank or in-lieu fee program, or a combination of the three. The amount of habitat created or restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant permanently impacted). Any onsite mitigation will be maintained and monitored for a period of three years.

MM-16. Temporary impacts to wetlands and perennial stream will consist of returning the wetland areas to pre-construction grade and stream banks to pre-construction contours. Permanent impacts to riparian wetland will be mitigated at a 3:1 ratio through the purchase of wetland credit at an approved mitigation bank, or through the purchase of in-lieu fee credit.

V. CULTURAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

a, b, c) Archival research, consultation with the Native American community, and an intensive archaeological survey are summarized in the Cultural Resources Inventory Report (Pacific Legacy 2020a). The cultural resources inventory identified one prehistoric isolate and two cultural resources within the project area. It is an isolated find and does not qualify as a historic property/significant historical resource. A Historic Resources Evaluation Report concluded that none of these resources are eligible for listing in the National Register of Historic Places or the California Register of Historic Places (Pacific Legacy 2020b).

Three soil phases were mapped at the surface in the project area (Pacific Legacy 2020a) including:

- Reiff fine sandy loam, 0 to 3% slopes in the northern half of the project area
- Unnamed gravel pits in the southern half of the project area north of Clear Creek
- Churn gravelly loam 0 to 3% slopes in the southern half of the project area south of Clear Creek

The Reiff soil series is classified by Meyer (2013:84) as late Holocene to recent in age. Several buried archaeological sites or site contexts have been identified in the vicinity of the project site; however, historic aerial photos and maps show the southern half north of Clear Creek as an active gravel quarry from at least the 1950s to the 1970s. If buried archaeological deposits were located in the area, they are likely destroyed and would have little to no integrity. South of Clear Creek, the Churn soil series has well developed B horizons and is estimated to be early Holocene in age (Meyer 2013:B15). Further, because this portion of the flood plain is much older, it should be considered to have a low potential for buried archaeological deposits.

An Extended Phase I archaeological investigation was conducted within the northern portion of the project area (approximately from Girvan Road to just south of the unnamed channel). The investigation included the excavation of nine exploratory trenches within the area of direct impact. Backhoe trenches measured 0.6 meter (m) (about 2.0 feet [ft]) wide and ranged in

length from 2.1 to 3.6 m (6.9 to 11.8 ft). Trenches were ramped at one end to allow ingress/egress, with maximum depths ranging from 1.1 to 3.0 m (3.6 to 9.8 ft). No cultural artifacts were recovered from the trenches.

While the proposed project is not anticipated to impact cultural resources, the following standard conservation measures are included in every project. In the event of an unanticipated discovery of artifacts, including human remains, impacts would be less than significant.

CR-1. If previously unidentified cultural materials are unearthed during construction, it is the City's policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Additional archaeological surveys will be needed if the proposed project undertaking limits are extended beyond the present survey APE limits.

CR-2. If human remains are discovered during project activities, all activities in the vicinity of the find will be stopped and the Shasta County Sheriff-Coroner's Office shall be notified. If the coroner determines that the remains may be those of a Native American, the coroner will contact the Native American Heritage Commission (NAHC). Treatment of the remains shall be conducted in accordance with further direction of the County Coroner or the NAHC, as appropriate.

Documentation

- Meyer, J. 2013. A Geoarchaeological Overview and Assessment of Northeast California. Cultural Resources Inventory of Caltrans District 2 Rural Conventional Highways: Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama, and Trinity Counties. California Department of Transportation, Office of Environmental Management, North Region.
- Pacific Legacy. 2020a. Cultural Resources Inventory Report for the Westside Sewer Interceptor Phase 3 Project, Shasta County, California. August.
- Pacific Legacy. 2020b. Historical Resources Evaluation Report for the Westside Sewer Interceptor Project, Shasta County, California. July.

Mitigation

No mitigation required.

VI. ENERGY

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Discussion

a) During construction, vehicles including worker commuter vehicles and heavy construction equipment, would require the use of gasoline and diesel fuel for power. Construction is anticipated to last approximately 24 months. Construction is estimated to result in a short-term consumption of energy, representing a small demand on local and regional fuel supplies that would be easily accommodated and would be temporary. The short duration of equipment usage and incorporation of energy efficiencies would not create a wasteful or significant increase in demand for fuel supplies; therefore, impacts on energy resources would be less than significant.

b) The proposed project includes a new sewer pipeline to convey sewage to an existing treatment plant and would not require the additional use of energy for operations. The proposed project would not prohibit energy conservation or the use of renewable energy (City of Redding 2009) and would not conflict with or obstruct the City's plan for renewable energy. Because operations would be consistent with existing conditions, there would be no operational impact. Construction of the proposed project would have a less-than-significant impact on state or local plans related to renewable energy.

Documentation

- City of Redding. 2009. General Plan – Natural Resources Element.

Mitigation

No mitigation required.

VII. GEOLOGY AND SOILS

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake, fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publications 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	☐	☐	☒	☐

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

Discussion

a, c, d) There are no Alquist-Priolo earthquake faults designated in the project area; and there are no other documented earthquake faults in the immediate vicinity that pose a significant risk of rupture, ground shaking, or otherwise unstable ground conditions. The closest active fault is about 50 miles away from the project site. Implementation of the proposed project would not increase the potential for ground shaking to occur. Ground shaking activities such as earthquakes would have a negligible effect on the new pipeline, as it would be designed in accordance with current California Building Code (CBC) seismic design criteria. This CBC design criteria will be incorporated into the project design to help ensure that the project is built to withstand any potential ground shaking that could occur in the project area. The impact would be less than significant.

According to the City's General Plan, landslides could occur in the westernmost portion of the City (City of Redding 2000); however, the proposed project is not located in an area prone to landslides. The project area is relatively flat and would not pose a significant hazard. There would be no impact related to landslides.

Other types of ground failure such as expansive soils and subsidence (i.e., the gradual settling or sinking of an area with little or no horizontal motion) are not considered to pose a significant hazard within the proposed project area as soils in that area are expected to have a medium to low potential for expansion. The impact would be less than significant.

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits, along with recent Holocene age deposits are more susceptible to liquefaction while older deposits of clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking. According to the City's Health and Safety Plan element, the project area is in an area having a high potential for liquefaction (City of Redding 2009).

CGI Technical Services Inc. (CGI) completed a geotechnical desktop study/data report for the Phase 3 Westside Interceptor, which evaluated geological conditions and hazards that could impact the proposed pipeline routes based on selected, available, and published information relevant to the project area. Although soils in the project area have a high potential for liquefaction, key design features would help ensure the pathways and associated project features are constructed to provide structure stability and would be in conformance with state and federal building code requirements. The impact would, therefore, be less than significant.

b) During construction, localized erosion could occur due to ground disturbance and stockpiling of soil in the project area. Construction of the new pipeline would require soil trenching and excavation. If not properly managed, substantial erosion of stockpiled soils could occur, and sediment could be transported into sensitive receiving waters. This would aid stockpile management and reduce the risk of erosion and sediment transport outside of project work areas.

Additionally, the proposed project is subject to certain erosion-control requirements and BMPs mandated by existing City regulations which includes:

- *City of Redding Grading Ordinance.* This ordinance requires preparation of an erosion and sediment control plan for projects affecting more than one acre (Redding Municipal Code Title 16). The erosion and sediment control plan requires preparation and description of any BMPs that will be used during construction and post-construction, if needed.

- *City of Redding Stormwater Quality Management and Discharge Control Ordinance.* This ordinance requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) for projects affecting greater than 1 acre (Redding Municipal Code Title 14). The objectives of the SWPPP are to identify the sources of sediment and other pollutants that may affect water quality associated with stormwater discharges and to describe and ensure the implementation of BMPs to reduce those sources of sediment and other pollutants in stormwater discharges.

The potential for project construction to result in substantial soil erosion or the loss of topsoil would be less than significant.

e) The proposed project does not involve the use of septic tanks or alternative wastewater disposal; therefore, there would be no impact.

f) A review of published data (Paleobiology Database 2018; UCMP 2019) indicates that there are no known unique geologic features, fossil-bearing strata, or paleontological sites in the project area. The proposed project will have no impact on paleontological resources.

Documentation

- CGI Technical Services Inc. (CGI). 2013. Geotechnical Data Report Westside Interceptor, Phase 3, City of Redding. November.
- City of Redding. 2000. 2000-2020 General Plan. Health and Safety Element. October
- Paleobiology Database. 2018. The paleobiology database. Available at: https://paleobiodb.org/#/. Accessed June 12.
- University of California Museum of Paleontology at Berkeley (UCMP). 2019. UCMP Specimen Search Online Database. Available at: https://ucmpdb.berkeley.edu/advanced.html. Accessed June 12.

Mitigation

No mitigation required.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

a) Greenhouse gases (GHGs) are recognized by wide consensus among the scientific community to contribute to global warming/climate change and associated environmental impacts because of their ability to trap heat in the atmosphere and affect climate. The major GHGs that are released from human activity include carbon dioxide, methane, and nitrous oxide (Governor's Office of Planning and Research 2008). The primary sources of GHGs are from industrial facilities, transportation vehicles (including planes and trains), energy/electricity plants, and industrial and agricultural activities (such as dairies and hog farms) (CARB 2021).

GHG emissions from the proposed project would be generated offsite from the production of project materials (e.g., pumps, electrical systems), as well as onsite construction-related equipment emissions. While the project would have an incremental contribution in the context of the county and region, construction-related GHG emissions would be short term and minor. BMPs AQ-1 through AQ-6 (Section III Air Quality) will be incorporated into the proposed

project which would reduce construction-related GHG emissions. Project operation would be consistent with existing conditions. The impact would be less than significant.

b) The proposed project would not conflict with any applicable plans, policies, or regulations adopted to reduce GHG emissions. As noted in impact "a" and in Section III Air Quality, the proposed project is in conformance with the City's air quality policies and thresholds, follows state guidelines and regulations, and incorporates BMPs AQ-1 through AQ-6. The proposed project would have a less-than-significant impact on the City's applicable plans, policies, or regulations related to GHG emissions. The impact would be less than significant.

Documentation

- City of Redding. 2009. General Plan – Air Quality Element.
- California Air Resources Board (CARB). 2021. Current California GHG Emission Inventory Data. Available at: Current California GHG Emission Inventory Data | California Air Resources Board. Accessed June 5.
- Governor's Office of Planning and Research. 2008. Technical advisory: CEQA and climate change: Addressing climate change through California Environmental Quality Act Review. Sacramento, CA.
- Shasta Air Quality Management District, https://www.co.shasta.ca.us/index/drm_index/aq_index.aspx. Accessed August 2, 2019.

Mitigation

No mitigation required.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Discussion

a, b, d) The proposed project would not present a significant risk due to the use of hazardous materials or emissions. The project area is not on any lists of properties known to contain hazardous materials. A review of known hazardous materials sites databases identified two nearby leaking underground storage tank (LUST) sites and one cleanup site within an approximate 0.5 mile including the following (California State Water Resources Control Board 2019; California Department of Toxic Substances Control 2019):

- Shorts Scrap Iron & Metal Inc. 2041 Girvan Road (RB Case No. 450013): LUST cleanup site located about 0.6 mile east of project area, case closed.
- Morgan Emultech Inc. 7200 Pit Road (RB Case No. 450272): LUST cleanup site located about 0.4 mile east of project area, case closed.
- Northstate Recycling, 2041 Girvan Road (RB Case No. SLT5R1078): Cleanup program site located about 0.6 mile east of project area, case open – remediation.

The two LUST cases are now closed and do not pose a threat to the proposed project in the form of hazardous material leaks or spills. The Northstate Recycling site has been under evaluation since June 2012. The proposed project would have no direct or indirect impacts on this site.

Construction activities pose a slight risk for solvent or fuel spills or leaks. In accordance with the City's Stormwater Management Program (City of Redding 2021), and as a part of the Clean Water Act Section 402, National Pollutant Discharge Elimination System, a SWPPP is required when obtaining a general construction permit. Compliance under water quality regulations and the SWPPP would require use of the following standard conservation measures and BMPs to avoid or minimize the potential for accidental release of hazardous materials from spills or fuel leaks during project construction:

- **HAZ-1**. Hazardous materials, including fuels, oils, cement, and solvents, will be stored and contained in an area protected from direct runoff and away from areas where they could enter waters of the United States.
- **HAZ-2**. Construction equipment will be inspected daily for leaks. Leaking fluids will be contained upon detection and equipment repairs will be made as soon as practicable or the leaking equipment will be moved off site.
- **HAZ-3**. Secondary containment such as drip pans or absorbent materials shall be used to catch spills or leaks when removing or changing fluids. Secondary containment will be used for storage of all hazardous materials.
- **HAZ-4**. Spill containment and clean-up materials shall be kept on site at all times for use in the event of an accidental spills.
- **HAZ-5**. Absorbent materials shall be used on small spills rather than hosing down or burying the spill. The absorbent material shall be promptly removed and properly disposed.

The implementation of the SWPPP required by state and local regulations would ensure that the proposed project would not pose a significant risk for solvent or fuel spills. The potential for project construction and operation to create a hazard to the public or the environment through the accidental spill or pollutants would be less than significant.

c) There are no existing or currently proposed schools within 0.25 mile of the project area. There would be no impacts on schools.

e) The proposed project is not located within an airport land use plan or within two miles of an airport. There would be no impacts on airport land uses.

f) The proposed project is not located within any roadways, nor would require the closure of any roads or alteration of any emergency response plans; therefore, there would be no impacts.

g) During the construction period, the use of construction equipment in and around vegetated areas increases the potential for wildfire ignition. The project area consists of vegetated areas that could be susceptible to wildfires. However, the proposed project would be constructed in compliance with applicable local, state, and federal requirements, including the California Fire Code, which would ensure that the potential for construction equipment to spark a wildland fire is minimal. Operation of the proposed project would be consistent with existing operations and

would not increase the existing wildfire potential. The potential for wildfire ignition from construction and operation of the proposed project would be less than significant.

Documentation

- California State Water Resources Control Board. 2019. Geotracker available at: http://geotracker.waterboards.ca.gov/. Accessed June 6.
- California Department of Toxic Substances Control. 2019. EnviroStor – Hazardous Waste and Substances Site List (Cortese) available at: https://www.envirostor.dtsc.ca.gov/. Accessed June 6.
- City of Redding. 2021. Storm Water Management Program available at: https://www.cityofredding.org/departments/public-works/environmental-management/storm-water-management. Accessed June 7.

Mitigation

No mitigation required.

X. HYDROLOGY AND WATER QUALITY

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i) result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Discussion

a, c) Three creek crossings would be required to construct the proposed project: Olney Creek, an unnamed channel, and Clear Creek. The Olney Creek and unnamed channel crossings would be constructed by the installation of cofferdams upstream and downstream of the crossing, diverting and/or bypass pumping (or gravity flow bypass) creek flows around construction site.

The Clear Creek crossing would be constructed without significant dewatering of the construction area. The banks would be excavated to provide a gentle ramp down to the water's edge. A combination of impervious and porous cofferdams will be installed upstream and downstream of the pipeline alignment. The cofferdam would prevent the migration of solids from the construction area, but it is not intended to keep the excavated area completely free of water. The cofferdam would consist of large concrete blocks that are pushed into place and rest on the creek bottom or driven piles into the bottom via a hammer or vibration, or a combination of both.

In-channel construction could cause localized erosion and sediment in the stream channel. The City's construction standards require that all projects prepare a plan to address water pollution control and incorporate this plan into the project design. In accordance with the City's Stormwater Quality Management and Discharge Control Ordinance, and as a part of the Clean Water Act Section 402, National Pollutant Discharge Elimination System, the construction standards and specifications for the proposed project will require that a SWPPP be prepared by the contractor prior to construction. The SWPPP would help ensure that water quality standards are not substantially affected by the proposed project through the implementation of sediment control measures and runoff prevention practices. The impact related to runoff and alteration of drainage patterns would be less than significant. Standard conservation measures and BMPs BIO-1 through BIO-3, described in Section IV Biological Resources, are incorporated into all projects that require earthwork and work near streams to reduce potential project-related impacts on water quality. In addition, a water quality sampling and monitoring program will be

implemented during construction (MM-2). This mitigation measure is described in Section IV Biological Resources. The proposed project would have a less-than-significant impact on water quality with mitigation incorporated.

b, e) Excavation during construction of the proposed project could occur within the water table, which would require localized dewatering. The water would be pumped to a sediment collection system, such as a Baker Tank, and then disposed of in accordance with local, State, and Federal requirements. Dewatering would be required only during the initial phases of excavation and construction and would not occur for substantial periods of time. Additionally, in-channel construction is constrained to the dry season. Because of the short duration of construction, the volume of groundwater removed would be expected to be minor and would not conflict with implementation of a groundwater sustainability plan. Construction impacts on groundwater supplies would be less than significant.

Operation of the proposed project would not use groundwater resources. The proposed project would result in negligible to no increase in impervious surfaces because the ground surface would be returned to general pre-project conditions. Impacts on groundwater supplies from operation of the proposed project would be less than significant

d) The project area includes work within Olney Creek, Clear Creek, an unnamed channel, and is adjacent to the Sacramento River, all of which are designated as Floodway Zone AE (Federal Emergency Management Agency 2011). The majority of Cascade Park is designated as Floodway Zone A. Zone AE is a floodplain designation that has mapped base flood elevations (BSE) determined, and Zone A is a floodplain designation that does not have BSE. Both zones are mapped as special flood hazard areas.

Creek crossings, as explained in impact discussions “a” and “c” (above) would use coffer dams to reduce water inundation in the work areas. Creek crossings would also be timed to occur during the summer months when flows are at their lowest levels. It is expected that the project area would remain dry during construction: however, the upland portions of the proposed project may be subject to periodic flooding if a series of major storm events occur. Construction does not take place during winter storm events and the SWPPP would require standard BMP implementation to prevent erosion and sediment transport, In addition, all construction materials and equipment would be removed from the project area during inactive winter periods. Project facilities would be placed at grade or underground, and would not change the BSE (i.e., increase the flood-hazard) within the project area. Potential impacts would be less than significant.

The threat of a tsunami wave is not applicable to inland, central valley communities such as Redding. Seiches could potentially be generated in either Shasta or Whiskeytown lakes during an earthquake. If a seiche were to overtop Shasta Dam, or in the event of dam failure, the project area would be within the inundation zone. However, regional history documents that the potential for such a threat is low (City of Redding 2000), and all proposed project facilities would be at grade or underground, consistent with existing conditions, and would not increase the risk of pollutants due to inundation. There is no documented threat of mudflows affecting the proposed project site. No impact would occur.

Documentation

- City of Redding. 2000-2020 General Plan. Health and Safety Element figures 4-1 (Ground Shaking Potential) and 4.2 (Liquefaction Potential).
- Federal Emergency Management Agency (FEMA), Floodplain regulations, FIRM Map 06089C1563G, March 17, 2011.

Mitigation

See Mitigation Measures MM-2 described in Section IV, Biological Resources.

XI. LAND USE AND PLANNING

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Discussion

a,b) The proposed project would not divide an established community. The majority of the proposed project would be constructed within the existing City right of way and on City-owned property with a possible portion occurring in a utility acquisition, depending on final design. The proposed project would not conflict with any applicable policies and regulations of the City's General Plan and Zoning Ordinance. There would be no impact.

Documentation

- City of Redding. 2000-2020 General Plan.
- City of Redding. 2019. Municipal Code.

Mitigation

No mitigation required.

XII. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion

a,b) The project area is not identified in the City's General Plan as having any known mineral resource value or as being located within any critical mineral resource overlay area. No impact would occur.

Documentation

- City of Redding. 2009. General Plan – Natural Resources Element.
- California Department of Conservation. 2016. Mines Online. https://maps.conservation.ca.gov/mol/index.html. Accessed August 2, 2019.

Mitigation

No mitigation required.

XIII. NOISE

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion

a,b) The proposed project would be located adjacent to residences on Girvan Road and Platinum Way as well as recreational users at Cascade Park. Existing sources of noise and minor vibrations in the area include vehicles traveling on the local roadways, sounds of children and families playing at Cascade Park, and minor sounds of water flowing from the Sacramento River, Olney Creek, and Clear Creek.

Construction noise would consist of grading and excavation equipment, trucks, and construction personnel. Project operation would not result in audible noise and ambient noise levels would remain the same. Construction would be limited to daytime hours, generally between the hours of 7:00 a.m. and 7:00 p.m. on weekdays. Work could occasionally occur on a Saturday; however, no operations would take place on Sunday. Noise generated by temporary construction activities and permanent operation of the proposed project would be similar to existing conditions. Potentially sensitive receptors such as nearby residences or recreational users would not be subject to excessive ground-borne vibration or noise levels. No permanent or long-term noise impacts would occur because of the proposed project. Noise impacts would be less than significant.

c) The proposed project is not located within an airport land use plan or near any airports; therefore, there would be no impacts.

Documentation

- City of Redding General Plan, Noise Element, 2000.
- Redding Municipal Airport. 2004. Redding Municipal Airport Master Plan. https://www.cityofredding.org/home/showdocument?id=865. Accessed August 20, 2021.

Mitigation

No mitigation required.

XIV. POPULATION AND HOUSING

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) The new pipeline would be sized to accommodate existing wastewater and meet future City wastewater conveyance demands by operating in conjunction with the City's existing system. By increasing the capacity of the interceptor, the proposed project would enable the City to convey flow more reliably to the treatment plant; however, because the permitted discharge at the CCWWTP would not change, the proposed project would not induce population growth; therefore, there would be no impacts.

b) Proposed facilities would be underground and would not displace housing or people. The proposed project would not result in the demolition or removal of any housing. Therefore, it would not displace people and would have no impact.

Documentation

- City of Redding General Plan, Housing Element 2014.

Mitigation

No mitigation required.

XV. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Fire Protection?	☐	☐	☒	☐
b) Police Protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

Discussion

a-e) The proposed project would not cause substantial adverse physical impacts on government facilities or negatively affect public services. Similarly, access to schools, parks (specifically Cascade Park), and other public facilities would not be substantially affected since access will be maintained through the project area during construction. Proposed contractor construction access in the area may temporarily interfere with access to some portions of Cascade Park. The proposed project would not result in substantial conflict or lack of emergency access on Girvan Road, Platinum Way, and/or Pit Road. The proposed project would have a less-than-significant temporary impact, and no permanent impact, on public services.

Documentation

- City of Redding General Plan, Public Facilities Element, 2000.

Mitigation

No mitigation required.

XVI. RECREATION

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion

a) The proposed project is within and adjacent to Cascade Park, which is approximately 28 acres and includes four acres of developed areas. This park includes various recreation amenities including a basketball court, parking lot, picnic area, playground area, trail, turf grass, and fishing access. The General Plan classifies this park as a community park which can range from 15 to 50 acres in size and provide opportunities for organized and informal recreation to the local community.

Temporary disturbance to Cascade Park is likely to occur during construction and partial closures of some portions of the park would be required to maintain safety during construction and the placement of project features, particularly during the pipeline placement in the northernmost portion of the pipeline alignment. These restrictions on use of the park could result in visitors temporarily making use of other nearby parks during the disruption to Cascade Park. However, substantial physical deterioration due to short-term increases in the use of other parks is not anticipated because the use would be temporary, lasting up to approximately 24 months. Additionally, there are multiple parks and open spaces within the neighborhoods and vicinity, and users would not be concentrated at one particular location. Therefore, the potential for the proposed project construction activities to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur is less than significant.

b) The proposed project is a pipeline project and does not include recreational facilities nor would it require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There would be no impact.

Documentation

- City of Redding General Plan, Recreation Element, 2000.
- City of Redding General Plan, Public Facilities Element, 2000.

Mitigation

No mitigation required.

XVII. TRANSPORTATION

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

Discussion

a) Construction of the proposed project would generate vehicle trips associated with worker commutes and material and equipment hauling. The increases in trips per day on local and regional roadways within the City could affect roadway capacity and circulation by introducing slower movements and larger turning radii of construction trucks compared to passenger vehicles if the number of trips were to result in a significant increase from the current local conditions.

The proposed project would generate construction traffic throughout the 24-month construction period with periods of heavier use (i.e., during excavation) and periods of minimal vehicle use (i.e., site restoration). The proposed project would not conflict with the City of Redding General Plan policies or the City of Redding Parks, Trails, and Open Space Master Plan (City of Redding 2018). Construction signage would help maintain existing service levels along Girvan Road, Platinum Way, and Pit Road for passenger vehicles, pedestrian traffic, and bicyclists. The proposed project would not conflict with any program, ordinance, or policy addressing the circulation system, and the impact would be less than significant.

b) Section 15064.3(b) of the current CEQA Guidelines shifts transportation impact analysis from a level of service (LOS) standard to a vehicle miles traveled (VMT) standard that refers to the amount and distance of automobile travel attributable to a project. Construction of the proposed project would require some haul, vendor, and worker trips over the 24-month construction period. The technical advisory provided by the Office of Planning and Research (OPR) provides that projects with less than 110 trips per day are presumed less than significant (OPR

2018). The proposed project would result in less than 110 trips per day during construction and would result in no additional maintenance trips during operation of the proposed project. The proposed project would result in a less than significant impact.

c) The proposed project, once constructed, would be located underground and would not result in changes to roadways causing an increase in hazards due to a geometric design feature or incompatible use on any roadways in the area. During construction, equipment and vehicles would be intermittently entering and exiting Girvan Road, Platinum Way, and Pit Road. This could pose a potential hazard from interaction with the general public on these public roadways. However, construction activities would be temporary and would largely occur within the pipeline alignment (i.e., away from the public roadways) and would not result in a substantial hazard. The proposed project would have no impact related to hazards from geometric design features.

d) Construction of the proposed project would not substantially interfere with emergency access. Constriction activities would be short-term and temporary in nature with possible partial closures or restrictions on Girvan Road, Platinum Way, and Pit Road. Stop signs during non-construction times and flagging during construction are not anticipated to be needed, and emergency vehicles would be allowed to pass though the project area unimpeded. Once constructed, the proposed project would be located underground and would not impact emergency access. Therefore, the impact would be less than significant.

Documentation

- City of Redding General Plan, Transportation Element, 2000.
- City of Redding Parks, Trails, and Open Space Master Plan, 2018.
- California Office of Planning and Research (OPR). 2018. Technical Advisory On Evaluation Transportation Impacts in CEQA. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed August 5, 2019.

Mitigation

No mitigation required.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project: cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) 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	☐	☐	☐	☒
b) 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.	☐	☐	☐	☒

Discussion

a, b) A letter was sent to the NAHC on June 29, 2018, requesting a review of their Sacred Lands File and contact information for potentially interested individuals. A response was received on July 5, 2018, which reported that no Native American cultural sites are known in the project area. In addition, in September 2018, the City sent letters to individuals/groups who may have information regarding the proposed project area. Follow-up phone calls and emails were made in January 2019 to ensure that the recipients had received the letters and to discuss any knowledge of cultural resources or proposed project concerns. One local Tribe responded, and consultation is ongoing. No tribal cultural resources were identified in the project area, and the proposed project would have no impact on tribal cultural resources.

Documentation

- Pacific Legacy. 2020a. Cultural Resources Inventory Report for the Westside Sewer Interceptor Phase 3 Project, Shasta County, California. August.

Mitigation

No mitigation required.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

a) The proposed project would not require construction or relocation of water, stormwater, electrical, natural gas, or telecommunication facilities. The proposed project is a wastewater infrastructure project, and all potential environmental impacts related to implementation of this proposed project have been analyzed in this document. The proposed project would not result in any other infrastructure improvements or require relocation of existing infrastructure beyond what has been analyzed herein; therefore, the proposed project would have no impact.

b) Construction and operation of the proposed project would not require the use of potable water. Water required for construction use, such as for dust control and pipeline testing, would be available from the City's existing water resources and would not require substantial amounts of additional water supplies. Operation of the proposed project would not require any water supplies. The proposed project would have sufficient water supplies to serve the project, and the impact would be less than significant.

c) The proposed project would provide additional wastewater conveyance capacity by extending a 48-inch trunk sewer pipeline from a diversion structure near Girvan Road to the CCWWTP. This additional capacity would accommodate wastewater flows for existing and planned development. Because this additional capacity is being proposed to accommodate existing and planned future growth rather than directly inducing growth, the proposed project would be considered a growth-accommodating project rather than a growth-inducing project. The CCWWTP has sufficient capacity to accommodate this growth, and the additional wastewater flows conveyed by the new pipeline. There would be no impact.

d,e) The proposed project construction activities would generate a minor amount of debris requiring disposal at a suitable facility, such as the City's West Central Landfill, which has sufficient permitted capacity to accommodate the proposed project with 6,589,044 cubic yards of remaining capacity and a maximum permitted capacity of 700 tons per day (CalRecycle 2019). Standard construction specifications would require recycling of some materials such as concrete to reduce landfill waste. Any potentially hazardous materials would be disposed of at an approved landfill. Through construction specifications, the City will confirm that the proposed project complies with federal, state, and local statutes and regulations pertaining to recycling and disposal of solid waste. The impact would be less than significant.

Documentation

- City of Redding General Plan, Public Facilities Elements, 2000.
- CalRecycle. 2019. Facility Operations, West Central Landfill. https://www2.calrecycle.ca.gov/SWFacilities/Directory/45-AA-0043/Detail/. Accessed August 5, 2019.

Mitigation

No mitigation required.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Discussion

a-d) The proposed project area is within a local responsibility area and is in an area designated by CAL FIRE that is a 'Non-Very High Fire Severity Zone". While all undeveloped areas are susceptible to wildfire, the proposed project would be constructed in compliance withal applicable local, state, and federal requirements, including the California Fire Code, which would minimize the potential for construction equipment to spark a wildland fire. The following standard conservation measures will be used during construction to help minimize project-related potential for wildfire ignition:

- **WILD-1.** Per the requirements of Public Resources Code Section 4442, the contract specifications include a requirement that internal combustion engines will be equipped with an operational spark arrester, or the engine must be equipped for the prevention of fire.

The proposed project would not affect emergency evacuation plans, result in the uncontrolled spread of wildfire, require installation or maintenance of associated wildfire infrastructure, or expose people or structures to significant risks related to wildfires. The proposed project would result in a less-than-significant impact related to wildfires.

Once constructed, the proposed project would be located underground and would not be affected by any potential fires in the area, nor would it contribute to increased risk for fire. Operational impacts related to fire hazards would be less than significant.

Documentation

- CAL FIRE. 2008. Very High Fire Severity Zones in LRA- Shasta County. https://osfm.fire.ca.gov/media/6806/fhszl_map45.pdf. Accessed August 2, 2019.
- City of Redding. 2000-2020 General Plan. Health and Safety Element.

Mitigation

No mitigation required.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	*Potentially Significant Impact*	*Less-Than-Significant with Mitigation Incorporated*	*Less-Than-Significant Impact*	*No Impact*
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below the self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c) Does the project have potential environmental effects which may cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a) The proposed project would have minimal potential to degrade the quality of the environment, affect wildlife populations or their habitats, or reduce the number or restrict the range of rare or endangered plant and animal species. Although special-status wildlife species, including Central Valley spring-run ESU Chinook salmon, Sacramento River winter-run ESU Chinook salmon, and Central Valley DPS steelhead, including designated habitat for these species and VELB, may be impacted by implementation of the proposed project, standard conservation measures, BMPs, and mitigation measures will be used to avoid adverse impacts on these species. Additionally, implementation of the proposed project is not anticipated to impact cultural resources, therefore the proposed project would not eliminate examples of history or prehistory.

b) As described in Section III, the proposed project could temporarily contribute to cumulative air quality impacts. However, these impacts would be considered less than significant and under policy of the City's General Plan, application of standard BMPs would eliminate the potential for air quality impacts during project implementation. Upon project completion the proposed project would not result in an increase in emissions and would therefore not be cumulatively considerable. The project's potential cumulative traffic impacts would be less than significant.

c) As discussed in this document, the proposed project does not include any activities that cannot be mitigated to a less-than-significant level or that could otherwise cause substantial adverse impacts on human beings, either directly or indirectly.

Documentation

- See all sections above

Standard Conservation Measures/BMPs

- **AQ-1.** Nontoxic soil stabilizers shall be applied according to manufacturer's specification to all inactive construction areas.
- **AQ-2.** All grading operations shall be suspended when winds (as instantaneous gusts) exceed 20 miles per hour.
- **AQ-3.** Water all stockpiles, access roads, and disturbed or exposed areas, as necessary, to prevent airborne dust.
- **AQ-4.** Pursuant to the California Vehicle Code (Section 23114(e)(4)) (California Legislative Information 2016), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).
- **AQ-5.** All public roadways used by the project contractor shall be maintained free from dust, dirt, and debris caused by construction activities. Streets shall be swept at the end of the day if visible soil materials are carried onto adjacent public paved roads.
- **BIO-1.** A Stormwater Pollution Prevention Plan (SWPPP), as required by the City of Redding Stormwater Quality Management and Discharge Control Ordinance, will be prepared to address BMPs that will be used to prevent erosion and sediment loss within the project site. BMPs such as silt fence, mulching and seeding, and straw wattles will be placed where needed to prevent sediment from leaving the site during and after construction.
- **BIO-2.** Appropriate sediment control measures (e.g., silt fences, straw wattles) shall be in place prior to the onset of construction activities near waters of the United States and in project areas where there is a potential for surface runoff to drain into waters of the United States. Sediment control measures shall be monitored and maintained until construction activities have ceased.
- **BIO-3.** High visibility fencing, flagging, or markers will be installed along the edges of the work zone near waters of the United States and riparian areas to prevent unauthorized access.
- **HAZ-1**. Hazardous materials, including fuels, oils, cement, and solvents, will be stored and contained in an area protected from direct runoff and away from areas where they could enter waters of the United States.

- **HAZ-2**. Construction equipment will be inspected daily for leaks. Leaking fluids will be contained upon detection and equipment repairs will be made as soon as practicable or the leaking equipment will be moved off site.

- **HAZ-3**. Secondary containment such as drip pans or absorbent materials shall be used to catch spills or leaks when removing or changing fluids. Secondary containment will be used for storage of all hazardous materials.

- **HAZ-4**. Spill containment and clean-up materials shall be kept on site at all times for use in the event of an accidental spills.

- **HAZ-5**. Absorbent materials shall be used on small spills rather than hosing down or burying the spill. The absorbent material shall be promptly removed and properly disposed.

Mitigation

MM-1. Equipment operating within the stream channels will use non-toxic vegetable oil for operating hydraulic equipment instead of conventional hydraulic fluids.

MM-2. The City will hire a qualified water quality professional to monitor turbidity and suspended sediment levels at locations 50 feet upstream and 300 to 500 feet downstream from construction during any in-channel activities in Olney Creek or Clear Creek, when and where work has the greatest likelihood to affect water quality. Water quality monitoring will occur hourly throughout each day during in-channel excavation. A detailed turbidity monitoring work plan will be prepared by the Contractor for submittal to the City. Turbidity levels caused by construction activities and measured downstream from the work area will remain within the objectives defined in the Basin Plan. Turbidity, settleable solids, and other water quality results will be reported in real-time via automated dataloggers, or at least daily, to the City construction manager and relayed to the National Marine Fisheries Service (NMFS), as deemed necessary by a qualified biologist and/or the City. In conjunction with daily turbidity monitoring, if it becomes necessary to manage turbidity to meet water quality objectives, silt curtains will be installed under the supervision of a qualified biologist immediately downstream of in-water work areas to minimize the amount of turbid water escaping from the construction site and to prevent suspended sediment from drifting outside of the immediate project work site. Silt curtains will be kept in proper working order and allow fish that may enter the curtained area adequate room to exit the area freely.

MM-3. Seasonal work periods for the three channels will be adhered to as follows:

- Clear Creek: September 1 through October 31
- Olney Creek and the unnamed channel: July 1 to November 1

MM-4. To reduce the potential for adverse effects on listed species due to crushing or other impacts during in-channel construction in Clear Creek, Olney Creek, and the unnamed channel prior to beginning construction, the areas will be visually inspected for fish presence by a qualified biologist. If presence of fish is noted, they will be herded away from the work area using seines if possible. Block nets will be installed immediately behind seine hauls to exclude fish from re-entering work areas during in-channel work. If cofferdams or turbidity curtains must completely enclose and isolate

work areas, then fish salvage and relocation to outside of the work areas will be conducted by qualified fisheries biologists. Additionally, during excavation and placement of fill materials within the active channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile fish away from the work area. All temporary stream diversion and backfill material within the channel will consist of washed material that meets the California Department of Transportation Gravel Cleanliness Specification #85, which is based on criteria meeting Clean Water Act standards.

MM-5. In Clear Creek, most of the trenching and pipeline installation will occur within semi-isolated coffer-dammed work areas to manage upstream shoring and downstream turbidity, but would not be completely enclosed, allowing any fish entering the work area to readily exit it. However, in the event that some portions of the in-channel pipeline installation need to be completely isolated and dewatered for pipe joining and concrete curing, fish salvage and relocation outside of the cofferdam enclosures would be performed by an NMFS- and CDFW-approved biologist.

MM-6. Any withdrawals/movement of water from creek channels will use pump intakes with screens meeting NMFS and CDFW criteria to prevent entrainment injury and impingement of fish. The NMFS Anadromous Salmonid Passage Facility Design (2011) guidelines include specific criteria for end-of-pipe screens and screen materials for use in streams and rivers:

- **Location**: If applicable, end-of-pipe screens must be placed in locations with sufficient ambient velocity to sweep away debris removed by the screen face or designed in a manner to prevent debris re-impingement and provide for debris removal.

- **Escape Route**: A clear escape route should exist for fish that approach the intake volitionally or otherwise.

- **Screen Material Guidelines**: The percent open area for any screen material must be at least 27%. Circular screen face openings must not exceed 3/32-inch diameter. Perforated plate must be smooth to the touch with openings punched through in the direction of approaching flow. Slotted or rectangular screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction. Square screen face openings must not exceed 3/32 inch on a side. The screen material must be corrosion resistant and sufficiently durable to maintain a smooth uniform surface with long term use. Other components of the screen facility (e.g., seals) must not include gaps greater than the maximum screen opening defined above.

MM-7. All equipment used for off-road construction activities will be weed free prior to entering the project area. Construction equipment will be properly disinfected or cleaned according to guidance provided by the State of California Aquatic Invasive Species Management Plan (CDFG 2008) prior to in-channel work to prevent the spread of aquatic invasive species.

MM-8. Mature trees such as cottonwoods, alders, and valley oaks located in SRA habitat near construction areas will be flagged and avoided as much as possible during construction. Vegetation may be trimmed only as needed.

MM-9. The construction limits will be clearly identified prior to construction and all areas containing elderberry shrubs to be avoided during construction will be fenced off or flagged. For elderberry shrubs occurring within or immediately adjacent to work locations, a 20-foot avoidance buffer will be

established around the driplines of the shrubs to help protect the shrubs and their root zones during project activities. The avoidance buffers will be maintained for the duration of work activities in the area. Additionally, no trimming of elderberry shrubs will occur, and no removal of vegetation within the dripline of an elderberry shrub will occur.

MM-10. To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of VELB (March-July).

MM-11. A qualified biologist will perform preconstruction surveys for western pond turtle and their nests prior to initiation of work in riparian habitat or streams, including vegetation removal. If western pond turtles or their nests are encountered in the project area during construction and could be harmed by construction activities, work will stop immediately in the area and CDFW will be notified. Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the construction impact zone.

MM-12. If construction occurs during the nesting season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey to locate active bird nests. The pre-construction survey will be performed no more than 7 days prior to the implementation of construction activities. If a lapse in construction activities occurs for 7 days or longer, another pre-construction survey will be performed. If an active nest is found, a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

MM-13. To the extent practicable, removal of large trees with cavities, crevices, or snags shall occur before maternity colonies form (i.e., prior to March 1) or after young are volant (i.e., after August 15). If construction (including the removal of large trees) occurs during the non-volant season (March 1 through August 15), a qualified biologist shall conduct a pre-construction survey of the project area to locate maternity colonies and identify measures to protect the colonies from disturbance. The pre-construction survey will be performed no more than seven days prior to the implementation of construction activities. If a lapse in construction activities for seven days or longer occurs between those dates, another pre-construction survey will be performed. If a maternity colony is found a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.

M-14. To the extent practicable, removal of vegetation will occur outside of the ring-tailed cat maternal denning period (May 1–June 30). If vegetation removal is to occur during the maternal denning period (May 1–June 30), a qualified biologist will conduct a preconstruction survey of the project area to locate maternity dens. The preconstruction survey will be performed no more than seven days prior to the vegetation removal. If a maternity den is found, a qualified biologist (in consultation with the City and CDFW) will develop measures to protect the maternity den from disturbance.

MM-15. Any trees greater than 6 inches diameter at breast height, determined to be contributing to shaded riverine aquatic habitat that are removed during project activities will be replaced on site, but outside of the permanent utility corridor The amount of habitat created/restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant impacted).

Woody riparian vegetation greater than 6 inches diameter at breast height, that does not contribute to shaded riverine aquatic habitat, that is removed during project activities would be compensated for through the establishment of onsite mitigation areas outside the permanent easement, the purchase of credits from a mitigation bank or in-lieu fee program, or a combination of the three. The amount of habitat created or restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant permanently impacted). Any onsite mitigation will be maintained and monitored for a period of three years.

MM-16. Temporary impacts to wetlands and perennial stream will consist of returning the wetland areas to pre-construction grade and stream banks to pre-construction contours. Permanent impacts to riparian wetland will be mitigated at a 3:1 ratio through the purchase of wetland credit at an approved mitigation bank, or through the purchase of in-lieu fee credit.

APPENDIX A

Figures 1a and 1b – Project Location and Design Features

Figure 2 – Olney Creek Crossing

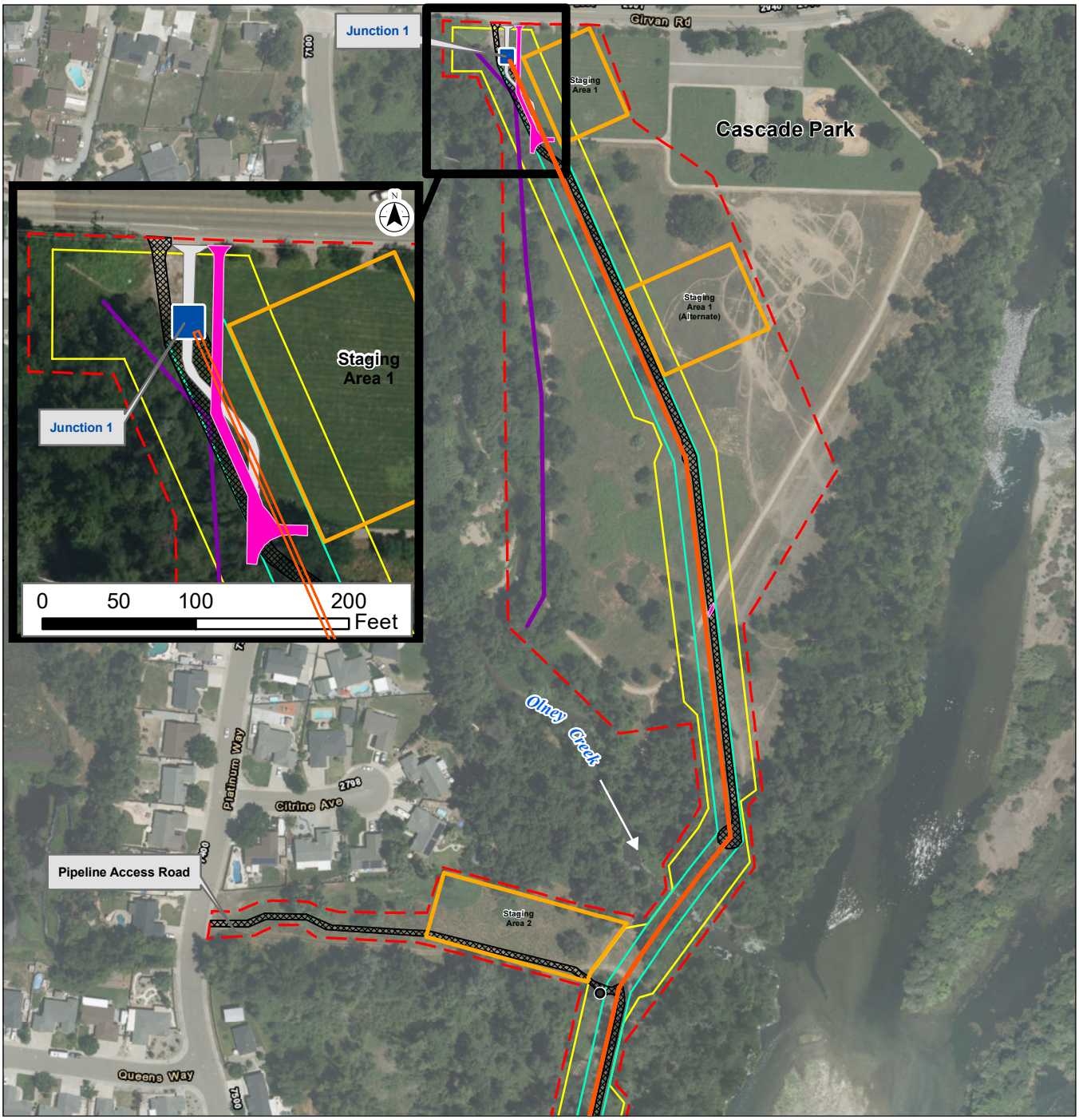
Figure 3 – Unnamed Channel Crossing

Figure 4 – Clear Creek Crossing

Figure 5 – Clear Creek Work Bridge

Figure 6 – Project Impacts – Land Cover Types and Vegetation Communities

Figures 7a and 7b – Project Impacts – Potential Waters of the United States



- Study Area (20.27 acres)
- Junction
- Staging Area
- Existing 6' Wide Concrete Walking Path - To Be Demolished
- New 6' Wide Concrete Walking Path
- Permanent Access Road
- Construction Easement
- New Pipeline
- Permanent Easement
- Pipeline Bypass
- New Maintenance Manhole

0 250 Feet
1 inch = 250 feet (At page size of 8.5"x11")

N

Stantec

Project Location
Shasta County, California

2272020003
Prepared by TM on 2021-06-07

Client/Project
City of Redding
Westside Sewer Interceptor Project

Figure No.
1a

Title
Project Location and Design Features

Notes
1. Coordinate System: NAD 1983 StatePlane California I FIPS 0401 Feet
2. Base map: ESRI World Imagery Map web mapping service
3. Public Land Survey: T 31N, R 04W, Sec. 30, 31
4. USGS 7.5 Quad: Enterprise

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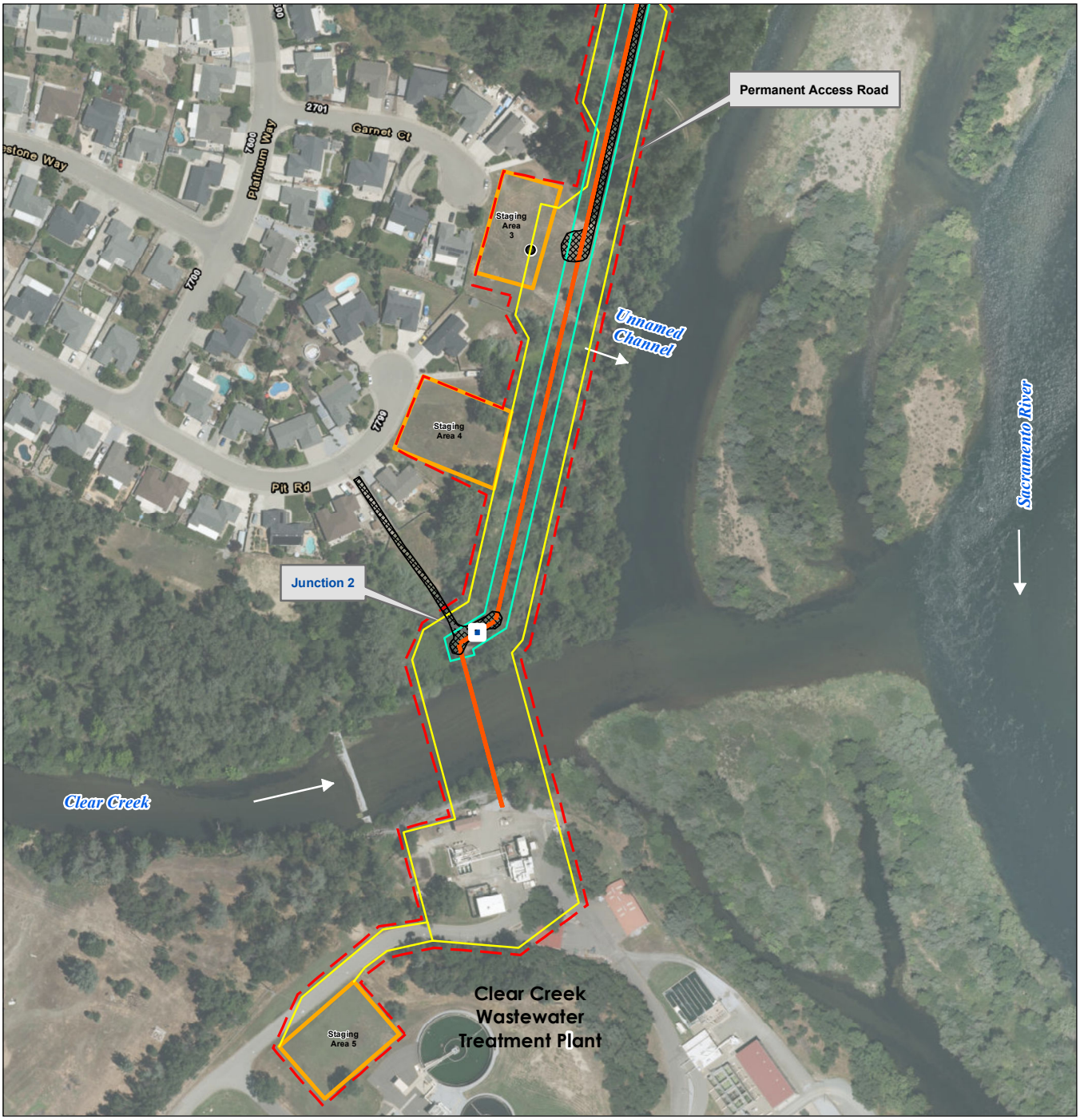


- Study Area (20.27 acres)
- Junction
- Staging Area
- Existing 6' Wide Concrete Walking Path - To Be Demolished
- New 6' Wide Concrete Walking Path
- Permanent Access Road
- Construction Easement
- New Pipeline
- Permanent Easement
- Pipeline Bypass
- New Maintenance Manhole

0 250 Feet

1 inch = 250 feet (At page size of 8.5"x11")

N

Stantec

Project Location
Shasta County, California

2272020003
Prepared by TM on 2021-06-07

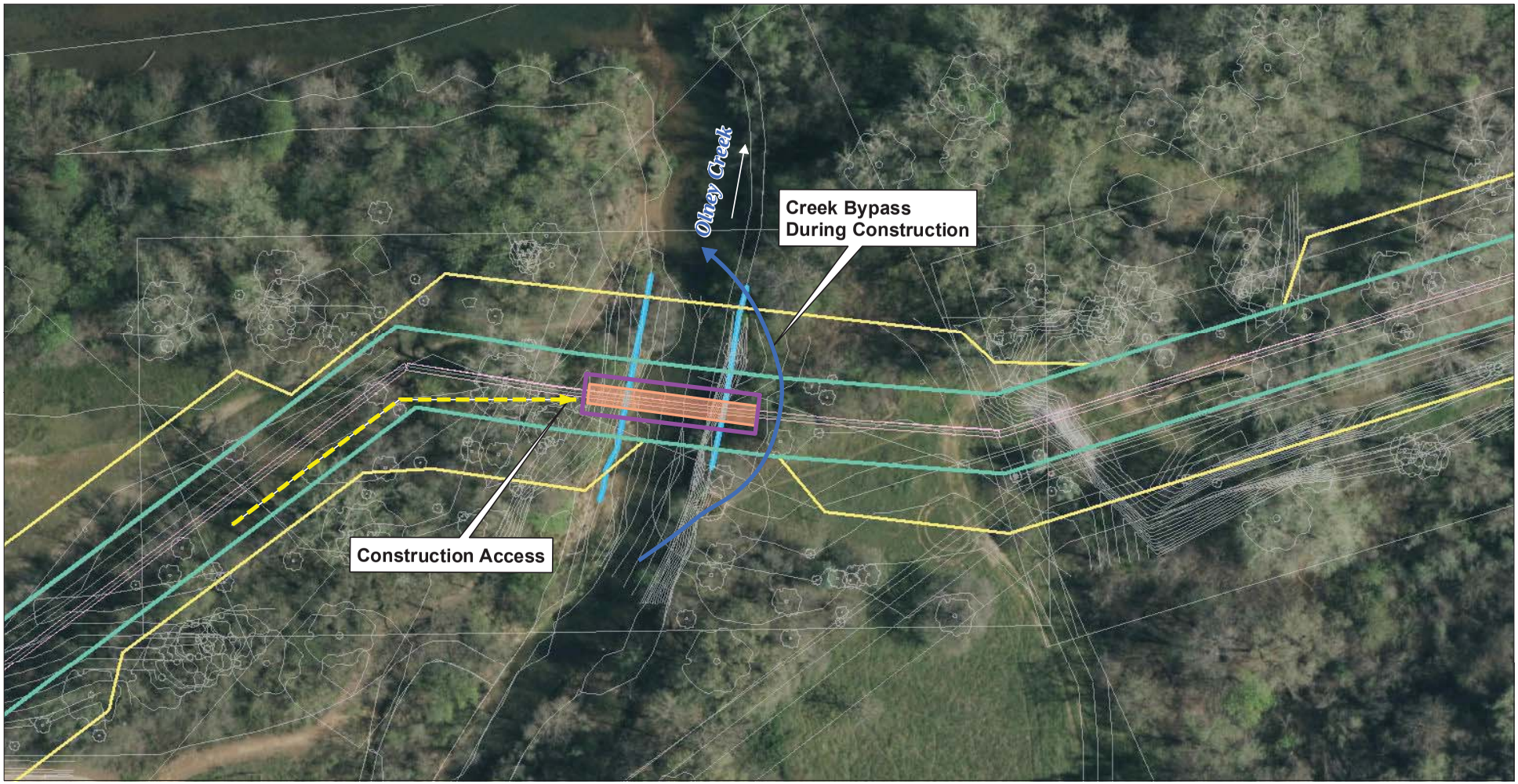
Client/Project
City of Redding
Westside Sewer Interceptor Project

Figure No.
1b

Title
Project Location and Design Features

Notes
1. Coordinate System: NAD 1983 StatePlane California I FIPS 0401 Feet
2. Base map: ESRI World Imagery Map web mapping service
3. Public Land Survey: T 31N, R 04W, Sec. 30, 31
4. USGS 7.5 Quad: Enterprise

V:\2272\active\2272020003\03_data\gis_cad\gis\mxds\2272020003_Figure_1b_Project_Location_and_Design_Features.mxd Revised: 2021-06-07 By: lmooney



- Coffer Dam
- Trench
- Ordinary High Water Mark
- Construction Easement
- New Pipeline
- Permanent Easement

0 50 Feet

1 inch = 50 feet (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 StatePlane California I FPS 0401 Feet
2. Aerial imagery: City of Redding, 3-17-2016

Stantec

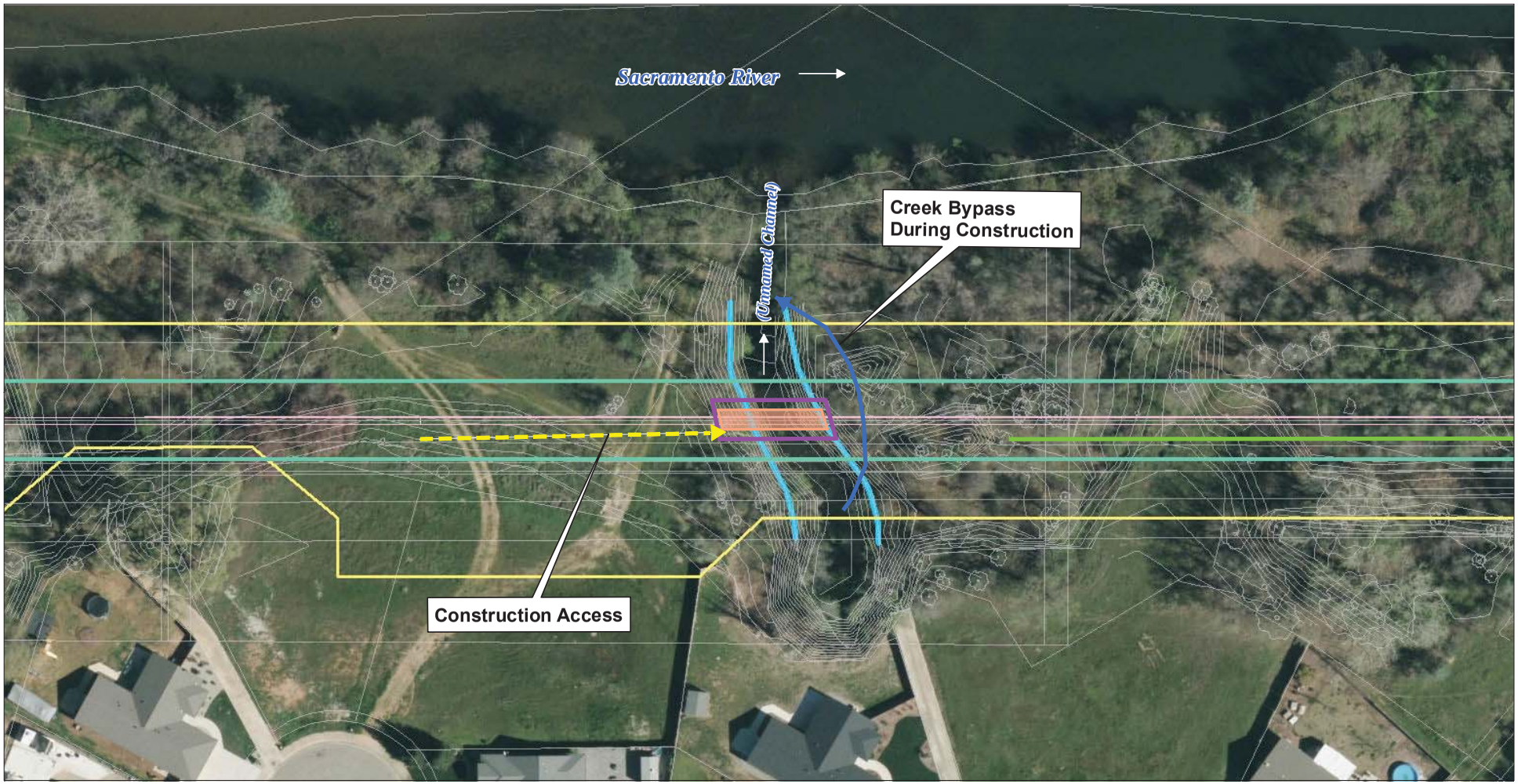
Project Location
Shasta County, California

227202003
Prepared by TM on 2020-03-11

Client/Project
City of Redding
City of Redding Westside Sewer Interceptor Project

Figure No.
2

Title
Olney Creek Crossing



- Coffer Dam
- Trench
- Ordinary High Water Mark
- Construction Easement
- New Pipeline
- Permanent Easement

0 50 Feet

1 inch = 50 feet (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 StatePlane California I FPS 0401 Feet
2. Aerial imagery: City of Redding, 3-17-2016

Stantec

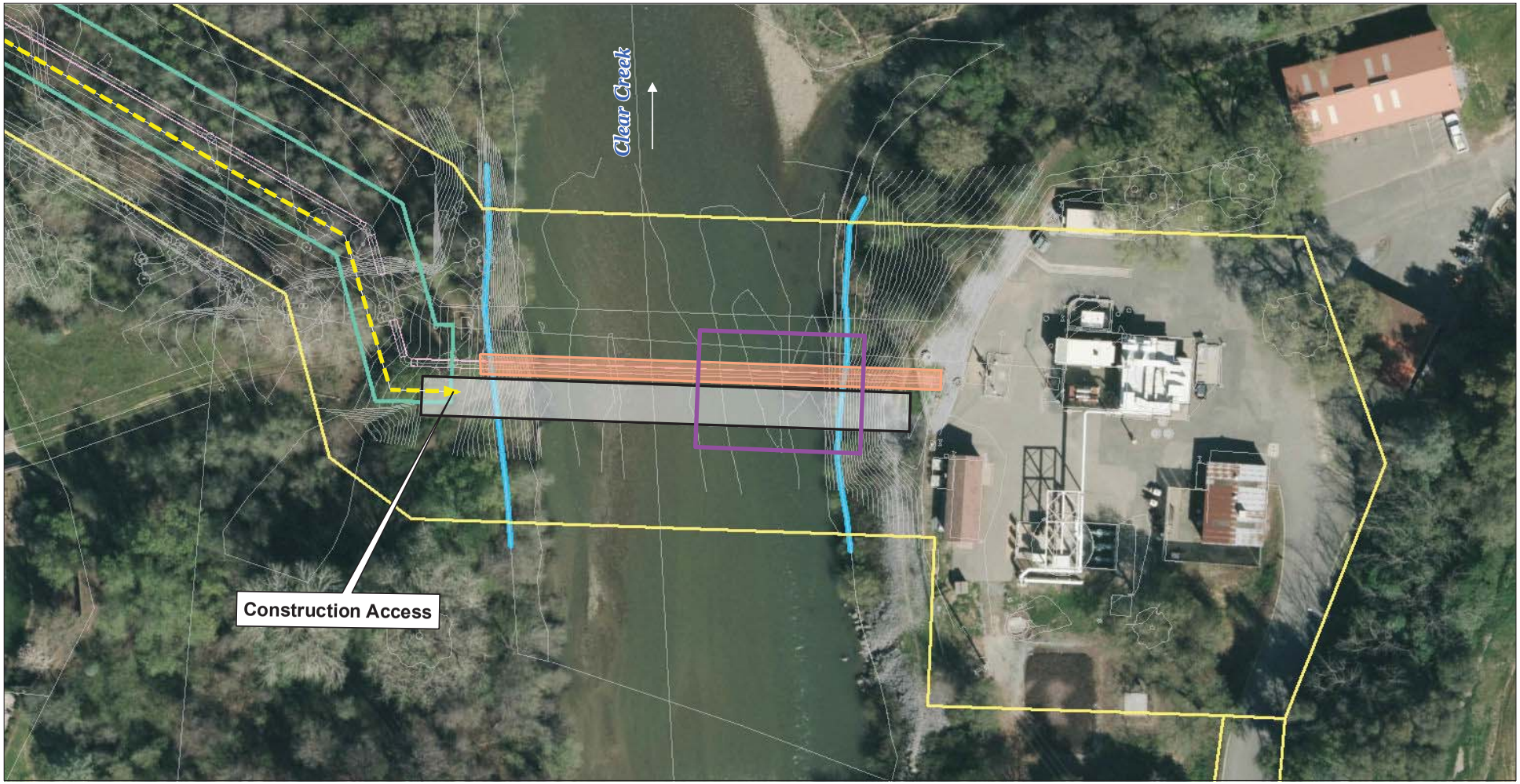
Project Location
Shasta County, California

227202003
Prepared by TM on 2020-03-11

Client/Project
City of Redding
City of Redding Westside Sewer Interceptor Project

Figure No.
3

Title
Unnamed Channel Crossing



- Coffer Dam
- Trench
- Work Platform
- Ordinary High Water Mark
- Construction Easement
- New Pipeline
- Permanent Easement

0 50 Feet

1 inch = 50 feet (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 StatePlane California I FPS 0401 Feet
2. Aerial imagery: City of Redding, 3-17-2016

Stantec

Project Location
Shasta County, California

227202003
Prepared by TM on 2020-03-11

Client/Project
City of Redding
City of Redding Westside Sewer Interceptor Project

Figure No.
4

Title
Clear Creek Crossing

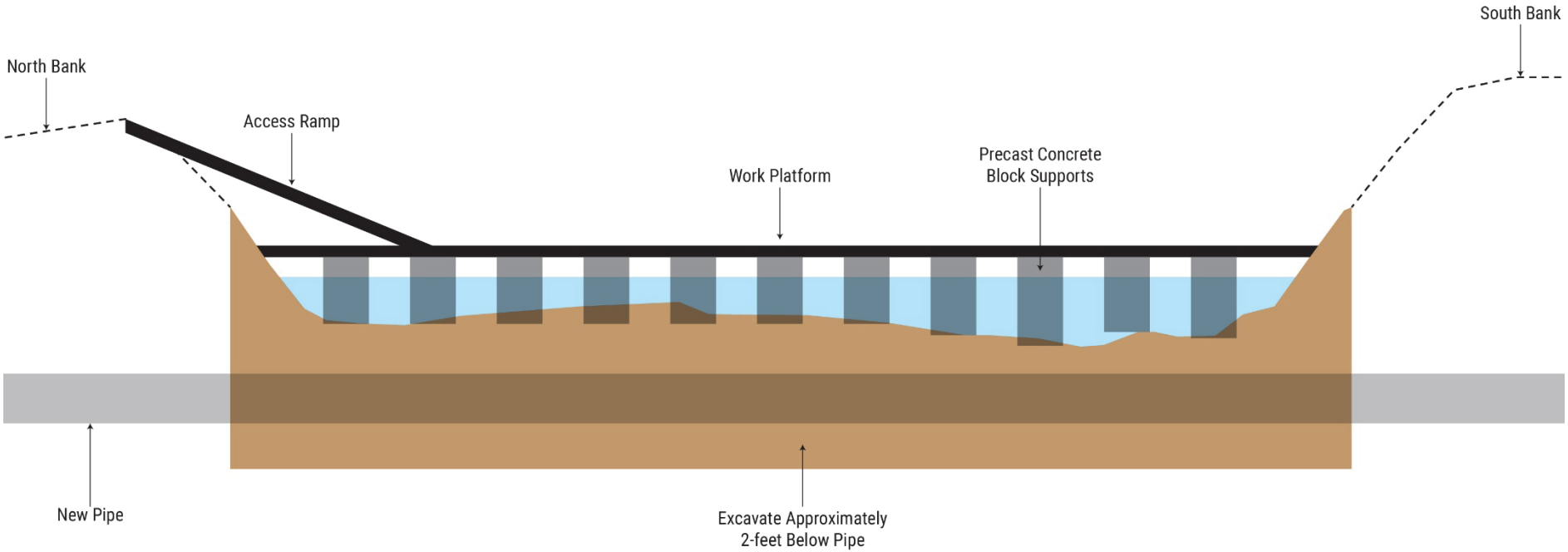
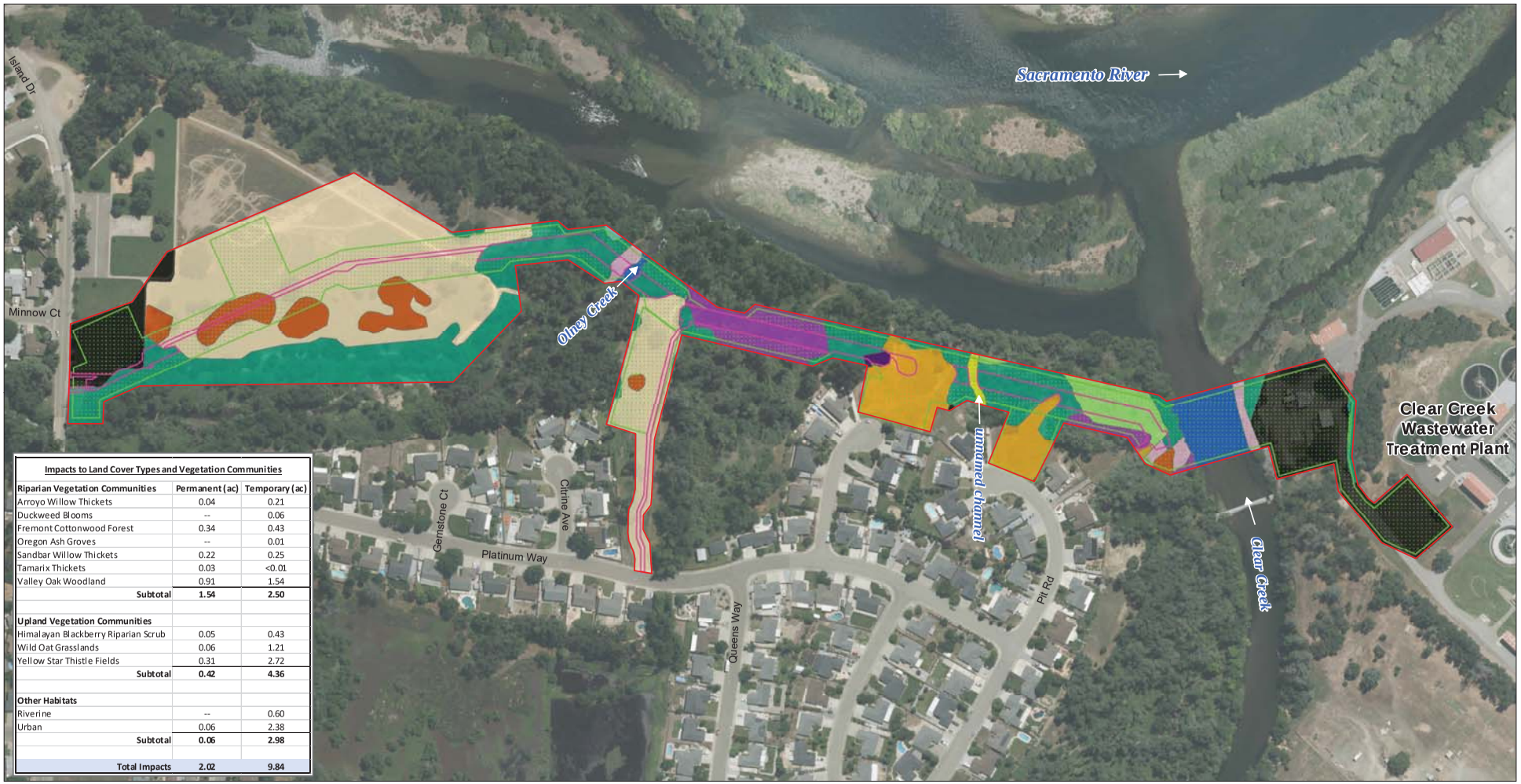


Figure 5: Clear Creek Work Bridge



Impacts to Land Cover Types and Vegetation Communities

Riparian Vegetation Communities	Permanent (ac)	Temporary (ac)
Arroyo Willow Thickets	0.04	0.21
Duckweed Blooms	--	0.06
Fremont Cottonwood Forest	0.34	0.43
Oregon Ash Groves	--	0.01
Sandbar Willow Thickets	0.22	0.25
Tamarix Thickets	0.03	<0.01
Valley Oak Woodland	0.91	1.54
Subtotal	**1.54**	**2.50**
Upland Vegetation Communities		
Himalayan Blackberry Riparian Scrub	0.05	0.43
Wild Oat Grasslands	0.06	1.21
Yellow Star Thistle Fields	0.31	2.72
Subtotal	**0.42**	**4.36**
Other Habitats		
Riverine	--	0.60
Urban	0.06	2.38
Subtotal	**0.06**	**2.98**
Total Impacts	**2.02**	**9.84**

- Project Area (20.27 acres)
- Permanent Impacts (2.02 acre)
- Temporary Impacts (9.84 acres)

Riparian Vegetation Communities

- Arroyo Willow Thickets (0.29 acre)
- Duckweed Blooms (0.07 acre)
- Fremont Cottonwood Forest (1.02 acres)
- Oregon Ash Groves (0.02 acre)
- Sandbar Willow Thickets (0.56 acre)
- Tamarix Thickets (0.05 acre)
- Valley Oak Woodland (5.13 acres)

Upland Vegetation Communities

- Yellow Star Thistle Fields (7.04 acres)
- Wild Oat Grasslands (1.36 acres)
- Himalayan Blackberry Riparian Scrub (1.07 acre)

Other Habitats

- Riverine (0.69 acre)
- Urban (2.97 acre)

0 250 Feet

1 inch = 250 feet (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 StatePlane California I FIPS 0401 Feet
2. Aerial imagery: City of Redding, 3-17-2016

Stantec

Project Location: Shasta County, California — 227202003

Prepared by TM on 2020-09-09

Client/Project: City of Redding, Westside Sewer Interceptor Phase 3 Project

Figure No.: 6

Title: **Impacts to Land Cover Types and Vegetation Communities**

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Summary of Potential Waters of the United States

Wetlands

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
RW1	Riparian Wetland	PFOA	-122.367433	40.509225	0.07	--	--
RW2	Riparian Wetland	PFOA	-122.367513	40.509109	0.02	--	--
RW3	Riparian Wetland	PFOA	-122.368727	40.50569	0.51	--	--
RW4	Riparian Wetland	PFOA	-122.369224	40.505524	0.02	--	--
RW5	Riparian Wetland	PFOA	-122.368811	40.504882	0.03	--	--
			Subtotal		**0.65**		
RW/FEW1*	Riparian /Fresh Emergent Wetland Complex	PEM1	-122.368486	40.506762	0.11	--	--
			Subtotal		**0.11**		

* satisfies wetland criteria; is also a backwater perennial stream feature.

Total Potential Wetlands					**0.76**		

Other Waters

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
PS1	Perennial Stream	R3UBH	-122.368894	40.505099	0.66	182	152
PS2	Perennial Stream	R3UBH	-122.367490	40.509163	0.07	94	20-35
Total Potential Other Waters					**0.73**	**276**	
Total Potential Waters of the United States					**1.49**	**276**	

Impacts on Potential Waters of the United States

Permanent

Wetlands

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
RW3	Riparian Wetland	PFOA	-122.368727	40.50569	0.01	--	--
Total Permanent Impacts on Wetlands					**0.01**		
Total Permanent Impacts on Potential Waters of the United States					**0.01**		

Temporary

Wetlands

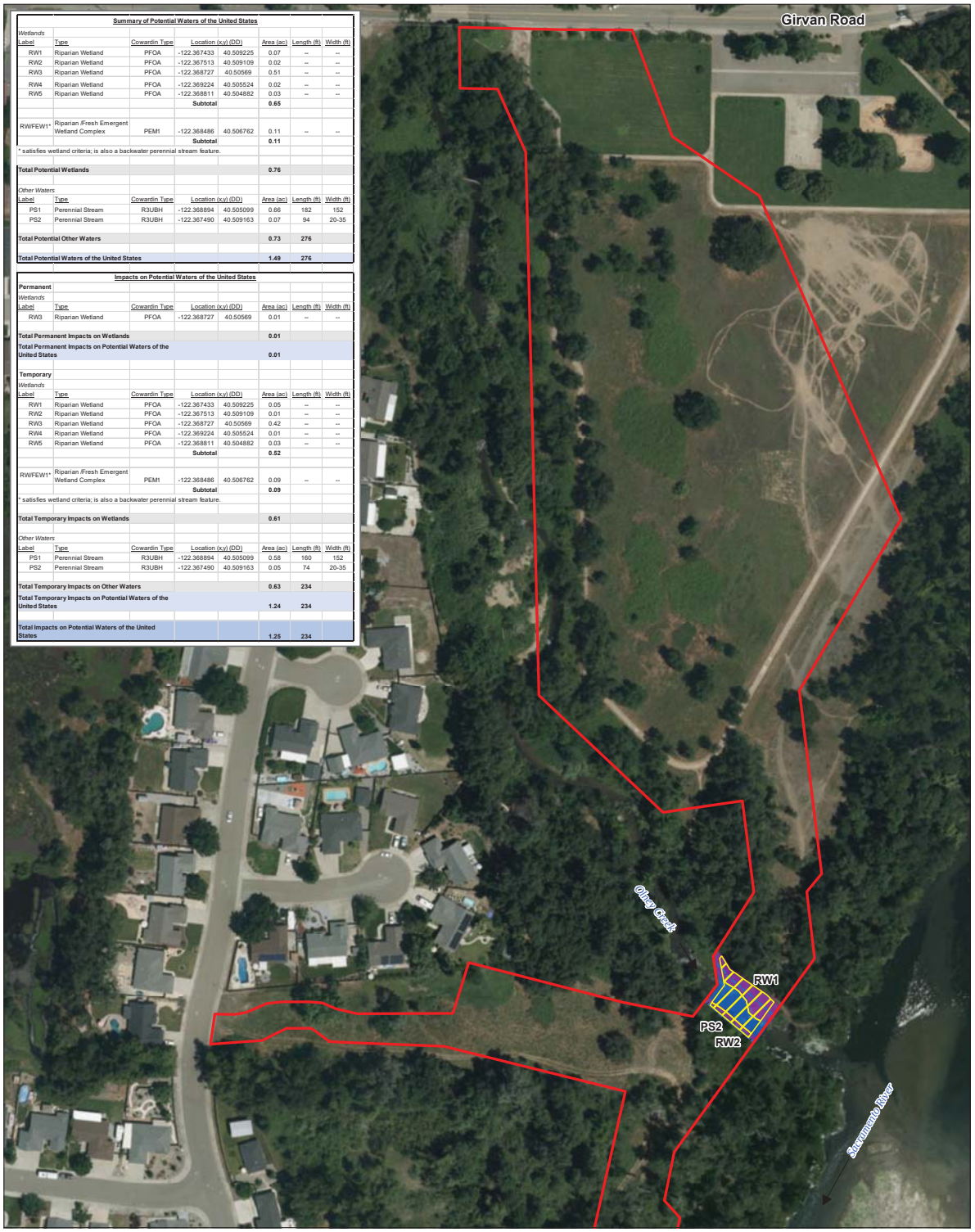
Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
RW1	Riparian Wetland	PFOA	-122.367433	40.509225	0.05	--	--
RW2	Riparian Wetland	PFOA	-122.367513	40.509109	0.01	--	--
RW3	Riparian Wetland	PFOA	-122.368727	40.50569	0.42	--	--
RW4	Riparian Wetland	PFOA	-122.369224	40.505524	0.01	--	--
RW5	Riparian Wetland	PFOA	-122.368811	40.504882	0.03	--	--
			Subtotal		**0.52**		
RW/FEW1*	Riparian /Fresh Emergent Wetland Complex	PEM1	-122.368486	40.506762	0.09	--	--
			Subtotal		**0.09**		

* satisfies wetland criteria; is also a backwater perennial stream feature.

Total Temporary Impacts on Wetlands					**0.61**		

Other Waters

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
PS1	Perennial Stream	R3UBH	-122.368894	40.505099	0.58	160	152
PS2	Perennial Stream	R3UBH	-122.367490	40.509163	0.05	74	20-35
Total Temporary Impacts on Other Waters					**0.63**	**234**	
Total Temporary Impacts on Potential Waters of the United States					**1.24**	**234**	
Total Impacts on Potential Waters of the United States					**1.25**	**234**	



Study Area (20.27 acres)
Permanent Impacts (0.01 acre)
Temporary Impacts (1.24 acres)
Ordinary High Water Mark

Potential Waters of the United States

Wetlands

Riparian Wetland (0.65 acre)
Riparian/Fresh Emergent Wetland Complex (0.11 acre)

Other Waters

Perennial Stream (0.73 acre)

0 150 300 Feet

1 inch = 150 feet (At page size of 11"x17")

N

Stantec

Project Location
Redding, Shasta County, California

2272020003
Prepared by TM on 2020-07-21

Client/Project
City of Redding
Westside Sewer Interceptor Project

Figure No.
7

Title
Project Impacts on Potential Waters of the United States

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Basemap: City of Redding, 3/17/2016
3. Delineator: Sara Taylor and Sarah Tona
4. Delineation Dates: 9/19/2018, 9/24/2018, and 11/5/2019

Summary of Potential Waters of the United States

Wetlands

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
RW1	Riparian Wetland	PFOA	-122.367433	40.509225	0.07	--	--
RW2	Riparian Wetland	PFOA	-122.367513	40.509109	0.02	--	--
RW3	Riparian Wetland	PFOA	-122.368727	40.50569	0.51	--	--
RW4	Riparian Wetland	PFOA	-122.369224	40.505524	0.02	--	--
RW5	Riparian Wetland	PFOA	-122.368811	40.504882	0.03	--	--
			Subtotal		**0.65**		
RW/FEW1*	Riparian /Fresh Emergent Wetland Complex	PEM1	-122.368486	40.506762	0.11	--	--
			Subtotal		**0.11**		

* satisfies wetland criteria; is also a backwater perennial stream feature.

Total Potential Wetlands					**0.76**		

Other Waters

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
PS1	Perennial Stream	R3UBH	-122.368894	40.505099	0.66	182	152
PS2	Perennial Stream	R3UBH	-122.367490	40.509163	0.07	94	20-35
Total Potential Other Waters					**0.73**	**276**	
Total Potential Waters of the United States					**1.49**	**276**	

Impacts on Potential Waters of the United States

Permanent

Wetlands

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
RW3	Riparian Wetland	PFOA	-122.368727	40.50569	0.01	--	--
Total Permanent Impacts on Wetlands					**0.01**		
Total Permanent Impacts on Potential Waters of the United States					**0.01**		

Temporary

Wetlands

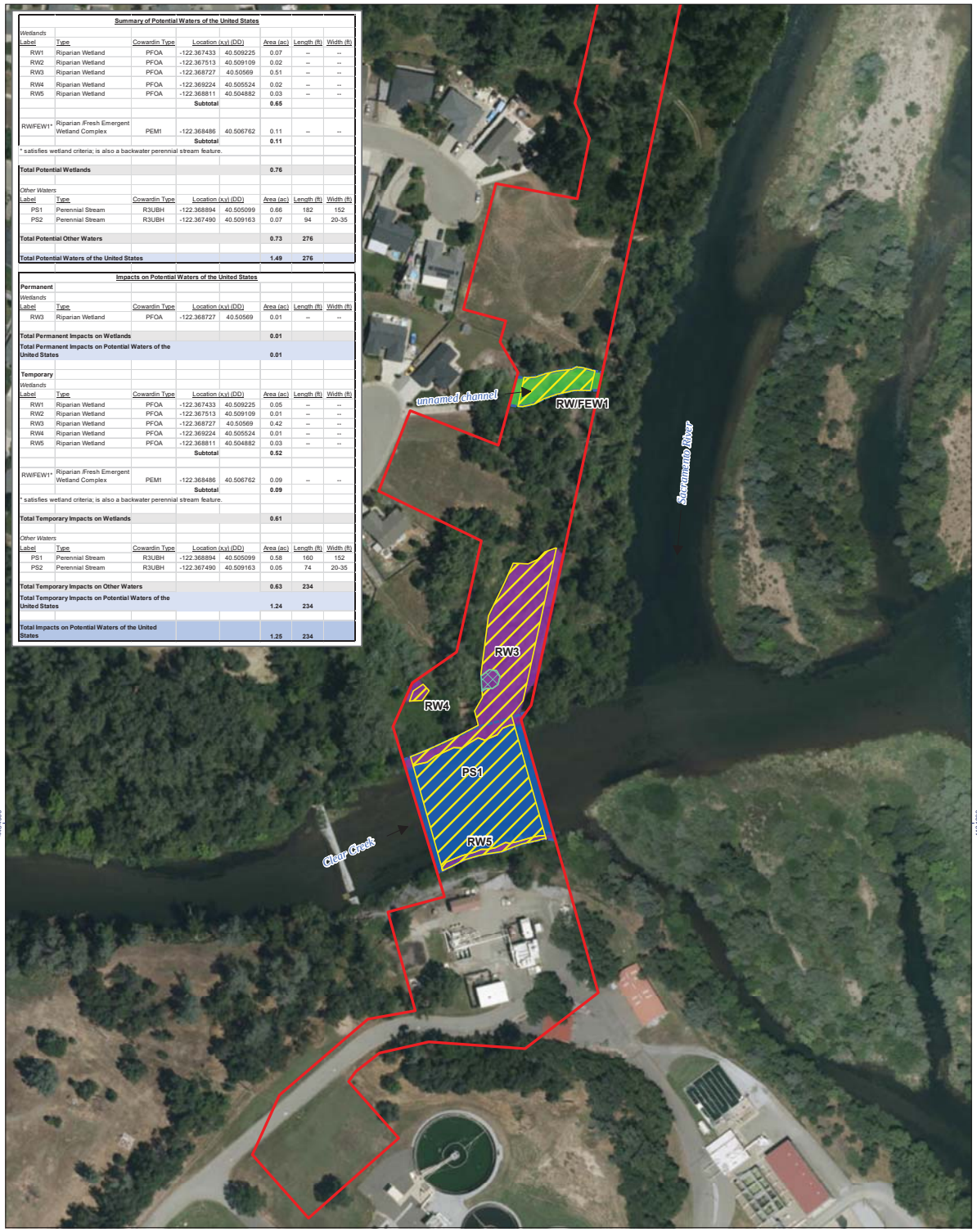
Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
RW1	Riparian Wetland	PFOA	-122.367433	40.509225	0.05	--	--
RW2	Riparian Wetland	PFOA	-122.367513	40.509109	0.01	--	--
RW3	Riparian Wetland	PFOA	-122.368727	40.50569	0.42	--	--
RW4	Riparian Wetland	PFOA	-122.369224	40.505524	0.01	--	--
RW5	Riparian Wetland	PFOA	-122.368811	40.504882	0.03	--	--
			Subtotal		**0.52**		
RW/FEW1*	Riparian /Fresh Emergent Wetland Complex	PEM1	-122.368486	40.506762	0.09	--	--
			Subtotal		**0.09**		

* satisfies wetland criteria; is also a backwater perennial stream feature.

Total Temporary Impacts on Wetlands					**0.61**		

Other Waters

Label	Type	Cowardin Type	Location (x,y) (DD)		Area (ac)	Length (ft)	Width (ft)
PS1	Perennial Stream	R3UBH	-122.368894	40.505099	0.58	160	152
PS2	Perennial Stream	R3UBH	-122.367490	40.509163	0.05	74	20-35
Total Temporary Impacts on Other Waters					**0.63**	**234**	
Total Temporary Impacts on Potential Waters of the United States					**1.24**	**234**	
Total Impacts on Potential Waters of the United States					**1.25**	**234**	



Study Area (20.27 acres)
Permanent Impacts (0.01 acre)
Temporary Impacts (1.24 acres)
Ordinary High Water Mark

Potential Waters of the United States

Wetlands

Riparian Wetland (0.65 acre)
Riparian/Fresh Emergent Wetland Complex (0.11 acre)

Other Waters

Perennial Stream (0.73 acre)

0 150 300 Feet

1 inch = 150 feet (At page size of 11"x17")

N

Stantec

Project Location
Redding, Shasta County, California

2272020003
Prepared by TM on 2020-07-21

Client/Project
City of Redding
Westside Sewer Interceptor Project

Figure No.
7

Title
Project Impacts on Potential Waters of the United States

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Basemap: City of Redding, 3/17/2016
3. Delineator: Sara Taylor and Sarah Tona
4. Delineation Dates: 9/19/2018, 9/24/2018, and 11/5/2019

ATTACHMENT C

Mitigation Monitoring and Environmental Commitment Program

MITIGATION MONITORING AND ENVIRONMENTAL COMMITMENT PROGRAM

WESTSIDE SEWER INTERCEPTOR PHASE 3 PROJECT STATE CLEARINGHOUSE NO. 2021XXXXXX

MITIGATION MONITORING PROGRAM CONTENTS

This document is the Mitigation Monitoring and Environmental Commitment Program (MMP/ECP) for the Westside Sewer Interceptor Phase 3 Project (project). The MMP/ECP includes a brief discussion of the legal basis for, and the purpose of, the program, discussion, and direction regarding complaints about noncompliance, a key to understanding the monitoring matrix, and the monitoring matrix itself.

LEGAL BASIS OF AND PURPOSE FOR THE MITIGATION MONITORING PROGRAM

California Public Resources Code Section 21081.6 requires public agencies to adopt mitigation monitoring or reporting programs whenever certifying an environmental impact report (EIR) or a mitigated negative declaration (MND). This requirement facilitates implementation of all mitigation measures adopted through the California Environmental Quality Act (CEQA) process.

The MMP contained herein is intended to satisfy the requirements of CEQA as they relate to the Initial Study/Mitigated Negative Declaration prepared for the project. It is intended to be used by City of Redding (City) staff, participating agencies, project contractors, and mitigation monitoring personnel during implementation of the project.

- Mitigation is defined by CEQA Guidelines Section 15370 as a measure that does any of the following:
- Avoids impacts altogether by not taking a certain action or parts of an action.
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifies impacts by repairing, rehabilitating, or restoring the impacted environment.
- Reduces or eliminates impacts over time by preservation and maintenance operations during the life of the project.
- Compensates for impacts by replacing or providing substitute resources or environments.

The intent of the MMP is to ensure the effective implementation and enforcement of adopted mitigation measures and permit conditions. The MMP will provide for monitoring of construction activities as necessary, on-site identification and resolution of environmental problems, and proper reporting to City staff.

In addition to meeting the CEQA MMP requirements, this document incorporates environmental commitments, standard practices, conservation measures, and best management practices (BMPs). The

environmental commitments may be part of the project design, standard contract specifications, City of Redding requirements, or conservation measures. These commitments are part of the project, but do not constitute mitigation under CEQA as they have not been incorporated to reduce a potentially significant impact.

MITIGATION MONITORING/ENVIRONMENTAL COMMITMENT TABLE

The MMP/ECP Table identifies the mitigation measures and commitments proposed for the project. The tables have the following columns:

- **Mitigation Measure:** Lists the mitigation measures identified within the Initial Study for a specific potentially significant impact, along with the number for each measure as enumerated in the Initial Study.
- **Environmental Commitment:** Lists the commitments identified within the project that are not related to a potentially significant CEQA impact, but further ensure environmental resource protection.
- **Timing:** Identifies at what point in time, review process, or phase the mitigation measure will be completed.
- **Agency/Department Consultation:** References the City department or any other public agency with which coordination is required to satisfy the identified mitigation measure.
- **Verification:** Spaces to be initialed and dated by the individual designated to verify adherence to a specific mitigation measures.

NONCOMPLIANCE COMPLAINTS

Any person or agency may file a complaint asserting noncompliance with the mitigation measures and commitments associated with the project. The complaint shall be directed to the City in written form, providing specific information on the asserted violation. The City shall investigate and determine the validity of the complaint. If noncompliance with a mitigation measure has occurred, the City shall take appropriate action to remedy any violation. The compliant shall receive written confirmation indicating the results of the investigation or the final action corresponding to the particular noncompliance issue.

MITIGATION MONITORING AND ENVIRONMENTAL COMMITMENT TABLE FOR THE WESTSIDE SEWER INTERCEPTOR PHASE 3 PROJECT MITIGATION MONITORING PROGRAM (STATE CLEARINGHOUSE NO. 2021XXXXXX)

ENVIRONMENTAL COMMITMENTS

The following environmental commitments will be incorporated into the project to further protect environmental and biological resources:

Best Management Practices (BMPs)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
Air Quality (AQ)			
AQ-1. Nontoxic soil stabilizers shall be applied according to manufacturer's specification to all inactive construction areas.	Construction	Construction Management	
AQ-2. All grading operations shall be suspended when winds (as instantaneous gusts) exceed 20 miles per hour.	Construction	Construction Management	
AQ-3. Water all stockpiles, access roads, and disturbed or exposed areas, as necessary, to prevent airborne dust.	Construction	Construction Management	
AQ-4. Pursuant to the California Vehicle Code (Section 23114(e)(4)) (California Legislative Information 2016), all trucks hauling soil and other loose material to and from the construction site shall be covered or shall maintain at least 6 inches of freeboard (i.e., minimum vertical distance between top of load and the trailer).	Construction	Construction Management	
AQ-5. All public roadways used by the project contractor shall be maintained free from dust, dirt, and debris caused by construction activities. Streets shall be swept at the end of the day if visible soil materials are carried onto adjacent public paved roads.	Construction	Construction Management	

Best Management Practices (BMPs)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
Biological Resources (BIO)			
BIO-1. A Stormwater Pollution Prevention Plan (SWPPP), as required by the City of Redding Stormwater Quality Management and Discharge Control Ordinance, will be prepared to address BMPs that will be used to prevent erosion and sediment loss within the project site. BMPs such as silt fence, mulching and seeding, and straw wattles will be placed where needed to prevent sediment from leaving the site during and after construction.	Preconstruction/ Construction	City/ Construction Management	
BIO-2. Appropriate sediment control measures (e.g., silt fences, straw wattles) shall be in place prior to the onset of construction activities near waters of the United States and in project areas where there is a potential for surface runoff to drain into jurisdictional waters. Sediment control measures shall be monitored and maintained until construction activities have ceased.	Preconstruction/ Construction	City/ Construction Management	
BIO-3. High visibility fencing, flagging, or markers will be installed along the edges of the work zone near waters of the United States and riparian areas to prevent unauthorized access.	Preconstruction/ Construction	City/ Construction Management	
Cultural Resources (CR)			
CR-1. If previously unidentified cultural materials are unearthed during construction, it is City policy that work be halted in that area until a qualified archaeologist can assess the significance of the find.	Construction	City/ Construction Management	
CR-2. If human remains are discovered during project activities, all activities near the find will be stopped and the Shasta County Sheriff-Coroner's Office shall be notified. If the coroner determines that the remains may be those of a Native American, the coroner will contact the Native American Heritage Commission (NAHC). Treatment of the remains shall be conducted in accordance with further direction of the County Coroner or the NAHC, as appropriate.	Construction	City/ NAHC/ County Coroner	
HAZARDS AND HAZARDOUS MATERIALS (HAZ)			
HAZ-1. Hazardous materials, including fuels, oils, cement, and solvents will be stored and contained in an area protected from direct runoff and away from areas where they could enter waters of the United States.	Construction	City/ Construction Management	

Best Management Practices (BMPs)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
HAZ-2. Construction equipment will be inspected daily for leaks. Leaking fluids will be contained upon detection and equipment repairs will be made as soon as practicable or the leaking equipment will be moved off site.	Construction	City/ Construction Management	
HAZ-3. Secondary containment such as drip pans or absorbent materials shall be used to catch spills or leaks when removing or changing fluids. Secondary containment will be used for storage of all hazardous materials.	Construction	City/ Construction Management	
HAZ-4. Spill containment and clean-up materials shall be kept on site at all times for use in the event of an accidental spills.	Construction	City/ Construction Management	
HAZ-5. Absorbent materials shall be used on small spills rather than hosing down or burying the spill. The absorbent material shall be promptly removed and properly disposed.	Construction	City/ Construction Management	

CEQA MITIGATION MEASURES

Resource-specific mitigation measures that will be used during project implementation include:

Mitigation Measure (MM)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
BIOLOGICAL RESOURCES (BIO)			
MM-1. Equipment operating within the stream channels will use non-toxic vegetable oil for operating hydraulic equipment instead of conventional hydraulic fluids.	Preconstruction/ Construction	City/ Construction Management	
MM-2. The City will hire a qualified water quality professional to monitor turbidity and suspended sediment levels at locations 50 feet upstream and 300 to 500 feet downstream from construction during any in-channel activities in Olney Creek or Clear Creek, when and where work has the greatest likelihood to affect water quality. Water quality monitoring will occur hourly throughout each day during in-channel excavation. A detailed turbidity monitoring work plan will be prepared by the Contractor for submittal to the City. Turbidity levels caused by construction activities and measured downstream from the work area will remain within the objectives defined in the Basin Plan. Turbidity, settleable solids, and other water quality results will be reported in real-time via automated dataloggers, or at least daily, to the City construction manager and relayed to the National Marine Fisheries Service (NMFS), as deemed necessary by a qualified biologist and/or the City. In conjunction with daily turbidity monitoring, if it becomes necessary to manage turbidity to meet water quality objectives, silt curtains will be installed under the supervision of a qualified biologist immediately downstream of in-water work areas to minimize the amount of turbid water escaping from the construction site and to prevent suspended sediment from drifting outside of the immediate project work site. Silt curtains will be kept in proper working order and allow fish that may enter the curtained area adequate room to exit the area freely.	Preconstruction/ Construction	City/ Construction Management	
MM-3. Seasonal work periods for the three channels will be adhered to as follows: ▪ Clear Creek: September 1 through October 31 ▪ Olney Creek and the unnamed channel: July 1 to November 1	Preconstruction/ Construction	City/ Construction Management	

Mitigation Measure (MM)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
MM-4. To reduce the potential for adverse effects on listed species due to crushing or other impacts during in-channel construction in Clear Creek, Olney Creek, and the unnamed channel prior to beginning construction, the areas will be visually inspected for fish presence by a qualified biologist. If presence of fish is noted, they will be herded away from the work area using seines if possible. Block nets will be installed immediately behind seine hauls to exclude fish from re-entering work areas during in-channel work. If cofferdams or turbidity curtains must completely enclose and isolate work areas, then fish salvage and relocation to outside of the work areas will be conducted by qualified fisheries biologists. Additionally, during excavation and placement of fill materials within the active channel, equipment shall be operated slowly and deliberately to alert and scare adult and juvenile fish away from the work area. All temporary stream diversion and backfill material within the channel will consist of washed material that meets the California Department of Transportation Gravel Cleanliness Specification #85, which is based on criteria meeting Clean Water Act standards.	Preconstruction/ Construction	City/ Construction Management	
MM-5. In Clear Creek, most of the trenching and pipeline installation will occur within semi-isolated coffer-dammed work areas to manage upstream shoring and downstream turbidity, but would not be completely enclosed, allowing any fish entering the work area to readily exit it. However, in the event that some portions of the in-channel pipeline installation need to be completely isolated and dewatered for pipe joining and concrete curing, fish salvage and relocation outside of the cofferdam enclosures would be performed by an NMFS- and CDFW-approved biologist.	Preconstruction/ Construction	City/ Construction Management	

Mitigation Measure (MM)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
MM-6. Any withdrawals/movement of water from creek channels will use pump intakes with screens meeting NMFS and CDFW criteria to prevent entrainment injury and impingement of fish. The NMFS Anadromous Salmonid Passage Facility Design (2011) guidelines include specific criteria for end-of-pipe screens and screen materials for use in streams and rivers: ▪ **Location**: If applicable, end-of-pipe screens must be placed in locations with sufficient ambient velocity to sweep away debris removed by the screen face or designed in a manner to prevent debris re-impingement and provide for debris removal. ▪ **Escape Route**: A clear escape route should exist for fish that approach the intake volitionally or otherwise. ▪ **Screen Material Guidelines**: The percent open area for any screen material must be at least 27%. Circular screen face openings must not exceed 3/32-inch diameter. Perforated plate must be smooth to the touch with openings punched through in the direction of approaching flow. Slotted or rectangular screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction. Square screen face openings must not exceed 3/32 inch on a side. The screen material must be corrosion resistant and sufficiently durable to maintain a smooth uniform surface with long term use. Other components of the screen facility (e.g., seals) must not include gaps greater than the maximum screen opening defined above.	Preconstruction/ Construction	City/ Construction Management	
MM-7. All equipment used for off-road construction activities will be weed free prior to entering the project area. Construction equipment will be properly disinfected or cleaned according to guidance provided by the State of California Aquatic Invasive Species Management Plan (CDFG 2008) prior to in-channel work to prevent the spread of aquatic invasive species.	Preconstruction/ Construction	City/ Construction Management	
MM-8. Mature trees such as cottonwoods, alders, and valley oaks located in SRA habitat near construction areas will be flagged and avoided as much as possible during construction. Vegetation may be trimmed only as needed.	Preconstruction/ Construction	City/ Construction Management	
MM-9. The construction limits will be clearly identified prior to construction and all areas containing elderberry shrubs to be avoided during construction will be fenced off or flagged. For elderberry shrubs occurring within or immediately adjacent to work locations, a 20-foot avoidance buffer will be established around the driplines of the shrubs to help protect the shrubs and their root zones during project activities. The avoidance buffers will be maintained for the duration of work activities in the area. Additionally, no trimming of elderberry shrubs will occur, and no removal of vegetation within the dripline of an elderberry shrub will occur.	Preconstruction/ Construction	City/ Construction Management	

Mitigation Measure (MM)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
MM-10. To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub will be conducted outside of the flight season of VELB (March-July).	Preconstruction/ Construction	City/ Construction Management	
MM-11. A qualified biologist will perform preconstruction surveys for western pond turtle and their nests prior to initiation of work in riparian habitat or streams, including vegetation removal. If western pond turtles or their nests are encountered in the project area during construction and could be harmed by construction activities, work will stop immediately in the area and CDFW will be notified. Upon authorization from CDFW, a qualified biologist may relocate the individual(s) the shortest distance possible to a location containing habitat outside of the construction impact zone.	Preconstruction/ Construction	City/ Construction Management	
MM-12. If construction occurs during the nesting season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey to locate active bird nests. The pre-construction survey will be performed no more than 7 days prior to the implementation of construction activities. If a lapse in construction activities occurs for 7 days or longer, another pre-construction survey will be performed. If an active nest is found, a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.	Preconstruction/ Construction	City/ Construction Management	
MM-13. To the extent practicable, removal of large trees with cavities, crevices, or snags shall occur before maternity colonies form (i.e., prior to March 1) or after young are volant (i.e., after August 15). If construction (including the removal of large trees) occurs during the non-volant season (March 1 through August 15), a qualified biologist shall conduct a pre-construction survey of the project area to locate maternity colonies and identify measures to protect the colonies from disturbance. The pre-construction survey will be performed no more than seven days prior to the implementation of construction activities. If a lapse in construction activities for seven days or longer occurs between those dates, another pre-construction survey will be performed. If a maternity colony is found a qualified biologist (in consultation with the CDFW) will determine the extent of a construction-free buffer zone to be established around the nest.	Preconstruction/ Construction	City/ Construction Management	

Mitigation Measure (MM)	Timing/ Implementation	Enforcement/ Monitoring	Verification (Date and Initials
M-14. To the extent practicable, removal of vegetation will occur outside of the ring-tailed cat maternal denning period (May 1–June 30). If vegetation removal is to occur during the maternal denning period (May 1–June 30), a qualified biologist will conduct a preconstruction survey of the project area to locate maternity dens. The preconstruction survey will be performed no more than seven days prior to the vegetation removal. If a maternity den is found, a qualified biologist (in consultation with the City and CDFW) will develop measures to protect the maternity den from disturbance.	Preconstruction/ Construction	City/ Construction Management	
MM-15. Any trees greater than 6 inches diameter at breast height, determined to be contributing to shaded riverine aquatic habitat that are removed during project activities will be replaced on site, but outside of the permanent utility corridor The amount of habitat created/restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant impacted). Woody riparian vegetation greater than 6 inches diameter at breast height, that does not contribute to shaded riverine aquatic habitat, that is removed during project activities would be compensated for through the establishment of onsite mitigation areas outside the permanent easement, the purchase of credits from a mitigation bank or in-lieu fee program, or a combination of the three. The amount of habitat created or restored will be at least three times greater than the amount lost due to project implementation (i.e., a 3:1 ratio of new plantings per large woody riparian plant permanently impacted). Any onsite mitigation will be maintained and monitored for a period of three years as outlined in the Westside Sewer Interceptor Phase 3 Riparian Restoration Plan.	Preconstruction/ Construction/Post -Construction	City/ Construction Management	
MM-16. Temporary impacts to wetlands and perennial stream will consist of returning the wetland areas to pre-construction grade and stream banks to pre-construction contours. Permanent impacts to riparian wetland will be mitigated at a 3:1 ratio through the purchase of wetland credit at an approved mitigation bank, or through the purchase of in-lieu fee credit.	Preconstruction/ Construction/Post -Construction	City/ Construction Management	

ATTACHMENT D

Comments and Response to Comments (if any)